Stage 1 Business Analysis

Department of Technology, SIMM 19A, Revision 7/1/2015

1.1 General Information

Agency or State Entity Name:
State Hospitals, Department of

Organization Code:
4440

Proposal Name:
Electronic Health Record - Core Modules (EHR-Core)

Proposal Description:
Department of State Hospitals (DSH) proposes to implement the core functionality of an Electronic Health Record in order to address crucial business needs related to standardized patient registration, pharmacy management, billing, and primary care.

Proposed Start Date: **July, 2020**

Delegated Cost Threshold (Optional): (•) Over ( ) Under

Department of Technology Project Number: 4440-126

1.2 Submittal Information

Contact Information:

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Submission Date: 7/15/2016

Submission Type:

( ) New Submission
( ) Updated Submission (Pre-Approval)
(•) Updated Submission (Post-Approval)
( ) Withdraw Submission

Sections Updated (For Updated Submissions Only)

- [x] 1.1 General Information
- [x] 1.2 Submittal Information
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- [x] 1.6 Statutes or Legislation
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- [ ] 1.3.1 Reportability Assessment
- [ ] 1.3.2 Impact Assessment
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- [x] 1.11 Business and Stakeholder Capacity
- [x] 1.12 Organizational Readiness

Summary of Changes:

Expanded scope to include five DSH state hospitals and added rationale and business opportunities for billing.

Project Approval Executive Transmittal: File Attachment

1.3 Preliminary Assessment

1.3.1 Reportability Assessment

	Yes	No
1. Does the Agency/state entity anticipate requesting a budget action to support this proposal?	◉	○
2. Does the Agency/state entity anticipate the estimated total development and acquisition cost to exceed the Department of Technology's established Agency/state entity delegated cost threshold **and** the proposal does not meet the criteria of a desktop and mobile computing commodity expenditure?	◉	○
3. Does this proposal involve a new system development or acquisition specifically required by legislative mandate **or** is subject to special legislative reporting or review as specified in budget control language or other legislation?	◉	○

Anticipated Reportability

Is this proposal anticipated to be reportable?	◉	○

Planned Reporting Exemption

Does the Agency/state entity anticipate seeking an exemption from project reporting? (Answer only if Anticipated Reportability above is "Yes.")	○	◉

1.3.2 Impact Assessment

	Yes	No
1. Has the funding source(s) been identified for this proposal?	◉	○

If "Yes," select applicable funding source(s) and enter the fund availability date. If funding source is "Other Funds," specify below:

FUND SOURCE Mark all that apply	FUND AVAILABILITY DATE
[x] General Fund	FY 2018-2019
[ ] Special Fund	FY 0000-00
[ ] Federal Fund	FY 0000-00
[ ] Reimbursements	FY 0000-00

☐ Bond Fund	FY 0000-00
☐ Other Funds	FY 0000-00

2. Will the State possibly incur a financial sanction or penalty if this proposal is not implemented? If "Yes," provide details in Section 1.9 Business Problem or Opportunity Summary. ◉ ○

3. Is this proposal anticipated to have high public visibility? If "Yes," provide details in Section 1.9 Business Problem or Opportunity Summary. ◉ ○

4. On a scale of 1 to 3 (1 = None, 2 = Partially, 3 = Fully), indicate how well the current business processes are documented, communicated and available for review. 2

1.4 Business Sponsor and Key Stakeholders

Executive Sponsors

Title	First Name	Last Name	Business Program Area
Deputy Director	Katherine	Warburton	Clinical Operations
Deputy Director	Lupe	Alonzo-Diaz	Administrative Services
Deputy Director, CIO (A)	Rogene	Sears	Technology Services Division

Business Owners

Title	First Name	Last Name	Business Program Area
Staff Services Manager III (A)	Angela	Griffith	Administrative Services, Patient Cost Recovery Section
Data Processing Manager IV	Gina	Gonzales	Technology Services Division
Assistant Medical Director for Clinical Staff Affairs	Laura	Dardashti	Clinical Operations
Pharmacist, Clinical Operations Advisory Council	Uyen	Nguyen	Clinical Operations
Registered Nurse, Clinical Operations Advisory Council	Jana	Christ	Clinical Operations
	Stephanie	Perez	Clinical Operations

Health Information Management Director, Clinical Operations Advisory Council				

Key Stakeholders

Title	First Name	Last Name	Business Program Area/Group	External
DSH Hospital Administrators			Hospital Administration	☐
DSH Health Information Management Departments			Patient Registration	☐
DSH Trust Offices			Patient Registration	☐
DSH Pharmacists			Pharmacy Operations	☐
DSH Patient Cost Recovery Section			Billing	☐
DSH Nursing Staff			Nursing	☐
			California Health and Human Services Agency, Department of Technology, Department of Finance, and outside agencies including jails, prisons, and community hospitals	☑
DDS IT Manager	Don	Chipman	DDS Manager over current IT billing system (Cost Recovery System)	☑

1.5 Business Driver(s)

Mark all that apply

Financial Benefit:

- ☐ Increased Revenues
- ☐ Cost Savings
- ☑ Cost Avoidance
- ☑ Cost Recovery

Mandate(s):

- ☐ State
- ☑ Federal

Improvement:

- ☑ Better Services to Citizens
- ☑ Efficiencies to Program Operations
- ☑ Improved Health and/or Human Safety

	☐ Technology Refresh
Security:	☑ Improved Information Security ☑ Improved Business Continuity ☑ Improved Technology Recovery

1.6 Statutes or Legislation

Statutes or Legislation:	◉ New Statutes ○ Potential Legislation ○ Changes to Existing Legislation ○ Not Applicable
Bill Number:	HITECH Act
Legal Reference:	**American Recovery and Reinvestment Act of 2009, Pub. L. 111-5**
Additional Information:	Part of Public Law 111-5, the Health Information Technology for Economic and Clinical Health (HITECH) Act was signed into law by the federal government on February 17, 2009. The portion of the ARRA covering the HITECH Act includes Division A, Title XIII, and Division B, Title IV. According to the US Department of Health and Human Services, the HITECH act promotes the adoption and meaningful use of health information technology. "Meaningful use" specifies how certified Electronic Health Records are implemented and is currently measured by 15 core requirements and 10 menu requirements. Eligible hospitals and eligible providers must meet all core measures and at least five menu requirements to achieve Stage 1 meaningful use. The Center for Medicare & Medicaid Services (CMS) has planned payment reductions for hospitals and eligible professionals who do not meaningfully adopt Electronic Health Records use. Beginning January 1, 2015, eligible professionals who do not demonstrate meaningful use are subjected to a 1% Medicare payment reduction. This adjustment increases by 1% each year until it reaches a 3% payment reduction in 2017. CMS plans to continue increasing payment reductions up to 5% on a variable schedule after 2017. HITECH also directly impacted the Health Insurance Portability and Accountability Act (HIPAA) by imposing increased civil money penalties for HIPAA violations. Depending on the level of culpability of the violation, each infraction now levies a civil money penalty ranging from $100 to $50,000 up to a maximum of $1,500,000 for violations of each HIPAA provision, per calendar year.

Statutes or Legislation:	◉ New Statutes ○ Potential Legislation ○ Changes to Existing Legislation ○ Not Applicable
Bill Number:	Chapter 433, Statutes of 2015 (AB 532)

Legal Reference:	**Government Code Section 8310.9**
Additional Information:	AB 532 concerns the collection of ancestry and ethnic origin demographic information by CA state agencies and was passed on October 2, 2015. AB 532 requires state agencies that collect demographic data to offer individual respondents the option of selecting one or more ethnic or racial designations no later than January 1, 2022. AB 532 also requires state agencies to collect and report on the number or percentage of respondents who identify as each individual ethnic or racial designation, as each individual ethnic or racial designation alone or in combination with other designations, and as multiple ethnic or racial designations.

Statutes or Legislation:	◉ New Statutes ○ Potential Legislation ○ Changes to Existing Legislation ○ Not Applicable
Bill Number:	False Claims Act, 31 U.S.C. §§ 3729-3733
Legal Reference:	**Pub. L. 97-258, 1982, most recent revision Pub. L. 111-21, §4(a), 2009**
Additional Information:	The False Claims Act (FCA) imposes civil liability on any person who knowingly submits, or causes to be submitted, a false or fraudulent claim to the Federal Government. The penalty is between $5,000 and $10,000 for each FCA violation. In addition to FCA, the Civil Monetary Penalties Law authorizes the OIG to impose civil penalties for healthcare billing violations by any person, including an organization, agency, or other entity. Penalties range from $10,000 to $50,000 per violation and OIG may impose an assessment of up to three times the amounts claimed.

Statutes or Legislation:	◉ New Statutes ○ Potential Legislation ○ Changes to Existing Legislation ○ Not Applicable
Bill Number:	Civil Monetary Penalties L. 42 U.S.C. § 1320a
Legal Reference:	**Pub. L. 97-35, 1935, most recent revision Pub. L. 111-148, 2010**
Additional Information:	The Civil Monetary Penalties Law specifies that no person or organization will knowingly present a medical claim that is false, fraudulent, or requesting a greater payment than applicable to the service or treatment provided. This includes arranging for reimbursable services or otherwise receiving remuneration for a referral of a federal health care program beneficiary. The Social Security Act authorizes the federal government to seek civil monetary penalties, and the Office of the Inspector General may seek penalties ranging from $10,000 to $50,000 per each improper act and damages up to three times the amount of remuneration at stake.

1.7 Program Background and Context

The Department of State Hospitals (DSH), consisting of five state hospitals, has administrative and professional responsibility to provide patients committed to their sites with medical and clinical services that reflect the Department's philosophy, principles, and practices of psychosocial treatment and rehabilitation. In order to meet these obligations, it is crucial for DSH's five hospitals--which comprise the largest state hospital system in the nation--to have patient registration, pharmacy operations, primary care, and billing systems that function efficiently, safely, and in a fiscally responsible manner.

The scope of this project is each of these distinct functions: patient registration, pharmacy operations, and billing systems. Delivery of high quality primary care is tied into these foundational business areas. Patient registration is a function of Health Information Management Departments, Trust Offices, and related forensic personnel at the five state hospitals that collectively maintain a Master Patient Index. A Master Patient Index is an electronic database that holds information on every patient within DSH. Pharmacy operations including tasks such as medication prescription validation and dispensing are managed by Pharmacy Departments at the hospitals. DSH billing functions depend on data received from the hospitals and are coordinated and maintained centrally by the Patient Cost Recovery Section (PCRS) of Sacramento's Administrative Services Division. While each arm of the proposed project involves separate staff and stakeholders, the interoperability of patient data across each function is of paramount importance. Patient data must be exchanged across hospitals, between their departments, and also with external agencies, community hospitals, and regulatory bodies as required by law. Primary care service delivery cannot be modernized or improved without also upgrading these core business processes that support it.

The identified Executive sponsor and business owners link together the clinical programs, administration, and DSH Technology Services Division who manage patient registration, pharmacy operations, and billing systems and the numerous clinical and administrative professionals who utilize those systems. These individuals will oversee the business process by clarifying clinical aspects of desired project outcomes and by championing enterprise standards across DSH hospitals to improve the efficiency of patient registration, pharmacy, and billing business processes and the accuracy of the data flowing between those systems.

1.8 Strategic Business Alignment

Strategic Business Goals	Alignment
Safe Environment	This proposal helps achieve a safe environment at DSH by increasing ease of access to patient information for appropriate staff. This benefits both patient and staff safety by giving clinicians access to information they need to individualize treatment services. Also, this proposal ensures the accuracy of patient data. Accurate patient data supports the safety of DSH staff and patients alike through improved clinical decision-making. For staff, accurate data supports the development of plans to manage violent behavior. For patients, accurate data helps prevent the need for unnecessary duplication of assessment and treatment services.
Responsible Stewardship	This proposal reflects responsible stewardship through the careful safeguarding of state's investment in and responsible fiscal management of pharmaceuticals.
Excellence in Forensic Care	This proposal helps achieve excellence in forensic care by ensuring accurate patient data are shared with the court system, outpatient community partners, and other external stakeholders. It also builds a foundation for industry standard

	forensic mental health and medical treatment.
Safeguard Patient Information	This proposal aligns with the mission of the DSH Information Security Office which is to "protect and oversee the confidentiality, integrity, and availability of Department of State Hospitals information." There is an opportunity to reduce the number of Protected Health Information breaches resulting from the use of paper records. Paper records are often misfiled, and as a result are improperly disclosed to the wrong patients, to county courts, and to law enforcement personnel tasked with transport of patients.
Strategic Plan Last Updated	11/13/2012

1.9 Business Problem or Opportunity Summary

The Department of State Hospitals (DSH) manages the nation's largest inpatient forensic mental health hospital system, providing excellent forensic mental health and medical care to approximately 7,000 patients at any given moment. DSH's mission is to provide evaluation and treatment in a safe and responsible manner, seeking innovation and excellence in state hospital operations, across a continuum of care and settings. DSH provides daily care and mental health treatment to its patients. In Fiscal Year 2016–17, the department employed nearly 11,000 staff and served over 13,000 patients in a 24/7 hospital system supported by a $1.7 billion budget. DSH's standalone state hospitals are Atascadero, Coalinga, Metropolitan, Napa and Patton.

As part of DSH's commitment to providing the highest quality patient care, modernizing medical care delivery systems is a key priority for the department. Not only will modernization allow us to offer the highest quality care to DSH patients, it will allow DSH to continue to attract and retain superior medical and mental health providers. However, primary care service delivery does not operate in a vacuum; rather, coordinating the delivery of medical care to 7,000 patients is dependent upon a complex network of support services and business programs. Therefore, in order to make meaningful improvements to primary care service delivery at DSH, the foundational business areas that support primary care must also be included in any plans to update primary care.

Due in part to its sheer size, DSH standalone hospital operations experience complex problems involving the necessary coordination of patient care and the accurate flow of information and patient data between its numerous facilities, California Department of Corrections and Rehabilitation prisons, outside hospitals and medical treatment providers, and other community partners such as the Conditional Release Program. DSH has also experienced difficulties managing patient information within its hospitals, individually, due to differing requirements, needs, and resources in various departments. Driven by DSH's mission to continually improve the quality and excellence of treatment service, this proposal is designed to modernize the delivery of medical treatment as well as the core business program areas and systems upon which medical care is dependent: patient registration, pharmacy operations, and billing.

The relationship between primary care and its foundational business program areas at DSH is best understood in the context of the three key business problem areas driving the need for EHR-Core. First, DSH hospitals continue to depend on a 30-year-old, error-prone enterprise Master Patient Index within a system called Admission Discharge Transfer (ADT) that has outgrown and outlived its original uses. At the same time, pharmacy departments at DSH hospitals currently use software called Pharmacy Hospital Orders (PHO) to complete medication prescription validation and to inform billing and inventory tracking functions; however, pharmacy processes are based on this outdated mainframe system built in 1998 which is unable to maintain and adapt to current and future standards of practice and legal requirements. Finally, billing functions are currently achieved through numerous programs including the Data Systems Group (DSG) and Cost Recovery System (CRS) which transfer inputted data onto Center for Medicare & Medicaid Services (CMS) Form 1500 and Uniform Bill forms. DSH billing systems also rely on cooperation with another state agency, the Department of Developmental Services (DDS), for the actual submission of reimbursement claims to CMS. Though each business program area has different objectives and staff, registration, pharmacy, and billing depend on the

same patient data. Likewise, the problems faced by billing cannot be corrected without first or simultaneously correcting those problems faced by registration and pharmacy. Instead of addressing these business opportunities individually and perpetuating the need for multiple programs to coordinate communication with one another, DSH acknowledges the necessity to employ an integrated approach that collectively bridges those needs common to registration, pharmacy, and billing.

From 1986 to 1989, DSH (then Department of Mental Health, DMH) built its mainframe patient registration system ADT. Today, registration business practices require many more functions than simply maintaining patient registration and a Master Patient Index, yet current records are the primary legal basis for all patient movement for the last 27 years. While registration is central to DSH's current operations, these business practices were built for a different patient population. In the last ten years, DSH's population demographic has shifted from primarily civil court commitments to a forensic population referred through the criminal court system. As of 2016-2017, 91% of the current patient population is forensic, and the forensic population in DSH continues to increase. As a result, registration staff have struggled to keep up with the ever-evolving demands of updating psychiatric diagnostic codes and tracking forensic commitments. Due to current state of registration, the patient transfer data error rate is over 7%, which translates to an estimate of data errors in at least 910 of 13,000 patient records DSH handled during FY 2015-2016. A similar error rate of 5% has been observed when matching past records to present readmitted patients. In addition to requiring significant time and resources from registration staff to correct errors, the effects of data errors are more wide-reaching. For example, on DSH hospital admissions units, treatment staff depend on accurate patient registration data to inform clinical opinions and interventions that ensure patient and staff safety in an often volatile treatment setting. Incorrect or mismatched patient information not only increases the time and resources required of registration staff, such errors also directly impact patient care. Registration errors can lead to unnecessary duplication of numerous treatment services and medical tests. Measuring the full extent of potential unnecessary costs due to such registration errors is not possible in the current business state due to practice and business workflow variations across each of the DSH hospitals. DSH is also limited in its abilities to meet the requirements of recently enacted AB 532 which mandates the collection and reporting of the number or percentage of patients identifying as one or more ethnic or racial designations. While current registration methods collect patients' identified ethnicity, registration systems cannot accept more than one ethnic or racial designation per patient. While business processes can be altered to meet the requirements of AB 532, the registration systems DSH uses cannot. DSH is expected to comply with this mandate as soon as feasible but no later than 2022. EHR-Core's registration component has the flexibility to collect one or more ethnic or racial designations for each patient in a Enterprise Master Patient Index where our current systems lack this functionality and cannot be altered to do so. Registration has functioned in a relatively unchanged manner for nearly 30 years despite increasingly complex operational demands of DSH hospitals. The associated challenges and errors from registration practices can only be expected to increase as our registration staff and the software they use continue to struggle under a workload they were never intended to handle, and can no longer accommodate.

Similar to registration, pharmacy operations utilize the database interface software PHO which was built in 1998 and is primarily used for pharmacy departments' prescription validation. The pharmaceutical industry has changed in the last 15 years, rapidly integrating new and emerging medications and methodologies, such that DSH is simply unable to meet industry standards in managing the volume and complexity of prescriptions that are filled by pharmacy departments today. In 2016, DSH's pharmacy personnel processed approximately over 15 million transactions, and any disruption to their processes or systems would severely impair all pharmacy operations. Additionally, pharmacy departments are responsible for supply chain and inventory management as well as providing accurate reports to inform Medicare reimbursement billing. While pharmacy departments have considerable multifaceted responsibilities, the resources they have are not sufficient to meet these challenges. Pharmacy departments do not have the tools they need to effectively manage inventory or accurately inform billing. A lack of coordinated and standardized inventory management presents challenges related to managing pharmacy inventories and making informed decisions about ordering needed medications, reducing surplus stock based on past needs, and minimizing risk of diversion or theft. In fact, the magnitude and financial impact of not having modernized pharmacy operations is not fully known due to our lack of ability to take baseline data in this area. Moreover, the continually increasing complexity of Medicare Part D billing requirements necessitated introduction of a separate billing module that, too, has not kept up with industry

standards. While business process reengineering has taken place to address many of these needs manually, the implementation of sustainable automated procedures currently is not possible in the current tools provided to pharmacy departments. As time goes on, these pharmacy difficulties will place increasing financial, safety, and regulatory burdens on the state. DSH has the opportunity to standardize pharmacy prescription validation and supply chain management processes by implementing EHR-Core.

The issues described above with registration and pharmacy also have a significant impact on billing processes. The Department of Developmental Services (DDS) was traditionally responsible for the oversight of DSH's third party billing system. Third party billing refers to an entity performing billing services as an intermediary between two parties. In the 1980s, DDS and DMH entered into a Memorandum of Understanding (MOU) to identify its respective roles, including use of the Cost Recovery System (CRS) still employed today. As DSH's patient population has steadily increased over time, so too has Patient Cost Recovery Section's (PCRS) reliance on CRS to process Medicare claims. In contrast, DDS has experienced closure of some of its facilities and a reduction in their number of residents, making DDS less dependent and DSH more dependent on CRS. Even without direct control over CRS and its functions, PCRS acts as an intermediary between DSH to recuperate charges related to a patient's cost of care from any applicable insurance or private pay parties through this third party billing. Over time, this lack of autonomy has impacted functions such as quality control reviews, audits, claim corrections, trust functions, and private pay collections, which resulted in the decline of revenue. DSH's reliance on DDS means PCRS is unable to develop and implement more rigorous processes, claims resolution, and technical training for state hospital staff. This reliance on an outside agency has revealed business problems related to errors in and the accuracy of claims submitted, inefficient workflows, and inadequate reporting and tracking processes. For example, PCRS cannot confirm the accuracy of patient data due to a lack of accountability mechanisms in CRS. That is, CRS has no audit trail and cannot track the changes made by its individual users. Also, there have been errors resulting in unfair billing practices such as double billing of Medicare Part D and laboratory services, or not billing for all services rendered which is in conflict with the requirements of the False Claims Act and the Civil Monetary Penalties Law. PCRS staff have minimal control over CRS functionality and occasionally credits and adjustments occur on patient accounts erroneously. Moreover, DDS is phasing out maintenance of CRS which will leave DSH without a mechanism to seek reimbursement for Medicare-eligible services. When DDS ends support for CRS, PCRS will not be able to process, submit, or be reimbursed for claims. Utilizing CRS and depending on DDS for billing affects PCRS's ability to achieve its mission of increasing revenue in order to offset pressures to the state General Fund. Autonomous third party billing is crucial for DSH to correct errors and maximize revenue for the state.

Beyond the need for autonomous billing, DSH business processes require the accurate exchange of data between pharmacy and billing departments. Pharmacy reports do not directly communicate with Data Systems Group (DSG) and CRS billing software, posing practical challenges when attempting to automate billing functions. This disconnect is also reflected in the work done by each set of staff: Pharmacy personnel verify individual orders for patients internally; billing personnel request reimbursement from insurance providers externally. The reports generated by pharmacy are the link between these departments, yet accurate reporting is hampered once again by the inability to directly relay vital information to billing. These inefficiencies and lack of automated billing not only drain staff time and resources, they translate to over one million dollars of annual unrealized cost recovery in the form of Medicare reimbursement. Current processes may also lead to incurring allegations of Medicare fraud due to inaccurate billing. In May 2015, Medicare Part D billing processes were temporarily suspended within DSH so that underlying infrastructure needs could be addressed. While billing processes did resume later in 2015, there remains a risk of suspension of Medicare Part D billing if DSH continues to conduct business as it does now, without the tools needed to implement industry-standard billing processes and inventory control methods. DSH hospitals' risk for potential Medicare fraud allegations come from difficulties with assigning, tracking, and accurately billing for correct National Drug Code (NDC) numbers when medications are ordered, administered, or returned. Also, when DSH patients are temporarily discharged to external health facilities for outpatient medical treatments such as dialysis, patient data and financial transactions between DSH and external healthcare providers occur, requiring an exchange of billing information. Currently DSH has limited abilities to automate billing functions due to lack of electronic data sharing internally as well as with its healthcare partners.

In February 2016, the federal Department of Health and Human Services Centers for Medicare & Medicaid

Services (CMS) released the letter SMD-#16-003, which provided updated guidance about the availability of federal funding at the 90% matching rate for state expenditures on activities to promote Health Information Exchange (HIE) and encourage the adoption of certified EHR technology by certain Medicaid providers. HIE refers to the secure and appropriate sharing of vital medical information of patients between health care organizations. Further research found that DSH may now be eligible for some federal incentive funding to support HIE. DSH will pursue funding opportunities based on eligibility requirements for such programs.

Over time, through a combination of healthcare audits and feedback from external agencies, it has become apparent that current business needs related to patient registration, pharmacy operations, and billing cannot be met, and standard practices in use at DSH hospitals are insufficient for the current and future demands of healthcare documentation and patient data exchange. Various factors have led to these deficiencies including a continued dependence on outdated registration and pharmacy systems, evolving requirements and standards of practice in regard to pharmacy operations, and an overdependence on another state agency to complete, track, and correct errors in CMS claims as originally provided by DSH.

EHR-Core bridges the business problems experienced individually by registration, pharmacy, and billing, encompassing the operational needs of each area with a unified system to be used at DSH hospitals and DSH-Sacramento that primarily benefits the doctors, nurses and related healthcare providers offering 24/7/365 primary medical care. EHR-Core is a name that refers to the core, foundational functions of an Electronic Health Record (EHR) stemming from these pressing business opportunities. As opposed to acquiring separate registration, pharmacy, and billing tools in isolation—which could perpetuate existing business problems involving consistency of patient data across numerous settings—the implementation of core EHR functions addresses these individual crucial business problems through an overarching approach.

Therefore, implementation of EHR-Core is necessitated by several financial, legal, and service improvement business drivers. First, the most evident drivers are the potential for reimbursement opportunities, and cost avoidance achieved through the automation of billing practices, as made possible by the modernization of pharmacy operations and the introduction of standardized pharmacy inventory tracking. Next, implementation of an EHR to replace and standardize various practices will move DSH toward compliance with the Health Information Technology for Economic and Clinical Health (HITECH) Act. While HITECH mandates the meaningful use of EHRs, CMS sets the criteria through various “Meaningful Use” core set and menu set objectives (e.g., electronically recording active medication lists, known allergies, patient demographics, clinical summaries, and medication orders). DSH is currently not in compliance with CMS Meaningful Use objectives and therefore is subject to ongoing penalties for all Medicare claims. DSH incurs a 1% payment reduction for Medicare reimbursements as of January 1, 2015, and further noncompliance will lead to increased penalties annually up to 5% and as high as 9% in future years.

DSH also risks being out of compliance with the Civil Monetary Penalties Law as there have been errors resulting in double billing of Medicare Part D and laboratory services. If not corrected, future errors could lead to potential penalties and fines. Similarly, revitalizing third party billing processes would align DSH with the federal recommendations cited in an Office of the Inspector General (OIG) report (OEI-05-99-00100). This analysis suggested proprietary medical billing software (such as CRS) presents the highest risk of producing inaccurate claims. The OIG report states that proprietary medical billing software is especially prone to producing claim errors and may present the greatest risk of misuse. For example, CRS does not contain an audit trail in order to trace the flow of data, which is one of the biggest deficiencies cited by the OIG. It is essential to identify the source of the claim, and all persons or parties through whom the claim passed before it was received by Medicare. In addition, the OIG report cites problems with having a select few responsible for developing, implementing, and maintaining proprietary software such as CRS. Having so few people responsible for CRS reduces the likelihood that someone will see and correct systemic errors that produce erroneous claims. By consolidating and autotomizing the billing functions under DSH by replacing CRS, DSH can track the source of the data, manage the system, and therefore minimize the risk to DSH and Medicare by producing more accurate claims. If the proposal is not approved, DSH remains at high-risk of being out of compliance with applicable medical billing statutes and regulations. If audited, negative findings may be produced demonstrating DSH's lack of compliance with applicable medical billing laws. At an even higher level, this billing example reveals the necessity of ensuring registration, pharmacy, and billing staff working throughout the state to reference the

same patient data without errors. Disparate processes, tools, and tracking methods employed across DSH hospitals ultimately impacts the accuracy of DSH patient data beyond one individual work area or department.

Acquiring core EHR functionality would meet the current multidimensional needs of patient registration, pharmacy operations, and billing functions while also starting to achieve some of the Meaningful Use criteria required by federal law. However, it should also be noted that only a portion of these mandatory Meaningful Use objectives would be met with this proposal. EHR-Core presents a fiscally responsible approach to current business problems and also sets the stage for future expansion to achieve those objectives. Finally, the secondary benefits brought by modernization of these systems via EHR, such as improved patient care coordination, diagnostics and outcomes, increased efficiencies in reporting, and employee retention, are also important business drivers. Just as registration, pharmacy, and billing rely on the same patient data, the business opportunities that each area faces need to be solved concurrently. Otherwise, DSH runs the risk of experiencing the same problems as it does now where patient data must be manually transferred from department to department, leaving additional opportunities for error and lack of efficiencies in the absence of automated data systems communicating with each other.

Implementation of EHR-Core system at DSH would simultaneously improve primary care services while resolving key problems in registration, pharmacy, and billing business areas by modernizing systems and processes to current healthcare standards. Rather than develop three independent proposals to address registration (ADT), pharmacy (PHO), and automated billing (DSG and CRS), which could lead to increased cost and a burden on technological services, acquisition of core functionality of an EHR system would address the need for interoperable patient data exchange across each of these systems as well as with external stakeholders. The severely inadequate state of business processes and systems underlying these key hospital operations, along with significant financial, mandate, and service improvement business drivers, make moving forward with the EHR-Core proposed project a responsible decision.

1.10 Business Problem or Opportunity and Objectives Table

ID Problems or Opportunities

1	Documenting patient registration and maintaining a Master Patient Index are completed by HIMD and related forensic personnel; however, current business practices require expanded and upgraded capabilities. This lack of modernized business practices has led to significant data errors in areas such as verifying patient transfers and matching readmissions with previous records. Data errors require considerable staff time and resources to correct and amend records. Currently, patients that return to care in DSH are not matched to their previous records at a rate of 5%.

Obj #	Objective
1.1	By July 2020, implement a solution that creates a new Master Patient Index that reduces error of matching returning patients to previous records from rates of 5% to 2% or less.

Metric	Baseline	Target	Measurement Method
Number of returning DSH patients incorrectly matched with previous records	5%	2% or less	Continue existing method of auditing patient registration data (currently through ADT)

Obj #	Objective
1.2	By the end of the first 60 days after project go-live, DSH will use a single patient identifier for 100% of patients for whom registration data are electronically accessible.

Metric	Baseline	Target	Measurement Method
Patients who are assigned a	None	100%	Current process is not measurable as

single patient identifier across electronic systems			the function does not exist

Obj #	Objective
1.3	By the end of the first 60 days after project go-live, DSH will be able to electronically access patient registration data for 80% of patients.

Metric	Baseline	Target	Measurement Method
Patients admitted for whom registration data is electronically accessible	None	80%	Current process is not measurable as the function does not exist

Obj #	Objective
1.4	In the first 60 days after project go-live, 100% of Registration workstations will be successfully updated with the new electronic registration solution.

Metric	Baseline	Target	Measurement Method
Number of workstations	0	100%	Count workstations successfully installed

ID Problems or Opportunities

2	Pharmacy departments purchase, validate orders of, dispense, and report on medications and other supplies used at DSH hospitals. Other DSH departments and external agencies depend on pharmacy records to inform care.

Obj #	Objective
2.1	By the end of the first 90 days after project go-live, DSH will be able to access the active medication list for 80% of patients.

Metric	Baseline	Target	Measurement Method
Data fields or reports	None	80% functionality	Current process is not measurable as the function does not exist

Obj #	Objective
2.2	By July 2020, DSH will have a functioning drug formulary check module that will exchange 100% of data between DSH pharmacy and billing systems.

Metric	Baseline	Target	Measurement Method
Data exchange between pharmacy and billing systems	None	100%	Current process is not measurable as the function does not exist

Obj #	Objective
2.3	In the first 60 days after project go-live, 100% of Pharmacy workstations will be successfully updated with the new electronic pharmacy solution.

Metric	Baseline	Target	Measurement Method
Number of workstations	0	100%	Count workstations successfully installed

ID Problems or Opportunities

3	The primary goal of the Patient Cost Recovery Section (PCRS) is to maximize third party billing revenue therefore decreasing pressure to the General Fund. PCRS seeks third party reimbursement from a variety of sources such as Medicare, private payors, and commercial insurance. PCRS submits Medicare Parts A, B, and D claims to CMS. Over 40,000 claims were submitted in fiscal year 2015-2016. Billing functions should accurately represent clinical health record input and services actually rendered by clinical and medical staff; however limitations in current business practices and dependence on another state agency to submit these claims have resulted in errors in over 22,500 claims (57% error rate, plus or minus 3%) for the same time period. A high claims error rate prevents DSH from recovering reimbursement on the majority of claims submitted to Medicare. DSH has an opportunity to increase the accuracy of Medicare claims that are submitted and decrease the number of claims rejected due to errors, resulting in considerable cost recovery via Medicare reimbursement. The limitations in business practices and dependence on an antiquated IT billing tool prevents PCRS from fully capturing charges associated with all medical services provided to patients and making billing statements easily accessible to third parties. These limitations hinder PCRS

Obj #	Objective
3.1	By July 2020, implement a billing solution to reduce the number of Medicare claims returned with errors from an average of 57% to 25% or less.

Metric	Baseline	Target	Measurement Method
Number of Medicare claims returned with errors	57%	25% or less	Continue reviewing existing Patient Cost Recovery Section tracking report

Obj #	Objective
3.2	In the first 60 days after project go-live, 100% of billing workstations will be successfully updated with the new electronic billing solution.

Metric	Baseline	Target	Measurement Method
Number of workstations	0	100%	Count workstations successfully installed

Obj #	Objective
3.3	By July 2020, maximize revenue from all funding sources including, but not limited to: private pay and Medicare parts A, B and D.

Metric	Baseline	Target	Measurement Method
Dollars	$3.4 million	$5.5 million	Annual Revenue Report

Obj #	Objective
3.4	By July 2020, accurate patient cost of care accounts to reduce the risk of an audit and to collect costs associated with evaluation and treatment.

Metric	Baseline	Target	Measurement Method
Time; days	It currently takes 1-2 weeks to reconcile a patient's cost of care account	Zero days; if patient cost of care accounts are accurate, it should not take any time to reconcile an account	Time-study

Obj #	Objective
3.5	By July 2020, eliminate the number of potential instances for duplicative billing for all services. Data is only available for duplicative billing related to lab and radiology services, however it is likely this issue spans across other services.

Metric	Baseline	Target	Measurement Method
More than one charge/bill per service rendered	On average, about four percent of lab service transactions contain duplicative charges. In March 2016 (most recent example), of the 41,310 lab service transactions, 1,537 contained duplicative charges. In April 2014, there were 84 instances of double billing for radiology	Zero instances of double billing	Number of transactions containing duplicative charges

Obj #	Objective
3.6	By July 2020, all patient cost of care information should be managed by DSH. Currently, there are six data management systems that store patient cost of care information that are not directly managed by DSH.

Metric	Baseline	Target	Measurement Method
Number of separate data repositories not managed by DSH	Six data repositories	One centralized data repository managed directly by DSH	List of data management systems and user rights

Obj #	Objective
3.7	By July 2020, ability to track and identify user changes in patient cost of care information. There is not an ability in the current data management functionality to track or identify who and/or what changes are being made to patient cost of care account information.

Metric	Baseline	Target	Measurement Method
Data fields or reports	None	100% feasible	Current process is not measurable as the function does not exist

Obj #	Objective
3.8	By July 2020, have the ability to print out billing statements organized by addressee rather than randomly.

Metric	Baseline	Target	Measurement Method
Time to organize billing statements by addressee	It currently takes one to two business days (8	One hour per month	Workflow, time-study, and functionality

	hours-16 hours) to mail out billing statements every month. That is 96-192 hours annually

ID Problems or Opportunities

4	To effectively modernize primary care documentation, primary care systems must be integrated with registration, billing, and pharmacy systems that share data amongst themselves and update in real time.

Obj #	Objective
4.1	In the first 60 days after project go-live, 100% of primary care workstations will be successfully updated with the new electronic primary care solution.

Metric	Baseline	Target	Measurement Method
Number of workstations	0	100%	Count workstations successfully installed

Obj #	Objective
4.2	In the first 60 days after project go-live, DSH will have a primary care module that can exchange 100% of data between DSH primary care and registration, pharmacy, and billing systems.

Metric	Baseline	Target	Measurement Method
Data exchange between primary care and other systems	None	100%	Current process is not measurable as the function does not exist

Obj #	Objective
4.3	By July 2020, DSH providers will complete 90% of primary care patient documentation electronically in the selected solution.

Metric	Baseline	Target	Measurement Method
Number of documents completed electronically of completed documents	None	100%	Current process is not measurable as the function does not exist

1.11 Business and Stakeholder Capacity

1.11.1 Business Program Priorities

	Yes	No
Does this proposal share resources (state staff, vendors, consultants or financial) with other business program priorities within the Agency/state entity?	○	◉

1.11.2 External Stakeholder Involvement

Department of Technology, Department of Finance

1.11.3 New or Changes to Business Processes

	Yes	No
Does the Agency/state anticipate this proposal will result in the creation of new business processes?	◉	○

	Yes	No
Does the Agency/state entity anticipate changes to existing business process?	◉	○

The sponsor is willing to dedicate resources to meet business need; higher priority will be given to this proposed request.

1.12 Organizational Readiness

1.12.1 Governance Structure

	Yes	No
Does the Agency/state entity have an established governance structure for combined business and IT decision making, including information security and privacy?	◉	○

The DSH Portfolio Management process guides the planning, execution, and management of the DSH Project Portfolio. DSH TSD Portfolio Management Council meets monthly and assesses proposals with an IT component for alignment with business strategic goals and objectives by applying a weighted decision model. The Portfolio Management Council is comprised of DSH representation for Business, Information Technology, Legal, Discovery, Risk, Compliance, Data Office/Governance, Records and Information Management. The Portfolio Management Council provides the scored proposal with feedback pertaining to the proposals potential impact on the enterprise to the Executive Leadership Team (ELT). The ELT insures that proposals approved to become projects are in line with the overall strategic direction of the enterprise and provide business value.

1.12.2 Leadership Participation

Identify the levels of leadership that are aware of and engaged in addressing the business problem(s)/ opportunity(ies) identified in this proposal (check all that apply):

- ☑ Executive
- ☑ Senior Management Business/Program
- ☑ Mid-level Management Business/Program
- ☑ Senior Management IT
- ☑ Mid-level Management IT
- ☑ Enterprise Architect

DSH has engaged existing governance teams throughout the department including hospital executive teams, the Clinical Operations Advisory Council, pharmacy service managers, and the Patient Cost Recovery Section. DSH will also hold regular meetings with an oversight committee comprised of members from the Hospital Automation Committee (HAC; DSH IT Governance Body), the Project Management Office (PMO), before mentioned PMs, and representatives from the Clinical Operations Division (a DSH program governance body) will be held for the purposes of tracking project progress, providing direction and support, and resolving issues/risks that have been elevated to this level.

1.12.3 Resource Capability/Skills/Knowledge for Stage 2 Alternatives Analysis

	Yes	No
Does the Agency/state entity anticipate requesting additional resources, through a budget request, to further study this proposal and/or perform procurement analysis?	◉	○

Of the Agency/state entity resources identified to perform Stage 2 Alternatives Analysis for this proposal, enter the number of staff who have had experience with planning projects of a similar nature.

1

The project's team will utilize appropriate project team members providing the knowledge and skill set necessary from the impacted business area(s) SMEs to complete Stage 2 Alternatives Analysis deliverables.

1.12.4 Training and Organizational Change Management

	Yes	No

	Yes	No
With respect to the magnitude of this proposal, does the Agency/state entity have resources, processes, and methodologies in place to provide training and organizational change management services?	○	◉
Does this proposal affect business program staff located in multiple geographical locations? If "Yes," specify the city, state, number of locations and approximate staff in each location:	◉	○

City	State	Number of Locations	Approximate Number of Staff
Atascadero (DSH-Atascadero)	CA	1	1,746
Coalinga (DSH-Coalinga)	CA	1	1,660
Napa (DSH-Napa)	CA	1	1,770
Norwalk (DSH-Metropolitan)	CA	1	1,055
Patton (DSH-Patton)	CA	1	1,846
Sacramento (DSH-Sacramento)	CA	1	450

The DSH utilizes the Prosci 3-Phase Change Management Process as model for implementation.

1) Preparing for change includes conducting risk analyses, identifying anticipated resistance and preparing action items in response.

2) Managing change requires developing communication plan, internet resources, training and risk analyses plan.

3) Reinforcing change will require continual assessment of adoption of policies and processes, gauge resistance, solicit feedback and identify gaps for intervention. For Office of Protective Services Training Tracking, Learning Management System and Asset Management program adoption, the magnitude of change anticipated will be minimal.

Approximate number of staff impacted includes medical, clinical, administrative, and ancillary employees that will likely utilize EHR.

While DSH has resources, processes, and methodologies in place at each geographical location in the form of established Training Departments, a project of this magnitude will require additional resources. Appropriate staff/contracting resources will be requested as part of project planning and budget request efforts.

1.12.5 Enterprise Architecture

	Yes	No
Does the Agency/state entity have a documented target (or future state) enterprise architecture that provides the overall business and IT context for this proposal?	◉	○

The Enterprise Architecture Committee (EAC) is an established entity within DSH that aligns business goals and objectives with the technical architecture. The EAC evaluates Projects, Standards, Business Objectives and Goals, alternative analyses submitted by the CIO, Senior Management, PMO Director, EAC Team Lead and/or EAC Primary Chair. The EAC addresses each submittal based on an assigned priority. The EAC assigns technical staff from potentially impacted areas including, but not limited to: security, risk, infrastructure, business programs, helpdesk and the project management office to assess the overall new emerging standard,

technology and/or projects impact on the DSH enterprise. If a new emerging standard, technology and/or project is approved by the EAC; processes, support models and/or governance plans are established, altered or updated as appropriate.

1.12.6 Project Management

Project Management Risk Score:	0.8

1.12.7 Data Management

	Yes	No
1. Does the Agency/state entity have an established data governance body with well-defined roles and responsibilities to support data governance activities?		
2. Does the Agency/state entity have data governance policies (e.g., data policies, data standards, etc.) formally defined, documented and implemented?		
3. Does the Agency/state entity have data security policies, standards, controls, and procedures formally defined, documented and implemented?	◉	○

The governance and management structure will help the TSD stay on track and ensure a successful partnership with customers. An important success factor for effective data management is agreement on roles and responsibilities. Data management governance operates on the premise that decisions and mitigation strategies are decided by the Subject Matter Experts (SME) in units and project teams, or as close to these SMEs as possible. As issues and risks require decisions and strategies from increasing levels of authority, the escalation path follows the chain of command through the TSD, clinical operations forums, and upward through the organizational structure referenced above. DSH has implemented several IT security policies designed to control and protect DSH data. Those policies are available on the DSH Intranet.

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