



# Stage 1 Business Analysis

California Department of Technology, SIMM 19A.2 (Rev. 2.4), Revised 4/2/2018

## 1.1 General Information

Agency or State Entity Name:	Department of State Hospitals
Organization Code:	4440
Proposal Name:	Pharmacy Modernization
Proposal Description	The Department of State Hospitals (DSH) proposes to implement pharmacy modernization that will consist of inventory, unit dose repackaging, automated dispensing, and patient specific medication billing as well as pharmacy data integration requiring rearchitecting the existing pharmacy related application environment to accommodate the new pharmacy system. Pharmacy Modernization will directly improve patient care and hospital operations. In addition, this will allow DSH to effectively track inventory, enhance patient medication safety, capture patient specific medication billing to increase revenues, and decrease the likelihood of drug shortages.
When do you want to start this project?:	7/1/2020
Department of Technology Project Number:	4440-127

## 1.2 Submittal Information

<b>Contact Information:</b>	
Contact First Name	Contact Last Name
Kwan	Kim
Contact Email	Contact Phone Number
<a href="mailto:Kwan.Kim@dsh.ca.gov">Kwan.Kim@dsh.ca.gov</a>	916-653-6361
Original Submission Date:	9/26/2018
Version Number:	2.0 (Sections 1.6 Business Alignment, Objective Table Updates)
<b>Project Approval Executive Transmittal</b>	
Attachment:	Include the Project Approval Executive Transmittal as an attachment to your email submission.

## 1.3 Business Sponsorship

<b>Executive Sponsors</b>			
<b>Title</b>	<b>First Name</b>	<b>Last Name</b>	<b>Business Program Area</b>
Executive Director	Brandon	Price	DSH -- Coalinga
<i>Select + to add additional Executive Sponsors</i>			
<b>Business Owners</b>			
<b>Title</b>	<b>First Name</b>	<b>Last Name</b>	<b>Business Program Area</b>
Chief Information Officer	Rogene	Sears	DSH -- TSD
Medical Director	David	Fennell	DSH -- Atascadero
Medical Director	Robert	Withrow	DSH -- Coalinga
Medical Director	Nady	Hanna	DSH -- Metropolitan
Medical Director	Patricia	Tyler	DSH -- Napa
Medical Director	Kayla	Fisher	DSH -- Patton
Pharmacy Service Manager (PSM)	Grace	Hayes	Pharmacy Services (DSH-A)
Pharmacy Service Manager (PSM)	Daniel	Siev	Pharmacy Services (DSH-C)



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Pharmacy Supervisor	Elizabeth (Lisa)	Nguyen	Pharmacy Services (DSH-M)
Pharmacy Operations Director	Glen	Itow	Pharmacy Services (DSH-M)
Pharmacy Supervisor	Ruben	Lozano	Pharmacy Services (DSH-N)
Pharmacy Service Manager (PSM)	Nikko	Laparan	Pharmacy Services (DSH-N)
Pharmacy Operations Director	John	Anton	Pharmacy Services (DSH-P)
Pharmacy Supervisor	Uyen	Nguyen	Pharmacy Services (DSH-P)
Nursing Services	Leslie	Kazarian	Nursing Administration (DSH-A)
Nursing Services	Leah	Holmes	Nursing Administration (DSH-A)
Nursing Services	Julie	West	Nursing Administration (DSH-A)
Nursing Services	Megan	Wills	Nursing Administration (DSH-A)
Nursing Services	Kiran	Hundal	Nursing Administration (DSH-C)
Nursing Services	Adella	Davis-Sterling	Nursing Administration (DSH-M)
Nursing Services	Dean	Percy	Nursing Administration (DSH-N)
Nursing Services	Steve	Athens	Nursing Administration (DSH-N)
Nursing Services	Charles	Allen	Nursing Administration (DSH-P)
Patient Cost Recovery, SSM III	Angela	Griffith	Billing Services (DSH-SAC)
Patient Cost Recovery, Manager 1	Jennifer	Jaeger	Billing Services (DSH-SAC)

Select + to add additional Business Owners

## Program Background and Context

The Department of State Hospitals (DSH) manages the nation's largest inpatient forensic mental health hospital system. Its 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 is responsible for the daily care and provision of mental health treatment of its patients. DSH oversees five state hospitals and employs nearly 11,000 staff. Additionally, DSH provides services in jail-based competency treatment programs and conditional release programs throughout the 58 counties. In FY 2017-18, DSH served 11,961 patients within state hospitals and jail-based facilities, with average daily censuses of 5,897 and 227 respectively. The conditional release program (CONREP) maintains an average daily census of approximately 654. DSH's five state hospitals are Atascadero, Coalinga, Metropolitan – Los Angeles, Napa and Patton. Pursuant to the Budget Act of FY 2017-18, the psychiatric programs operating at state prisons in Vacaville, Salinas Valley, and Stockton, where DSH treated mentally-ill prisoners, have been transferred to the responsibility of the California Department of Corrections & Rehabilitation (CDCR) as of July 1, 2017. DSH continues to designate 336 beds at three of its state hospitals, Atascadero, Coalinga, and Patton for the treatment of mentally-ill prisoners.



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On a daily basis, the nursing staff within DSH encounter an ever changing and challenging environment all the while tending to patient needs in a unique forensic environment. Due to the complex nature of the patient needs, it is not uncommon for prescribed medication to be changed for PRN (Pro re nata - As Needed) or off-cycle throughout the day based on the medical concerns and/or needs of the patient. The nursing staff must remain vigilant so that orders written by the physician are processed in a timely manner. With this, a hardcopy is obtained and then either faxed or hand delivered to the pharmacist for fulfillment and then dispensed to the patient. On average the nursing staff within DSH complete medication distribution for the patients in two administration cycles and any additional as needed off cycle drug passes. The allotted timeframe for medication administration (also known as the med pass) is within 2 hours per Title 22<sup>1</sup>. Fitting the medication pass within 2 hours can be challenging with larger units and in forensics settings. For some patients this task is more time consuming based on the amount of medication that they must receive on top of various administration possibilities; some require crushed medication, mixing with pudding/thickeners and through gastrostomy tubes. Frequently challenged with a lack of cooperation or becoming agitated due to the wait time in line from the patient in a forensic setting, this can be detrimental to meeting the time constraint allowed for medication pass compliance processing guidelines. Lastly, within some DSH units the patient must have their medication administered to them in their rooms rather than in line. In some locations, the processes nursing staff currently use is a manual work around utilizing antiquated equipment. This process is done by hand and leaves much room to error not only for inventory but also for patient safety should the wrong drug be pulled and administered to the patient.

Current processes for pharmacy vary from site to site. At four of the five hospitals a medication order is written in paper format and hand delivered to the pharmacy or received through fax. Upon receiving the document, a pharmacy technician enters the order for the pharmacist to confirm the order is correct, that the dosage is appropriate, and evaluate for drug interactions. After the pharmacist has evaluated and validated the order, the pharmacy technician fills the order. Once filled, the pharmacist reviews the medication fill and the unit is notified that medication is ready for pick up. The nursing unit picks up the medications after signing for all doses and medications not administered to the patient are documented on a paper form. Unused medications are then credited by the pharmacy technician back to the patient. The pharmacist then reviews the credit form to ensure accuracy and files it in the pharmacy. For controlled medications (for example, opiates), additional paper documentation is required with accountability sheets requiring nursing staff counts the medication at each change of shift, review of documentation by Pharmacy, and periodic inventory checks by Pharmacy.

Pharmacy Modernization will address a dire need for standardization across the DSH hospital system meeting the requirements of not only the Pharmacists and Nursing staff but ultimately the patients for which we serve. Ultimately, the five key areas of opportunity are 1) inventory control, (2) unit dose repackaging machines, (3) automated dispensing cabinets, (4) patient specific medication billing, and (5) data integration. The high-level overview below depicts some of the many issues that the Pharmacy, Nursing and Billing teams face day-to-day.

## 1. Inventory Control:

While each hospital has taken labor intensive measures to safeguard controlled drugs, there is no standardized process for the rest of the pharmaceutical supply. Beyond controlled drugs, there is minimal true inventory control of pharmaceuticals since pharmacists do not have mechanisms to record incoming inventory and debit what is going out from that stock. Current work-arounds for inventory control vary at each hospital. For example, DSH-Atascadero does a monthly tracking of 20 medications, which is often significantly off, at least in part because their hospital's as-needed medications use is not captured towards inventory. DSH-Patton has a workaround of their automated dispensing cabinets by making the pharmacy a virtual cabinet, but this is an imperfect system without software designed for the purpose and cannot be used by the hospitals without automated dispensing cabinets.

Currently, when drugs are received, before placing them into inventory, pharmacy personnel manually performs appropriate receipt procedures, such as reconciling drugs received to drugs ordered, to ensure that discrepancies

<sup>1</sup> Title 22 Allotted timeframe for medication administration



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between quantity and drug type do not exist. Once the drugs received have been verified, then they are physically maintained in secure storage areas or active dispensing areas of the pharmacy. At DSH-Coalinga and DSH-Patton, drug storage includes the use of automated dispensing devices where drugs are directly scanned and input into the pharmacy management system according to the type of substance, allowing for automatic tracking and inventory counts.

## 2. Repackaging:

All DSH hospitals have repackaging machines but would benefit from updating to equipment that can communicate with inventory control software for better accountability and efficiency. DSH-Coalinga's repackaging machine is older and should have an immediate update. The other hospitals are utilizing a repackaging equipment with limited functionality. Because of this, inventories are currently conducted once per year for all medication and by law at least quarterly for controlled substances. A repackaging machine takes bulk packaged medications and puts them into unit dose packaging. Unit dose packaging can be done as multiples of a drug or can be configured to sequence medications in dated and timed strips for individual patients. This proposal includes a transition plan to update equipment for fully integrated pharmacies and efficient use of staff for remaining hospitals

## 3. Dispensing:

The current Drug Dispensing System is unable to update counts based on the supply it received from the warehouse, generate a list of medication order based on current supplies, review the balance on hand and must rely on DSH staff to fill out a refill form. Additionally, the staff must visually inspect the physical inventory for every medication each time they place an order, any nursing staff that arrives to the central pharmacy to retrieve any patient-specific medication(s) must fill out a form (paper tracking), handwriting and keying information from a paper form creates risk of transcription errors. The current Drug Dispensing System cannot generate needed meaningful reports, is unable to process multiple National Drug Code (NDC)s, needs its own computer specific to the software licensing and customization of reports is minimal.

## 4. Patient Specific Medication Billing:

Under a Memorandum of Understanding (MOU), Department of Developmental Services (DDS) has provided billing services for DSH. An increasing DSH patient population, and low reimbursement rates prompted DSH to develop their own billing unit, the Patient Cost Recovery Section (PCRS). PCRS is working to improve billing practices in DSH to maximize the recovery of cost of care, mitigate risks associated with incorrect billing practices, and improve patient care. Billing practices and resources for billing have evolved differently at each of the DSH facilities. None of the DSH hospitals meet the standard of practice to scan a bar coded patient identifier and each medication at time of administration for recording. This barcode scanning practice enhances patient safety by assuring an active order and the right medication for the right patient. This also accurately captures medication use in real time for billing.

## 5. Data Integration:

Currently within DSH, there is a need for re-architecture to eliminate an increasingly expensive process to support and was set up in such a way that it creates, data unavailability and data inaccuracies barriers to innovation, duplicates information and business processes, and limits service coordination and self-service capabilities. Pharmacy Hospital Operations (PHO) legacy software is archaic having been developed, in the 1990s. It lacks a comprehensive medication management system that would improve operations, automate physician orders and pharmacy operations, support clinical monitoring and documentation, and provide for an efficient and accurate billing/claims system. This program was built within DSH in the 90's to be compatible with the 1980s ADT (Admissions Discharge and Transfer) computer system. PHO was designed approximately ten years prior to Medicare D billing. Further, with the lack of automation, the ability to share business processes, support evidence-based decisions, foster self-service access to information and integrate service delivery DSH is unable to create a standardized pharmacy system environment. Data cannot flow effectively among legacy and new systems for data availability and analytics without rearchitecting pharmacy related applications and data environment.



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## 1.4 Stakeholders

### Key Stakeholders

Org. Name	Name
DSH Pharmacy Services	Pharmacy Services Managers
Internal or External?	<input checked="" type="checkbox"/> Internal <input type="checkbox"/> External

### When is the Stakeholder impacted?

Input to Business Process	During the Business Process	Output of the Business Process
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### How are Stakeholders impacted?

Input to business process for medication ordered, during monitoring medication on hand, output of required reports.

### How will the Stakeholders participate in the project?

Pharmacy managers provide leadership, and oversight input for the business process throughout. They will assist with the policy directives required for the organizational change management and participate in gathering requirements from the onset of the project and throughout the implementation. Additionally, they will provide pharmacy user acceptance testing and participate in organization change management as required throughout the project.

Org. Name	Name
DSH Pharmacy Services	Pharmacy Services Clinicians
Internal or External?	<input checked="" type="checkbox"/> Internal <input type="checkbox"/> External

### When is the Stakeholder impacted?

Input to Business Process	During the Business Process	Output of the Business Process
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### How are Stakeholders impacted?

Pharmacy Services Clinicians provide input for the medication administered to patients, during the process provide medication availability to patients, and provide output of medication accountability and documentation.

### How will the Stakeholders participate in the project?

Provide pharmacy requirements input for current process (AS-IS), desired outcome of the new process and procedures (TO-BE), user acceptance testing of the new systems, and participate in the adoption of the organizational change management process throughout the project.

Org. Name	Name
DSH Pharmacy Services	Central Nursing Staff
Internal or External?	<input checked="" type="checkbox"/> Internal <input type="checkbox"/> External

### When is the Stakeholder impacted?

Input to Business Process	During the Business Process	Output of the Business Process
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### How are Stakeholders impacted?

The Central Nursing Staff are impacted during the process of dispensing and the output of accounting of medication to patients.

### How will the Stakeholders participate in the project?

The Central Nursing Staff will participate from the initial gathering of their requirements, through the onset of implementation, and provide user acceptance testing with ongoing feedback as required for the project.

Org. Name	Name
DSH Pharmacy Services	Medical Billing Staff
Internal or External?	<input checked="" type="checkbox"/> Internal <input type="checkbox"/> External

### When is the Stakeholder impacted?



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Input to Business Process	During the Business Process	Output of the Business Process
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## How are Stakeholders impacted?

The Medical Billing units receive patient specific data of medication administered and submit medical claims to insurance companies.

## How will the Stakeholders participate in the project?

The Medical Billing units will contribute by providing billing requirements, contribute key information to the statement of work for the procurement process, provide feedback user acceptance testing and input after system implementation and participate in organization change management.

Select + to add additional Stakeholders

## 1.5 Business Program

Org. Name	Name
DSH Pharmacy Services	Pharmacy Services Managers

## When is the unit impacted?

Input to the Business Process	During the Business Process	Output of the Business Process
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## How is the business program unit impacted?

Pharmacy Services are impacted with all five pharmacy primary components of Pharmacy Modernization. They have to provide input to business process of medication ordered, during the process monitor medication on hand, and provide medication dispensed required reports as the output to billing for their business process.

## How will the business program participate in the project?

Pharmacy Services will be involved from start to end, validating requirements and providing input. They will contribute key information to the statement of work for the procurement process as well as participate in the user acceptance, testing, system implementation and organization change management.

Select + to add additional Business Programs

## 1.6 Business Alignment

Business Driver(s)			
Financial Benefit			
Increased Revenue	Cost Savings	Cost Avoidance	Cost Recovery
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Mandate(s)			
State		Federal	
<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
Improvement			
Better Services to Citizens	Efficiencies to Program Operations	Improved Health and/or Human Safety	Technology Refresh
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Security			
Improved Information Security	Improved Business Continuity	Improved Technology Recovery	Technology End of Life
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Strategic Business Alignment			
Strategic Plan Last Updated?		11/13/2012	





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Strategic Business Goal	Alignment
The DSH's goals are safe environment, responsible stewardship, excellence in forensic evaluation and excellence in treatment.	This proposal supports these goals through objectives to optimize pharmacy inventory and dispensing statewide as a single unified enterprise system to provide for timely access to treatment, create safer environments within the facilities for staff and patients, provide better care for patients, provide accurate reporting of pharmacy utilization to stakeholders, and improve fiscal efficiency and planning.

*Select + to add additional Business Goals and Alignment*

## Executive Summary of the Business Problem or Opportunity

With pharmacy modernization there is a need to redesign workflows, monitor quality assurance, optimize efficiency and safety of patient care in the medication use process throughout all hospitals, and ensure pharmacy data integration which requires rearchitecting the existing application environment to accommodate the new pharmacy system. The five primary components of Pharmacy Modernization are: (1) inventory control software, (2) unit dose repackaging machines, (3) automated dispensing cabinets, (4) patient specific medication billing, and (5) data integration.

### 1. Inventory Control

All DSH facilities are deficient in having a Pharmacy Inventory Control System to safeguard pharmaceutical drugs. The lack of a pharmacy inventory management was cited by the Office of State Audits and Evaluations (OSAE) in 2007 and again in 2015 by an independent auditor, Pharmacy Healthcare Solutions, as being deficient in meeting the requirements of the Business & Professions Code 4081. In addition, Government Code 13400-13407, under the State Leadership Accountability Act (SLAA), requires state entities to have an accountability system for state assets which DSH pharmacies currently lack. The Drug Supply Chain Security Act, a federal regulation, phases in increasing detail to trace prescription medications through their chain of custody to avoid counterfeits and tampering, and to assure appropriate storage throughout to maintain medication integrity. Furthermore, the Department of Finance's Mission Based Review team has identified pharmacy inventory control as an operational inefficiency. Therefore, it is critical for DSH to procure a delivery system that covers all facets of inventory -- ordering, receiving, storage, packaging, dispensing, distribution, delivery to units, and administration, along with accountability for refused medication, wastage, and expiration.

DSH currently only conducts a complete inventory once a year for all medications, once a month for controlled substances or as needed with no consistency. This may present risk to pharmacies. Drugs placed into inventory should regularly be reviewed for expiration dates to ensure they are not outdated. Additionally, pharmacies should perform daily physical reviews of expiration dates for drugs and obtain reports to identify expiring drugs and pull them (e.g., two days before expiration) from automated dispensing cabinets throughout the hospital. Expired drugs, received or currently in a pharmacy inventory, should be removed immediately and separated from the rest of the pharmacy inventory to be handled appropriately. This helps to ensure that the expired drugs are not available to be erroneously dispensed to patients. Once they are removed from inventory, they should also be accounted for and appropriately taken out of the pharmacy inventory tracking system. Pharmacy Modernization will allow DSH to effectively track inventory, enhance patient medication safety, more fully capture all medication use to patient specific medication billing to increase revenues, and decrease the likelihood of drug shortages.

### 2. Repackaging

While DSH does have repackaging machines, standardization paired with updating to a manufacturer that can communicate with inventory control software for better accountability and efficiency will alleviate inconsistencies and non-compatibility within reporting and inventory control. DSH-Coalinga's repackaging machine is older and should have immediate update as it is unable to communicate with other DSH locations or submit to patient cost and recovery directly. Plans should be made to transition equipment for fully integrated pharmacies which will create a more efficient use of staff and Electronic Health Record (EHR) readiness.



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## 3. Dispensing

Presently, nursing staff visit the central pharmacy daily to pick up medications and sign-off on a paper tracking log. Controlled substances at two out of five DSH locations (Napa and Patton) are located within dispensing cabinets, though not all medication charges are being generated such as floor-stock items and Intravenous (IV) solution. There is no deterrent for medication borrowing and it is possible to make a wrong drug selection because when staff open a drug dispensing cabinet to obtain Drug A there is also access to Drugs B-E, nor are pharmacy technicians supervised in the medication room whenever they are replenishing stock. There is also a risk for double billing with current dispensing cabinets if the dispensing cabinet disconnects from the network, any doses dispensed after the time of disconnect are not captured. Double billing can occur when another order can be filled manually and when the dispensing cabinet comes back online, the order will be filled again as the manual order was not recorded electronically. Current storage handling of controlled substances is out of compliance with Title 21 of the Federal Code of Regulations and could expose DSH to costly fines or labor-related grievances. The largest fines levied against pharmacies have involved the mishandling of controlled substances. Besides the risk of fines, the importance of proper handling of these substances is magnified in the DSH environment where 63% of the population (the current national average being 50%) is dealing with some form of addiction.

## 4. Patient Specific Medication Billing

Medication wastage data available for DSH is expired medication that has been processed by the contracted pharmaceutical returns vendor. Using the amount of expired medication processed from Patton State Hospital and projecting to all five state hospitals, the estimated figure of \$1.3 million approaches the projected national average for medication wastage of \$1.7 million. However, this is only a portion of the medication wastage since it does not include hazardous drug disposal, medication wastage from dropped doses or refused medication at the time of administration, damaged product, and drug diversion. There are also expired products that are unaccounted for because they are not accepted by the pharmaceutical waste vendor such as most liquids, creams, ointments, and OTC medications. Expired drugs classified as environmentally hazardous waste that cannot be returned for partial credit includes expensive products such as inhalers and insulin. Even the accepted expired pharmaceutical returns for DSH are underestimated due to a lag with the vendor's reportable data only as they complete processing for partial credit from the manufacturer or are found to be nonreturnable. If we are approaching the national average when capturing only a portion of drug wastage, then likely DSH exceeds the national average in drug wastage. With the addition of current standard of practice technology that fully tracks medication inventory, we would be able to account for all types of waste. This would include being able to scan and capture all items going to the pharmaceutical waste vendor so that we could accurately know all items that they receive up front, rather than waiting for a delayed report that does not provide true accountability. Initially having a good inventory system would make our wastage figures appear higher, but the ability to track would allow us to identify patterns of wastage in all categories that could be corrected to minimize loss. The tight control of inventory would also create the ability to detect diversion quickly before it can become larger.

Each facility currently has some differences in medication dispensing processes. These different dispensing processes have less influence on the amount of wastage than the amount of staff time that is allocated to frequent manual checks for expiring medications to utilize older medication before expiry. Reliance on manual processes that should be automated create a trade-off between using staff to save money by reducing waste and using staff to improve patient outcomes, which has greater potential for downstream cost savings and improved patient quality of life

In correlation with billing data from DSH Patient Cost and Recovery Offices, in 2017-18 out of \$4,107,811.81 in Medicare Part D patient specific billable claims only 29%, with a loss in revenue of \$2,927,776.82, were approved for payment to DSH. This, along with overall cost of pharmacy operating budgets between 10-20%<sup>2</sup> and an estimated annual 3-5%

<sup>2</sup><https://www.hhnmag.com/articles/4403-in-struggle-to-cut-expenses-hospitals-eye-the-pharmacy>





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increase in prescription drug expenditures<sup>3</sup>, and lack of patient specific billing software, are indications that this baseline reference point may increase. However, without a standardized automated drug dispensing system in place with inventory, diversion and accurate billing controls, using national hospital data that best reflects the situation within DSH provides the most accurate data readily available.

## 5. Data Integration

DSH does not have an automated tracking system with the ability to generate reports validating expired, missing, duplicated, unbilled or diversion of medication. DSH data flowing through multi-disciplinary systems encounters local workarounds reliant on old technology. A need for integrated, reliable delivery of medical and mental health services in the Department of State Hospitals will ensure that pharmacy data associated with the new system is available for self-service data analytics for our clinicians and management, thereby enabled a secure technology, analytics, and application environment that will improve outcomes for the patients we serve. Integration is also needed so data in one system can be shared with another.

Without approval, DSH will be unable to trace prescription medications through their chain of custody to avoid counterfeits and tampering or assure appropriate storage to maintain medication integrity. Non-standardization of current repackaging machines, the inability to communicate with the drug dispensing cabinet will lack the accountability required to reconcile with inventory control software for better accountability and efficiency. The ability to capture dosing refusals for credit is weakened without Drug Dispensing Systems creating a situation where non-administered medication will result in false billing records, placing the system at risk. The amount of revenue opportunities that DSH currently is unable to capture due to antiquated, non-standardized repackaging machines will continue to hinder the mission of the California Department of State Hospitals, "Providing evaluation and treatment in a safe and responsible manner, seeking innovation and excellence in hospital operations, across a continuum of care and settings." Lacking an effective up-to-date accountable technology in place; complete, accurate patient specific medication billing cannot be captured. The charge capture and billing processes, as well as third party prior authorization, are different at each hospital. Some of the charge capture processes are inherit to the automation that a hospital may have whereas another hospital may not have. Finally, without pharmacy data integration, systems architecture reconfiguration, Health Level 7 (HL7) ongoing training, and data availability for clinicians, EHR readiness will be an ongoing risk. Electronic flow of information cannot occur properly among DSH applications and systems as well as among organizations, providers, clinicians and patient specific medication billing.

1	Improved inventory management and drug tracking.
	1
	In the first 365 days after project go-live, manual process for inventory management and drug tracking with automated work flow.
	Drug inventory waste will be reduced by 25%
	Measure against previous year waste report at each facility.
	Improvement in effectively tracking inventory and medication wastage
	Cross check and verify that no additional drug waste is logged into variance report.
2	Improve drug repackaging time
	2
	In the first 180 days after project go live, all five locations will have standard repackaging machines that will reduced staff repackaging time.
	Reduce repackaging time by four hours
	The current time for repackaging takes a total of 12 hours.

<sup>3</sup> <https://www.hhnmag.com/articles/4403-in-struggle-to-cut-expenses-hospitals-eye-the-pharmacy>



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Target	Repackaging will be 8 hours.	
Measurement Method	Reporting of time spent repackaging captured on logs.	
<b>Select + to add additional Objectives</b>		
3	Drug dispensing and administration reduction of drug selection errors	
Objective ID	3	
Objectives	In the first 180 days after project go-live, reduction in assigned and dispensed medication selection errors to patients.	
Metric	Number of correctly administered medication to patients.	
Baseline	Reduction of monthly variance	
Target	Reduction of monthly variance by 80%	
Measurement Method	Generate report of medication variance data from automated dispensing equipment	
<b>Select + to add additional Objectives</b>		
4	Physical security: Improved control drug security on the unit and reduce risk of diversion	
Objective ID	4	
Objectives	Immediately after project go-live, there will be 100% ability to track controlled drug transactions with medication accountability safeguards (locking cabinets, and automated dispensing) thereby, reducing the opportunity for diversion by pharmacy and nursing staff	
Metric	100% accountability of dispensed drugs from automated dispensing devices	
Baseline	The five hospitals currently have night lockers which are not electronically protected. Controlled substances are secured in a lock box located within the medication rooms without complete documentation and accountability of all staff that have had access to controlled drugs.	
Target	100% security of all drug storage in the automated dispensing devices.	
Measurement Method	Generate audit reports of administered drugs from storage devices to be compared against inventory control data.	
<b>Select + to add additional Objectives</b>		
5	Improve patient specific medication billing (Medicare Part D)	
Objective ID	5	
Objectives	In the first 180 days after project go-live, 95% medication dispensed will have dispensing and billing data electronically generated and will include the appropriate National Drug Code (NDC) for billing purposes.	
Metric	Electronic dispensing and billing data will be captured with a target of 95% accuracy.	
Baseline	Per DSH Patient Cost and Recovery Claims Acceptance Rate (% of Claims Paid) 64% in FY2017-18 for Medicare Part D. June 2018 Total Postings are 61,493, Drug Cost \$5,372,107.98, Dispensing Fee \$8,836,446.89 with Total Charges \$14,208,554.87	
Target	95% acceptance	
Measurement Method	Generate a monthly, billing, error report to indentify system errors that need correction.	
<b>Select + to add additional Objectives</b>		
<b>Select + to add additional Objectives</b>		
6	Improve pharmacy data integration	
Objective ID	6	



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Objectives	In the first 365 days after project go-live, the new pharmacy system will be able to communicate and interface with all five hospital locations.
Metric	All five locations migrated to an enterprise-level system.
Baseline	Five independent, hospital systems
Target	All hospitals migrated to enterprise-level system with 80% data standardization
Measurement Method	All five hospitals will be migrated into a single enterprise-level system utilizing an Enterprise Service Bus (ESB) to communicate with existing backend systems.

Select + to add additional Problems

## Project Approval Lifecycle Completion and Project Execution Capacity Assessment

1. Does the proposal development or project execution anticipate sharing resources (state staff, vendors, consultants or financial) with other priorities within the Agency/state entity (projects, PALs, or programmatic/technology workload)?

☐ Yes
 ☒ No
 ☐ Clear

2. Does the Agency/ state entity anticipate this proposal will result in the creation of new business processes or changes to existing business processes?

☐ No
 ☐ New Processes
 ☐ Existing Processes
 ☒ Both New and Existing
 ☐ Clear

## 1.7 Project Management

Project Management Risk Score:	Business Complexity = .8
Attach completed Statewide Information Management Manual (SIMM) Section 45 Appendix A:	Include the completed SIMM 45 Appendix A as an attachment to your email submission.

### Existing Data Governance and Data

1. Does the Agency/state entity have an established data governance body with well-defined roles and responsibilities to support data governance activities? If an existing data governance org chart is used, please attach.	<input type="radio"/> Unknown <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Clear	If applicable, include the data governance org chart as an attachment to your email submission.
2. Does the Agency/state entity have data governance policies (data policies, data standards, etc.) formally defined, documented, and implemented? If yes, please attach the existing data governance plan, policies or IT standards used.	<input type="radio"/> Unknown <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Clear	If applicable, include the data governance policies as an attachment to your email submission.
3. Does the Agency/state entity have data security policies, standards, controls, and procedures formally defined, documented, and implemented? If yes, please attach the existing documented security policies, standards, and controls used.	<input type="radio"/> Unknown <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Clear	If applicable, include the documented security policies, standards, and controls as an attachment to your email submission.



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4. Does the Agency/state entity have user accessibility policies, standards, controls, and procedures formally defined, documented, and implemented? If yes, please attach the existing documented policies, accessibility governance plan, and standards used, or provide additional information below.	<input type="radio"/> Unknown <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Clear	If applicable, include the documented accessibility policies, standards, and controls as an attachment to your email submission.
5. Do you have existing data that you are going to want to access in your new solution?	<input type="radio"/> Unknown <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Clear	If applicable, include the data migration plan as an attachment to your email submission.
6. If data migration is required, please rate the quality of the data.	Some issues identified with the existing data	
<ul style="list-style-type: none"> <li><b>The quality of the current medication order data is very high</b></li> <li><b>Standardization between hospitals on Schedules (Sig Codes), Special Instruction Codes, and Hospital Formularies still need to be addressed</b></li> <li><b>No uniform Inventory Control / Management system is being used at any of the hospitals.</b></li> </ul>		

## 1.8 Criticality Assessment

### Business Criticality

Legislative Mandates:	N/A <input checked="" type="checkbox"/>	
Bill Number(s)/Code(s):		
Language that includes system relevant requirements:		
Business Complexity Score	2.0 (see attached PSS Complexity Assessment)	Include the completed SIMM 45 Appendix C as an attachment to your email submission.

### Noncompliance Issues

Indicate if your current operations include noncompliance issues and provide a narrative explaining the how the business process is noncompliant.

Programmatic Regulations	HIPPA/CJIS/FTI/PII/PCI	Security	ADA	Other	N/A
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

All DSH facilities are deficient in having a Pharmacy Inventory Control System to safeguard pharmaceutical drugs. The lack of a pharmacy inventory management was cited by the Office of State Audits and Evaluations (OSAE) in 2007<sup>4</sup> and again in 2015 by an independent auditor, Pharmacy Healthcare Solutions, as being deficient in meeting the requirements of the Business & Professions Code 4081<sup>5</sup>. In addition, Government Code 13400-13407, under the State Leadership Accountability Act (SLAA), requires state entities to have an accountability system for state assets which DSH pharmacies currently lack.<sup>6</sup>

1. What is the proposed project start date?	8/1/2019
2. Is this proposal anticipated to have high public visibility?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Clear

<sup>4</sup> 2007 Office of State Audit and Evaluation (OSAE)

<sup>5</sup> 2015 PHS Pharmacy Audit Final Report

<sup>6</sup> DSH 2017 SLAA Report



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If "Yes," please identify the dynamics of the anticipated high visibility below:

3. If there is an existing Privacy Information Assessment, include as an attachment to your email submission.

4. Does this proposal affect business program staff located in multiple geographic locations?

☒ Yes ☐ No ☐ Clear

If "Yes," provide an overview of the geographic dynamics below and enter the specific information in the space provided.

The Department of State Hospitals (DSH) manages the nation's largest inpatient forensic mental health hospital system. Its 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 is responsible for the daily care and provision of mental health treatment of its patients. DSH oversees five state hospitals and employs nearly 11,000 staff. Additionally, DSH provides services in jail-based competency treatment programs and conditional release programs throughout the 58 counties. In FY 2017-18, DSH served 11,961 patients within state hospitals and jail-based facilities, with average daily censuses of 5,897 and 227 respectively. The conditional release program (CONREP) maintains an average daily census of approximately 654. DSH's five state hospitals are Atascadero, Coalinga, Metropolitan – Los Angeles, Napa and Patton. Pursuant to the Budget Act of FY 2017-18, the psychiatric programs operating at state prisons in Vacaville, Salinas Valley, and Stockton, where DSH treated mentally-ill prisoners, have been transferred to the responsibility of the California Department of Corrections & Rehabilitation (CDCR) as of July 1, 2017. DSH continues to designate 336 beds at three of its state hospitals, Atascadero, Coalinga, and Patton for the treatment of mentally-ill prisoners.

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	2,380
Sacramento (DSH-Sacramento)	CA	1	450

Select + to add Locations

## 1.9 Funding

1. Does the Agency/state entity anticipate requesting additional resources through a budget action to complete the project approval lifecycle?

☒ Yes ☐ No ☐ Clear

2. Will the state possibly incur a financial sanction or penalty if this proposal is not implemented? If yes, please identify the financial impact to the state below:

☐ Yes ☒ No ☐ Clear

3. Has the funding source(s) been identified for this proposal?

☒ Yes ☐ No ☐ Clear

### FUNDING SOURCE

### FUND AVAILABILITY DATE

General Fund	<input checked="" type="checkbox"/>	7/1/2019
Special Fund	<input type="checkbox"/>	Date Picker
Federal Fund	<input type="checkbox"/>	Date Picker
Reimbursement	<input type="checkbox"/>	Date Picker



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Bond Fund	<input type="checkbox"/>	Date Picker
Other Fund	<input type="checkbox"/>	Date Picker
If "Other Fund" is checked, specify the funding:		

## 1.10 Reportability Assessment

1. Does the Agency/state entity's IT activity meet the definition of an IT Project found in the State Administrative Manual (SAM) Section 4819.2? If "No," this initiative is not an IT project and is not required to complete the Project Approval Lifecycle.	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Clear
2. Does the activity meet the definition of Maintenance or Operations found in SAM Section 4819.2?  If "Yes," this initiative is not required to complete the Project Approval Lifecycle. Please report this workload on the Agency Portfolio Report. And provide an explanation below.	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Clear
3. Has the project/effort been previously approved and considered an ongoing IT activity identified in SAM Section 4819.2, 4819.40?  If "Yes," this initiative is not required to complete the Project Approval Lifecycle. Please report this workload on the Agency Portfolio Report.	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Clear
4. Is the project directly associated with any of the following as defined by SAM Section 4812.32?  Single-function process-control systems; analog data collection devices, or telemetry systems; telecommunications equipment used exclusively for voice communications; Voice Over Internet Protocol (VOIP) phone systems; acquisition of printers, scanners and copiers.  If "Yes," this initiative is not required to complete the Project Approval Lifecycle. Please report this workload on the Agency Portfolio Report.	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Clear
5. Is the primary objective of the project to acquire desktop and mobile computing commodities as defined by SAM Section 4819.34, 4989?  If "Yes," this initiative is a non-reportable project. Approval of the Project Approval Lifecycle is delegated to the head of the state entity. Submit a copy of the completed, approved Stage 1 Business Analysis to the CDT and track the initiative on the Agency Portfolio Report.	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Clear
6. Does the project meet all of the criteria for Commercial-off-the-Shelf (COTS) Software and Cloud Software-as-a-Services (SaaS) delegation as defined in SAM 4819.34, 4989.2 and SIMM 22  If "Yes," this initiative is a non-reportable project. Approval of the Project Approval Lifecycle is delegated to the head of the state entity; however, submit an approved SIMM Section 22 form to CDT.	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Clear





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7. Will the project require a Budget Action to be completed?	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Clear
8. Is it anticipated that the project will exceed the delegated cost threshold assigned by CDT as identified in SIMM 10?	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Clear
9. Are there any previously imposed conditions place on the state entity or this project by the CDT (e.g., Corrective Action Plan)?  If "Yes," provide the details regarding the conditions below.	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Clear
10. Is the system specifically mandated by legislation?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Clear

### Department of Technology Use Only

Original "New Submission" Date	7/16/2018
Form Received Date	7/15/2019
Form Accepted Date	7/15/2019
Form Status	Completed
Form Status Date	7/15/2019
Form Disposition	Approved If "Other," specify:
Form Disposition Date	7/15/2019