



Electronic Health Records Request for Information

2020 Report to the Legislature

As required by Engrossed Substitute House Bill 1109 (2019)

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This is the report to the Legislature as directed by ESHB 1109 (2019) and contains information on Department of Corrections Electronic Health Records Request for Information (RFI)

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DOC Health Services Purpose Statement and Guiding Principles*

Purpose Statement: Providing integrated treatment services to improve overall quality of life throughout and beyond incarceration.

Guiding Principles:

- We will provide high quality and compassionate care.
- We will attract and retain a highly skilled, talented, and diverse workforce.
- We will continuously seek ways to improve the quality of care delivered to our patients.
- We will encourage a safe and healthy work place.
- We will create and maintain an environment that values professionalism and dedication of its workforce.

*As selected by Health Services Staff

Department of Corrections Electronic Health Records Request for Information (RFI)

2020 Report to the Legislature

Forward

“Within the funds appropriated in the subsection the department shall review and update the necessary business requirements for implementation of a comprehensive electronic health records system. The department will utilize its feasibility study from 2013 and the health informatics roadmap completed in 2017 to update its business requirements and complete a request for information process by May 31, 2021. The department shall submit a report to the governor and the legislature outlining the system specifications and a cost model for implementation no later than June 30, 2021. This subsection is subject to the conditions, limitations, and review requirements of section 719 of this act.”

Engrossed Substitute House Bill 1109, Section 222(1)(b), [2019]

Executive Summary

Per RCW 72.10.005, the Washington State Department of Corrections (DOC) is legislatively mandated to provide medical, dental and mental health care to approximately 17,000 incarcerated individuals across 12 state facilities. Providing 24 hour per day, 7 days per week health care for an aging, complex, often medically fragile, mobile patient population in a correctional environment is highly complex, but critical to furthering the Department’s mission to improve public safety by positively changing lives.

DOC currently operates a paper-based health records system, which exposes patients and DOC to significant risks in access to care and delivering health care services to incarcerated individuals. A comprehensive Electronic Health Record (EHR) system will address these risks and health services’ needs, including patient appointment scheduling, medical and dental care, mental health, substance use disorder treatment monitoring, nursing care, data analytics, and pharmacy management. An EHR system provides access to real-time patient information anywhere, at any time, to support health care decisions and access to timely, comprehensive medical care. An EHR integrates and leverages clinical information by using real-time data which captures documentation of health care services delivered to DOC’s patients. These records include clinical results, referrals, consultations from providers, and more which gives providers a comprehensive view of the patient’s current health status and future care needs. Providers may also have access to a patient’s health history prior to incarceration, including diagnostic images, medication regimens, immunizations, etc. which would inform practitioners of prior health conditions. Having been in service now for over two decades, today’s EHR systems also have features that can greatly improve patient throughput and electronic transfer of records to and from partner health care entities.

Background

The Office of the National Coordinator for Health IT cites that, nationwide, 87 percent of ambulatory clinics and 97 percent of acute care hospitals have adopted EHRs. Adoption of EHRs has been shown in the medical literature to decrease rates of adverse events, improve chronic disease management, and improve rates of preventive health care delivery. In contrast, DOC's current paper health record system poses serious administrative, security, financial, and physical risk to DOC staff, incarcerated individuals, and the state of Washington. The safety of DOC and incarcerated individuals are impacted by an increased likelihood of errors and incorrectly administering medication or care, which also exposes the state to legal and financial liability. Without the implementation of an EHR, there exists a lack of timely information and information security, and increased likelihood of physical records being lost or destroyed. Workload and time management of medical staff is also impacted by the inefficiencies of a paper system, which creates additional costs. Additionally, the current paper system is an inefficient and costly use of physical space in medical facilities that in many cases are already undersized for the patient population they must support. Finally, lack of an EHR significantly inhibits provider recruitment and retention particularly when compared to serving in more contemporary state-of-the-art health care settings. The investment in an EHR system will address these shortcomings and place incarcerated individuals first in regard to safety, access, and management of care.



The DOC is constitutionally required to provide medically necessary health care to approximately 17,000 incarcerated individuals 24 hours per day seven (7) days per week. Additionally DOC Health Services must enforce cost efficient health care utilization which requires identifying, approving and delivering medically necessary care for specific acute and chronic diseases for the incarcerated population. The DOC population is highly mobile with individuals often being transferred between several facilities during their incarceration. Physical medical charts and files must be stored, transported between facilities, pulled and delivered daily for provider appointments. Despite the extensive movement, paper medical records must be managed to ensure the safe keeping of protected health information. As chart notes and physician orders are handwritten, prescription orders can be misread or incomplete which can represent serious safety errors with risks for both incarcerated individuals and staff. Maintaining continuity of care presents a central challenge for DOC Health Services. An EHR system would decrease exposure to liability due to chart note errors, lack of timely information, and compromised information security. The current state of maintaining sizable islands of paper data is not sustainable. The desired future state for DOC Health Services is digital, integrated, and interoperable with outside care settings. This will enable safer, higher quality, and timelier medical care along with quick access to custom enhanced clinical and operational analytics.

The modernization of DOC health records to a community standard in place for two decades will support continuity of care with community providers as well as connectivity and data sharing agreements with state agencies, local hospitals, and jails. Enhancing DOC's ability to share information electronically with community providers and outside agencies can assist to overcome specialist reluctance to care for our population,

ultimately improve patient care and provide cost saving efficiencies across the Health Services Division (HSD). Procurement and implementation of an EHR system would enable the exchange of patient information through the state Health Information Exchange (HIE), and improve DOC's ability to meet timeliness requirements set forth in federal law to provide patient health records to outside stakeholders including Disability Rights Washington (DRW), and those stipulated in Revised Code of Washington (RCW) 43.06C.050 to provide patient records to the state of Washington Corrections Ombuds Office.

In February 2020, DOC opened RFI DOC K12216 per RCW 39.26, which was posted to Washington's Electronic Business Solution (WEBS), Washington's vendor self-registration and solicitation notification system, informing roughly 1,800 registered vendors, including the nation's leading EHR vendors. In March 2020, DOC received 13 documented vendor responses to RFI DOC K12216, eight of which had experience implementing EHR solutions in a correctional environment.

DOC also received numerous phone calls and emails from notable correctional EHR vendors that had not responded to the RFI due to considerable work required to produce a response with no guarantee of a return on their investment, but were interested in understanding whether DOC would pursue a Request for Proposal (RFP) process, as well as any timeline to complete the RFI work. DOC shared with vendors the scope, schedule, and objectives of the RFI project, while maintaining regular engagement.

Key Findings

While analysis of RFI vendor responses was not evaluative, consistent positive benefits and key findings across the span of solutions were identified and classified in the following areas:

- **Improved Health Care Delivery:** An EHR provides data and functionality used by health care staff to identify and manage individual patients and patient populations, apply evidence-based standards and guidelines, and improve health care processes.
 - Through the use of clinical decision support functions such as alerts and reminders, EHRs can ensure clinician knowledge of medical care that is recommended or overdue, facilitating improvements in rates of preventive health intervention and chronic disease control and promoting a more proactive and anticipatory care delivery system than is possible with a paper medical record. In reviewing RFI responses all vendors included statements that such clinical decision support tools were included with their products.

- Significant improvements in dental care can be achieved through the following: enhanced digital imaging, photos, and x-rays; scheduler summary views including medical alerts, and necessary procedures; providing an operatory preparation and time management system; integrated Health and Medication Status and History access through dental portals; an interactive odontogram providing treatment and procedure planning and records (gum) pocket depths, bone loss, and bleeding efficiently without the need for a dental assistant.
- The use of disease based registries, lists, dashboards, and other population health management tools are included in the products of many responding vendors. Such functionality can help to improve the quality, safety and real time tracking of care provided to patients with specific chronic conditions including behavioral health diagnoses, substance use disorders, and medical diagnoses such as cancer, diabetes, and hypertension.

Figure 1 EHR Mobile Technology



With the implementation of an EHR, DOC would modernize correctional healthcare in Washington State from a hodge-podge collection of outdated systems to a single, modern system that increases automation, promotes consistency, improves reporting accuracy, and delivers an effective and efficient level of care to the patient population.

- **Improved Accessibility of the Medical Record:** As a web-based system, an EHR would provide access to data that supports treatment anywhere and anytime across the agency. New mobile devices and cloud-based technology, integrated within EHR systems provide clinicians access to information at the bedside, which streamlines workflows, increases satisfaction, and improves patient care. The greatest impact of an EHR system is the ability to manage care based on real-time data. With health practitioners entering data as they see patients, the data is available to other clinicians, process partners, and management immediately instead of waiting weeks to view a report after it is scanned and appended to the paper record.
- **Health Care Data Analytics and Informatics:** As years of operational data is recorded and analyzed, an EHR system is able to collect data and focus on information related to clinical management, patient records, costs, diagnoses, and more. Clinical data analytics on both a patient and population level can be performed to ensure appropriateness of medical care provided and allow understanding of and better yet fill gaps in care delivery across the system. When combined with business intelligence suites and data visualization tools, health care analytics helps managers and clinical leaders operate more effectively by providing real-time information that can support decisions, deliver actionable insights, and provide measureable, improved patient outcomes.

- **Dashboard and Metrics:** Data from an EHR supports a real-time health care dashboard that provides key metrics used to analyze and promote efficiencies customized for each medical user. Examples of dashboard measurements include: Care Management, Population Health Management, and Medication Management. The dashboards provide ease of access to information and provide insight to areas that may need additional support, training, and workflow updates or improvements.
- **Cost Savings and Efficiencies:** Major objectives of implementing an EHR system would be to increase efficiency of care by reducing redundant procedures, streamline processes, and reduce medication waste. EHR adoption is likely to result in savings of both dollars and staff time, including efficiency gains related to labor costs and reduction in health care and pharmacy-related inventory, management, and purchasing.
- **Enhanced Security:** Advanced malware protection, disaster preparedness protections, secure endpoints, advanced authentication, auditing, and log correlation security measures would be available through an EHR system. Access control through traditional lock and key would be replaced with role-based access managed by administrators for the protection and privacy of patient data. An EHR system would also allow rules-based position classifications to limit access to patient data on a need-to-know basis. Nearly all responding vendors indicated that their products are HIPAA compliant.

Figure 2 EHR Desktop Access



- **Improvements to Community Health and Creating Greater Value for Washingtonians:** Improving continuity of health care at the time of an individual's reentry into the community is an important strategic goal for DOC and the state of Washington. An EHR can facilitate instantaneous sharing of DOC generated medical records both with specific community health care providers and with the state's Health Information Exchange, allowing continuation of treatment plans through the post-release period. In this way, an EHR system would reduce costs to the state of Washington by reducing the need for emergency medical care post-release, reducing the occurrence of communicable disease, improving the general health of incarcerated patients, and improving public health. The implementation of an EHR system would transform correctional health care in Washington, allowing incarcerated patients to better manage their personal medical conditions and provide tools and resources to facilitate ongoing self-care when integrating back into society.



Cost Analysis

Vendors responding to the RFI did not consistently provide comprehensive and useable financial information needed to provide a cost model for implementation of an EHR. Therefore, providing an estimated overall cost of acquiring and implementing an EHR system is not possible at this time. However, some respondents provided limited examples of services, products, and other things that will drive costs. Some vendors noted proprietary cost models that could be shared through a RFP process.

NOTE: Significant cost considerations include:

- Solution type: Hosted SaaS, Hosted Enterprise, or On-Premises
- Licensing, based on number of users
- Implementation professional services (i.e. Project management, Quality Assurance, consulting, training)
- Post-implementation support and maintenance
- Records/data conversion

Software enhancements and customization of a solution play significant roles in costs.

In order to arrive at an accurate estimate of the costs to acquire and implement an EHR system at DOC, business requirements would need to be developed, technical requirements documented, and a full RFP process would need to take place. Once an RFP has been issued and a successful vendor has been identified, DOC would then be able to provide an accurate cost estimate. The following steps could be taken to produce the “system specifications and a cost model for implementation” requirement in the proviso language:

- Contract with vendor with demonstrated experience and expertise with electronic health care systems to:
 - Lead the development of the business requirements and the RFP (both to be completed in FY 2022)
 - Directly manage the six to eight month RFP process from start to finish in FY 2023
- DOC would need to hire new dedicated staffing in IT and HSD to provide the direct support needed to the vendor for the development of the comprehensive business requirements. Direct support will be needed to provide:
 - The analysis support needed between the HSD, IT division, and the vendor to develop business requirements
 - Coordinate and document the IT technical requirements to successfully implement an EHR
- DOC should use in-kind resources for project management until mid-FY 2023, but then would need to hire a dedicated journey level IT Project Manager – Senior/Specialist to implement the new system.

The RFI indicates that there are off-the-shelf (COTS) solutions readily available, some developed for the correctional environment that are currently in use with jail partners in Washington state, and other state correctional organizations, that likely would require minimal customization.

Recommendations

1. The DOC recommends funding to prepare for the implementation of a comprehensive EHR system to help track and manage medical, dental, mental health, pharmacy, and other clinical services, including substance use disorder and sex offender treatments, for the incarcerated population as soon as possible. In order to successfully meet both the everyday and unique challenges DOC continuously faces, data governance and management must be enhanced and data sources consolidated. An EHR has the ability to operate in this complex manner and stands unmatched in comparison to DOC health services' current operating system. Updating business requirements, creating a Request for Proposal, and initiating a Request for Proposal process would be the next steps in this work, affording greater opportunities for vendor responses than the RFI process yielded. The standard DOC template would be utilized for any system selection, with vetting and enhancements per DOC staff members and stakeholder input. Once a system is selected and additional discussions occur related to that vendor's licensing and maintenance fees, hosting options, technical requirements, training, deployment strategies and other key considerations including an estimated budget, a high-level project schedule can then be developed.
2. Invest the needed resources in the 2021-23 biennium to develop the required business and technical requirements to successfully implement an EHR at DOC, and to develop and manage a RFP process.

Conclusion

This report reviewed DOC EHR RFI vendor responses and the potential benefits of EHR adoption for incarcerated individuals, DOC, and the state of Washington, and outlined DOC's recommendations for moving forward on the path to EHR adoption. Providing health care in a corrections environment is challenging enough with the ongoing COVID-19 pandemic coupled with an increasingly aging and medically complex patient population, and made exceedingly difficult to achieve with archaic paper medical records. This can lead to challenges in provider recruitment and retention. As evidenced by vendor responses and this report, many available EHR products contain functionality that will assist DOC Health Services in fulfilling our purpose statement of "providing integrated services to improve overall quality of life throughout and beyond incarceration."