

# **Ventura County Grand Jury 2013 - 2014**



## **Final Report**

### **Healthcare Records Processes and Procedures**

**May 29, 2014**

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## **Healthcare Records Processes and Procedures**

### **Summary**

The 2013-2014 Ventura County Grand Jury (Grand Jury) conducted an investigation in response to information received regarding the implementation of a new Electronic Health Records (EHR) system by the Ventura County Health Care Agency (VCHCA).

The Grand Jury performed this investigation by interviewing individuals involved in the adoption and implementation of the EHR. The Grand Jury researched the federal American Recovery and Reinvestment Act of 2009 (ARRA), which includes the Health Information Technology for Economic and Clinical Health Act (HITECH), with regard to sections applicable to the adoption of EHRs.

In May 2009, responding to requirements set forth by the ARRA, VCHCA issued a Request for Proposal (RFP) for the EHR system. In the RFP, VCHCA identified initial requirements for an EHR for all Ventura County (County) hospitals, clinics, and other required branches.

A second RFP, released in September 2010, superseded the original RFP to include new criteria. The second RFP, as stated in HITECH, required one integrated EHR system that encompassed outpatient care, inpatient care, and federally mandated Stage 1 "Meaningful Use" criteria, examples of which are (as stated in ARRA) "use of electronic prescribing" and "electronic exchange of health information to improve the quality of health care."

The Grand Jury found that the selected bidder, the Cerner Corporation (Cerner) of Kansas City, MO, upon implementing the new system, recognized that VCHCA's technology needs exceeded those requested and sufficient resources were underestimated.

The Grand Jury found that, beginning with the authorization of the Cerner contract in October 2011, there was a lack of a dedicated and experienced project manager to oversee, track, and report all tasks related to the EHR implementation. The absence of a recognized standard project plan, as shown in the Project Management Institute's *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*, contributed to staff being inadequately prepared for using the new system and to a problematic EHR system implementation by VCHCA.

The Grand Jury found hiring of "contract staff" did not support project needs. The Ventura County Board of Supervisors' (BOS) approval of additional funds allowed for the hiring of deployment staff. Hiring did not commence until August 2012, and continued after the VCHCA system "go-live" date of July 1, 2013. This indicated a lack of planning and diligence in pursuing the necessary qualified staff.

The Grand Jury found that staff training on the new equipment was insufficient, leading to a lack of experience and knowledge with all components of the EHR system. There was a period of inefficient and delayed patient care. Billing

processes were significantly impacted, requiring manual intervention, taking additional time.

The Grand Jury found that VCHCA ordered the user hardware in May and June 2013, too late to allow proper time for configuring of computers, hardware testing, and user familiarization.

The Grand Jury found that VCHCA had until the end of December 2014 to implement the new EHR system to avoid federal penalties.

The Grand Jury found that VCHCA had to be on the EHR system for 90 days prior to September 30, 2013, to qualify for full Meaningful Use funding, therefore July 1, 2013 was selected as its go-live date.

The Grand Jury recommends that VCHCA institute a standard for capital projects, using a PMI-recognized project management plan, for example, a Gantt chart-type of software program that includes a master work plan, tasks, and statuses.

The Grand Jury recommends that VCHCA have an experienced and dedicated project manager in place throughout the life of capital projects.

The Grand Jury recommends that VCHCA allocate and incorporate the required time and resources to each project to ensure that all project software and hardware is purchased and is on site, tested, and installed to support proper implementation.

The Grand Jury recommends that VCHCA provide the required time for staff to attend the appropriate training for all projects that involve new systems and/or procedures.

VCHCA transitioned its staff and clinics onto the new Cerner EHR system to qualify for full federal funding of Stage 1 Meaningful Use. The new EHR system encompasses a single platform across inpatient, outpatient, clinical, and billing services. As the healthcare regulations evolve, there will continue to be changes. VCHCA can be better prepared for Stages 2 and 3 implementations by following the above recommendations.

## **Background**

On February 17, 2009, ARRA was passed by Congress and signed into law four days later. It included HITECH, which authorized up to \$27 billion over ten years to support adoption of EHR systems used by healthcare providers nationwide. [Ref-01, Ref-02, Ref-04, Ref-05]

Through HITECH, the Office of the National Coordinator (part of the Department of Health and Human Services) was chartered to adopt an initial set of Health Information Technology standards, and create an incentive program for users of EHR certified technology. "...electronic health records are one of the most prevalent technologies in medicine. Besides reducing errors related to the upkeep of paper records, EHRs feature a number of important tools designed to help providers deliver optimal care." [Ref-02]

Federal penalties apply to all hospitals and patient care facilities that do not convert from paper records to an EHR by the end of December 2014. Meaningful

Use criteria state that “providers need to show they’re using certified EHR technology in ways that can be measured significantly in quality and in quantity.” [Ref-02] For example, providers need to:

- Maintain an up-to-date list of active diagnoses;
- Maintain an active medication list; and
- Record required patient demographics.

For the VCHCA, HITECH can provide approximately \$20 million in federal incentive payments in stages over a four-year period. The Cerner “off the shelf” system supports the capability to meet federal Stage 1 Meaningful Use standards. When VCHCA successfully deploys its customized version of Cerner’s standard EHR system, VCHCA will have met Stage 1 standards and begin to qualify for federal incentive payments. [Ref-03, Ref-04]

In June 2011, VCHCA selected Cerner as its system provider; in October 2011, VCHCA received approval for a loan of \$32 million from the County general fund for the EHR system from Cerner. This contract was for a web-based EHR system only and did not include staffing resources or hardware. [Ref-05, Ref-06, Ref-07] The EHR system at VCHCA achieved go-live status on July 1, 2013. (Att-01)

## **Methodology**

The Grand Jury conducted this investigation by:

- Interviewing individuals involved in the adoption and implementation of the Electronic Health Records for VCHCA;
- Researching the federal American Recovery and Reinvestment Act (ARRA) of 2009, and HITECH with regard to sections applicable to the adoption of EHR;
- Researching the timeline followed by VCHCA during the adoption and implementation of the EHR;
- Researching documents and newspaper articles regarding the adoption and implementation of the VCHCA EHR;
- Researching minutes of BOS meetings related to VCHCA’s adoption and implementation of the EHR; and
- Researching publications and websites regarding project management best practices.

## **Facts**

**FA-01.** On February 17, 2009, ARRA was passed by Congress and signed into law four days later. It included HITECH, which authorized up to \$27 billion over ten years to support adoption of EHR systems used by healthcare providers nationwide. [Ref-01, Ref-02, Ref-04, Ref-05]

**FA-02.** In May 2009, VCHCA issued the first RFP for an Electronic Health Records system. In September 2010, VCHCA issued a second RFP, superseding

the first RFP, in response to revised ARRA requirements. The second RFP required one integrated EHR system that encompassed outpatient care, inpatient care, and federally mandated Stage 1 Meaningful Use criteria, examples of which are (as stated in ARRA) “use of electronic prescribing” and, “electronic exchange of health information to improve the quality of health care.” [Ref-03, Ref-04, Ref-05] (Att-01)

- FA-03.** In July 2010, pursuant to the provisions of HITECH, the Centers for Medicare and Medicaid (CMS) announced final rules to implement provisions of ARRA to provide incentive payments for the Meaningful Use criteria for EHR technology. Additionally, those that fail to achieve the scheduled Stage 1 standards by the end of December 2014, irrespective of the loss of any Meaningful Use incentives, are subject to federal penalties. [Ref-04, Ref-05]
- FA-04.** In October 2010, all bids from companies responding to the second RFP to provide an EHR for VCHCA were received, and the second RFP closed. In June 2011, Cerner was selected. (Att-01) In October 2011, the BOS approved \$32 million to acquire the required EHR system. This did not include computer hardware, staffing, or medical hardware, which were to be provided by the VCHCA. [Ref-05, Ref-06, Ref-07, Ref-08]
- FA-05.** Over a four-year period beginning July 1, 2013, VCHCA expects to earn \$20 million in scheduled Meaningful Use incentive payments from the federal government.
- FA-06.** In April 2012, VCHCA hired an independent Information Technology (IT) consultant to oversee the EHR implementation; however, he was not authorized to be project manager. For this implementation, VCHCA did not use a formal structured project management plan based on best practices, such as those shown in the Project Management Institute’s *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*. Instead, they used Cerner’s event-based methodology—a simplified milestone checklist. [Ref-12, Ref-13] (Att-01)
- FA-07.** In December 2011, VCHCA decided to use contract staff (supplemental nurses and other healthcare support) to assist in all aspects of the EHR deployment. However, VCHCA did not seek funding approval for contract staff until July 2012. [Ref-09, Ref-10] (Att-01)
- FA-08.** In August 2012, the hiring of contract staff began, without a staffing plan based upon a project schedule. (Att-01)
- FA-09.** Between May and June 2013, hardware (laptops, servers) was ordered. [Ref-09] VCHCA computer hardware arrived in late June 2013. [Ref-10] The hardware was not configured until the weekend before the go-live date of July 1, 2013. IT personnel were mobilized from throughout the VCHCA to complete the task. Once completed, computer hardware was available for staff use. (Att-01)
- FA-10.** On July 1, 2013, go-live occurred with the conversion from multiple “legacy” systems to the single Cerner EHR system. To meet Meaningful

Use standards as set by HITECH, the final date to convert to a new system is by the end of December 2014. To achieve Meaningful Use incentive payments, go-live had to occur 90 days prior to October 1, 2013. Therefore, VCHCA chose to go live July 1, 2013, to qualify for full Meaningful Use funding and to avoid federal penalties. [Ref-05] (Att-01)

- FA-11.** VCHCA underestimated the number of users who would be on the system simultaneously. The capacity of the servers to accommodate simultaneous users was insufficient at go-live, creating a demand the system could not sustain. VCHCA requested nominal capacity for 600 users; 800 was the maximum capacity. After go-live, Cerner provided an additional 400 user licenses (up to 1,200) so all users could log on without system problems.
- FA-12.** VCHCA staff training on the new EHR system was less than recommended by Cerner. Cerner’s recommended minimum for training at its facility was 120 VCHCA staff; approximately 40 VCHCA staff attended training at the Cerner campus.
- FA-13.** Hardware testing performed by VCHCA was inadequate. Implementation time constraints did not allow for site testing throughout all areas of the hospital. For example, electro-magnetic interference in a wing of the hospital interfered with use of the new EHR system. New computers and tablets, as well as medical equipment that was not compatible with the Cerner System such as IV pumps and cardiac monitors, had to be replaced at an additional cost. [Ref-11] (Att-01)
- FA-14.** In October 2013, the first Meaningful Use incentive attestation document for \$600,000 was sent by VCHCA to the federal government for payment. (Att-01)
- FA-15.** As of December 2013, there had been no resolution of problems regarding the new EHR system and its ability to produce financial reports. For example, diagnostic coding (ICD-9) had to be reviewed on all billing, requiring additional time and resources. Reports that should have been automatically generated had to be manually produced from multiple systems.
- FA-16.** In February 2014, the first of two major updates to the EHR system was implemented by Cerner, resolving approximately 200 issues, as part of the contract with VCHCA. [Ref-06] (Att-01)

## **Findings**

- FI-01.** ARRA requirements led VCHCA to begin transitioning from multiple legacy and paper record systems to a single compliant EHR system. It began by selecting the company to deliver and implement the EHR system that met the federal government’s requirements. Cerner provided the software; VCHCA was responsible for planning the implementation and for the acquisition of staff and hardware. (FA-01, FA-02, FA-03, FA-04, FA-06, FA-07, FA-08, FA-09)

- FI-02.** VCHCA did not procure hardware in a timely manner. This led to time compression and inefficiency in the EHR implementation. (FA-09)
- FI-03.** VCHCA significantly underestimated the total number of simultaneous users the EHR system had to accommodate. This led to insufficient availability of user licenses, which only became evident at go-live when the system could not accommodate all users. (FA-11)
- FI-04.** From the authorization of the Cerner contract in October 2011, the absence of a dedicated and experienced project manager to oversee, track, and report all tasks contributed to staff being inadequately prepared for using the new system, as well as to a problematic EHR system implementation by VCHCA. (FA-06, FA-07, FA-08, FA-11)
- FI-05.** The VCHCA ordered the user hardware in May and June 2013, too late to allow proper time for site testing, configuring of computers, hardware testing, and user familiarization. When the testing did occur it was discovered that the current IV pumps and cardiac monitors were not compatible with the Cerner system. (FA-09, FA-12, FA-13)
- FI-06.** Staff training on the new equipment was insufficient, leading to a lack of experience with and knowledge of components of the EHR system. There was a period of inefficient and delayed patient care. Billing processes were significantly impacted, requiring manual intervention and additional time. (FA-12, FA-13, FA-15)
- FI-07.** VCHCA chose to go live July 1, 2013, to qualify for full Meaningful Use funding. (FA-03, FA-10, FA-14)

## **Recommendations**

- R-01.** The Grand Jury recommends that VCHCA institute a standard, PMI-recognized project management plan for capital projects, for example, a Gantt chart-type software program that includes a master work plan, tasks, and statuses. (FI-02, FI-04, FI-05, FI-06)
- R-02.** The Grand Jury recommends that VCHCA have an experienced, dedicated project manager in place throughout the life of capital projects. (FI-02, FI-03, FI-04, FI-05, FI-06, FI-07)
- R-03.** The Grand Jury recommends that VCHCA allocate and incorporate the required time and resources to each project to ensure that all project software and hardware is purchased and is on site, tested, and installed to support proper implementation. (FI-02, FI-03, FI-04, FI-06)
- R-04.** The Grand Jury recommends that VCHCA provide the required time and funding for staff to attend the appropriate training for all projects that involve new systems and/or procedures. (FI-02, FI-04, FI-05, FI-06)



## **Responses**

### Responses required from:

County of Ventura, Board of Supervisors (FI-01, FI-02, FI-03, FI-04, FI-05, FI-06, FI-07) (R-01, R-02, R-03, R-04)

### Responses requested from:

Ventura County Health Care Agency (FI-01, FI-02, FI-03, FI-04, FI-05, FI-06, FI-07) (R-01, R-02, R-03, R-04)

County of Ventura, County Executive Officer (FI-01, FI-02, FI-03, FI-04, FI-05, FI-06, FI-07) (R-01, R-02, R-03, R-04)

## **References**

- Ref-01.** Federal American Recovery and Reinvestment Act (ARRA), <http://www.recovery.gov/arra/Pages/default.aspx> (accessed September 13, 2013)
- Ref-02.** HITECH Answers. *About the HITECH Act of 2009*, <http://www.hitechanswers.net/about/about-the-hitech-act-of-2009/> (accessed April 5, 2014)
- Ref-03.** County of Ventura, General Services Agency, *Request for Proposal (RFP) for Electronic Medical Records (EMR)* issued September 17, 2010
- Ref-04.** Centers for Medicare and Medicaid. *Medicare & Medicaid EHR Incentive Program – Meaningful Use Stage 1 Requirements Summary*, <http://www.cms.gov/EHRincentivePrograms/> (accessed September 13, 2013)
- Ref-05.** Centers for Medicare and Medicaid. *2012-2014 Health Information Technology Timeline*, [http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Downloads/EHR\\_Medicaid\\_Guide\\_Remediated\\_2012.pdf](http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Downloads/EHR_Medicaid_Guide_Remediated_2012.pdf) (accessed April 7, 2014)
- Ref-06.** County of Ventura, Contract No. 6433 - GSA/Procurement Services - Cerner Corporation. October 4, 2011.
- Ref-07.** Ventura County Board of Supervisors (BOS) letter, October 4, 2011, "Approval and Authorization for Purchasing Agent to Sign a Contract with Cerner to Provide an EHR System Effective October 4, 2011."
- Ref-08.** *Ventura County Star*. Wilson, Kathleen (2011, October 6) "County to Spend \$32 Million on Electronic Health Records System."
- Ref-09.** Ventura County Board of Supervisors (BOS) letter, July 24, 2012, "Approval of and Authorization for the Health Care Agency to Expend up to a Total of \$5,748,500 for the Implementation of the Electronic Health Care Record Project for Staffing."
- Ref-10.** *Ventura County Star*. "Ventura County Supervisors Approve More Money for Electronic Health Records."

<http://www.vcstar.com/news/2012/jul/24/ventura-county-supervisors-approve-more-money/> (accessed September 13, 2013)

- Ref-11.** Ventura County Board of Supervisors (BOS) letter, May 21, 2013, "Approval of and Authorization for the Health Care Agency to Expend up to \$5,200,000 for Medical Equipment, End User Equipment, Licenses and Software Necessary to Integrate Patient Care into the Electronic Health Record (EHR); Ratification of, Approval of and Authorization For the Health Care Agency Purchase of \$1,137,196 End User Equipment Related to the EHR Implementation (Cerner)."
- Ref-12.** Project Management Institute. *A Guide to the Project Management Body of Knowledge (PMBOK® Guide) Fourth Edition*, Chapter 4, Section 4.2.3.1, pages 81-82.
- Ref-13.** Project Management Institute. *A Guide to the Project Management Body of Knowledge (PMBOK® Guide) Fourth Edition*, Appendix A, page 350.

## **Attachments**

- Att-01.** Description of Ventura County Health Care Agency Electronic Health Records (EHR) Timeline

**Glossary**

<b><u>TERM</u></b>	<b><u>DEFINITION</u></b>
ARRA	American Recovery and Reinvestment Act of 2009
Attestation	A formal document in which someone states that they believe something is true, correct, or real
BOS	County of Ventura, Board of Supervisors
Cerner	The Cerner Corporation of Kansas City, MO
CMS	Centers for Medicare and Medicaid
Contract staff	Supplemental nurses, and other healthcare support personnel for VCHCA
County	County of Ventura
CQM	Clinical Quality Measures
EHR	Electronic Health Records; the software platform that manages patient records maintained by a hospital or medical practice
Gantt chart	Type of bar chart, developed by Henry Gantt, which illustrates a project schedule. It illustrates start and finish dates of the different required elements of a project; useful in planning how long a project should take and helping to sequence the events by laying them out in the order in which the tasks need to be completed
Go-live	If a new system, especially a computer system, goes live, it starts to operate; become operational; the first time that a computer system can be used after all the tests on it have been completed
Grand Jury	2013-2014 Ventura County Grand Jury
HITECH	Health Information Technology for Economic Clinical Health Act of 2009; funds the allocation of monies for EHR Meaningful Use under ARRA
IT	Information Technology
Implementation	To put a plan or project into effect; execution
Legacy	Of or pertaining to old or outdated computer

	hardware, software, or data that, while still functional, does not work well with up-to-date systems
Meaningful Use	A set of criteria for the use of EHR systems to improve patient care by healthcare providers. This includes coordination of care, improved safety, patient engagement and improved population health. Incentives for Meaningful Use criteria began in 2011, with possible penalties for failure to achieve the standards by the end of December 2014.
NCHS	National Center for Health Statistics
Off the shelf	Available from merchandise in stock; not custom made
PMI	Project Management Institute
RFP	Request for Proposal
Stage 1	First phase of the federal government's Meaningful Use incentive program, which details the requirements for the use of electronic health record (EHR) systems by hospitals and eligible health care providers
Stage 2	Identified requirements for second stage federal incentive payments
VCHCA	Ventura County Health Care Agency

## **Attachment 01**

Description of Ventura County Health Care Agency  
Electronic Health Records (EHR) Timeline

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<b>Ventura County Health Care Agency Electronic Health Records (EHR) Timeline</b>	
<b>Date</b>	<b>Activity</b>
February 17, 2009	The American Recovery and Reinvestment Act (ARRA) of 2009 is signed by the federal government and becomes law four days later. Under it, estimates of as much as \$27 billion over ten years will be expended to support national adoption of EHR systems
May 22, 2009	Ventura County Health Care Agency (VCHCA) issues first Request for Proposal (RFP) for an Electronic Health Records (EHR) system
July 16, 2010	Centers for Medicare and Medicaid (CMS) announces final rule to implement provisions of ARRA of 2009 to provide incentive payments for the Meaningful Use of certified EHR technology. According to the provisions of Healthcare Information Technology for Economic and Clinical Health Act (HITECH), healthcare organizations that have begun Stage 1 Meaningful Use by 2011 will be eligible for incentive payments; those that have failed to achieve the standard by the end of December 2014 may be penalized. The program is scheduled to end by 2021. However, in California eligibility terminates after 2015.
September 17, 2010	Ventura County Health Care Agency issued second RFP for EHR which included Meaningful Use criteria
October 15, 2010	RFP closes
January 2011	Registration for EHR incentive program begins — Stage 1
June 2011	Decision on vendor for EHR made — Cerner system with customization selected; comprised of 63 modules
August 2011	BOS approval to begin contract negotiations with Cerner
September 2011	Draft Board of Supervisors letter requesting staffing
October 2011	BOS approval of \$32 million for Cerner software only
December 2011	VCHCA decides to use contract staff
March 2012	Request for Qualifications (RFQ) for contract staff
April 30, 2012	Formal project kickoff by VCHCA
July 2012	Independent IT Consultant hired to oversee implementation; BOS approval for contract staff
August 2012 – continuous	Contract staff hired
May-June 2013	Hardware (computers and tablets) ordered
June 28-30, 2013	Hardware configured and provided to staff
July 1, 2013	Conversion from legacy systems to Cerner EHR system — begin using new system; go-live to qualify for full Meaningful Use reimbursement (Potentially \$20 million)
July 2013	Cerner staff onsite to assist VCHCA staff for first few weeks after implementation

<b>Ventura County Health Care Agency Electronic Health Records (EHR) Timeline</b>	
<b>Date</b>	<b>Activity</b>
July 2013	User license requirements were underestimated by VCHCA leading to inadequate system capacity (Cerner later provided additional licenses); training of the staff was insufficient leading to inexperience with components of the EHR early in its implementation
October 2013	First Meaningful Use incentive attestation document for \$600,000 sent to federal government for payment to VCHCA
December 2013	No resolution of issues producing financial reports; manual intervention necessary; all billing/coding must be reviewed
February 2014	Cerner releases major EHR system update (resolving approximately 200 issues)