

Response to 2013-14 Grand Jury Report Form

Report Title: Healthcare Records Processes and Procedures

Report Date: 5/29/2014

Responding Agency/Dept: Health Care Agency

Response by: Barry Fisher **Title:** Health Care Agency Director

FACTS

- I (we) agree with the facts numbered: **FA-01; FA-02; FA-03; FA-04; FA-05; FA-07; FA-11; FA-14; FA-16**
- I (we) disagree wholly or partially with the facts numbered: **FA-06; FA-08; FA-09; FA-10; FA-12; FA-13; FA-15**

FINDINGS

- I (we) agree with the findings numbered: **FI-03; FI-07**
- I (we) disagree wholly or partially with the findings numbered: **FI-01; FI-02; FI-04; FI-05; FI-06**

RECOMMENDATIONS

- Recommendations numbered _____ have been implemented.
- Recommendations numbered _____ have not yet been implemented, but will be implemented in the future.
- Recommendations numbered _____ require further analysis.
- Recommendations numbered **R-01; R-02; R-03; R-04** are already standard Health Care Agency procedures.

Date: _____

5/29/14

Signed: _____

Barry Fisher

Number of pages attached: 11

FY 2013-14 GRAND JURY FINAL REPORT
RESPONSES TO FINDINGS AND RECOMMENDATIONS

Report Date: May 29, 2014

Report Title: Healthcare Records Processes and Procedures

Required Respondents: Board of Supervisors
(FI-01 through FI-07 plus R-01 through R-04)

Requested Respondents: Health Care Agency
(FI-01 through FI-07 plus R-01 through R-04)

County Executive Office
(FI-01 through FI-07 plus R-01 through R-04)

Response by: Health Care Agency

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]

RESPONSE: Agree.

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)

RESPONSE: Agree. It is important to recognize the sheer complexity of what HCA took on. The HCA county system spans 2 hospitals and 40 outpatient clinics as well as handling all of the financials. To do this right the first time, an integrated system that would work in both an in-patient hospital and outpatient clinic environment was a requirement and from a vendor that had the experience and resources to partner with us to make it successful. The first RFP did not include the requirement for integration resulting in several smaller, piecemeal vendors responding while none of the larger providers of integrated solutions did.

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]

RESPONSE: Agree.

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]

RESPONSE: Agree.

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.

RESPONSE: Agree.

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)

RESPONSE: Disagree. In 2011, HCA selected their most senior IT manager to initially manage the EHR project during the RFP process, contract negotiations and then planning the details of the project kickoff. In April 2012, more than full year before system go-live, HCA hired a full time contract project manager who reported to the agency director and had full authority for all aspects of the project related to HCA staff and resources planning and coordination. He also had full authority to manage the Cerner contract. It is important to understand that the project manager was required to adhere to the negotiated contract with Cerner and all decisions related to tasks and timelines were jointly made by both the HCA and Cerner project management teams.

The contract with Cerner **required** that HCA follow the Cerner "Event Driven" Project Management methodology. This project methodology has been successfully utilized in implementations with hundreds of Cerner clients.

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)

RESPONSE: Agree. HCA utilized contract staff and received funding approval in July 2012. This use of contract staff is standard practice and preferable in that it allows for reduced staff acquisition time, the ability to find more experienced professionals, meet the higher compensation requirements of experienced Cerner professionals, and the flexibility to meet peak project staffing requirements without unnecessarily increasing permanent staff levels. Without this option, staffing would have taken 6-12 months longer and probably would have resulted in less skilled individuals requiring more training to get them up to speed.

FA-08. In August 2012, the hiring of contract staff began, without a staffing plan based upon a project schedule. (Att-01)

RESPONSE: Disagree. HCA did have a staffing plan which adhered to the staffing requirement specified in the Cerner contract. Both the contract and HCA staff were assigned to specific tasks to meet the required timeline.

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)

RESPONSE: Disagree.

While it is true that hardware (workstations, laptops, printers and scanners) was ordered and arrived in this time frame, and some of it was configured the weekend before, much of the hardware was configured as it arrived between 1 and 3 weeks before go live.

During the pre-implementation period, HCA performed testing and training on over 100 older computers. The results of that testing indicated that the existing computers were adequate to support the Cerner system. Post implementation, some of the older computers were having performance issues, therefore, HCA immediately replaced those computers. The mechanism for a prompt hardware replacement was facilitated through the assistance of other HCA agencies that had recently purchased new equipment. Also, equipment was repositioned from VCMC clinics to the hospital until new equipment could be procured. Further, Cerner donated over 200 laptop computers to assist the agency in providing sufficient hardware.

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)

RESPONSE: Partially Agree

There was no conversion from legacy systems. Cerner was "day forward" with no data loaded previous to July 1 except for patients currently in the hospitals at go live (midnight). In addition:

1. The need to upgrade our legacy systems was identified previous to the availability of Meaningful Use funding and planning was already underway to begin this effort. The availability of Meaning Use funding happen to coincide with the general timeframe previously targeted.
2. At least twice before go live, the project manager and Cerner reviewed the project plan with the Executive Steering Committee to weigh the pros and cons of proceeding with the "big bang" vs. looking at a staggered approach.
3. The decision was made to proceed to support overall patient care while managing costs in a responsible manner. More specifically:

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.

RESPONSE: Disagree

This point assumes the training occurred in Kansas City. It did not. There were 4 trips to Kansas City:

1. System Review – a checkpoint session to make sure the requirements and design elements were being completed according to Cerner standards
2. Design Review – a final review of the design before Cerner began building the system
3. System Validation – a review of the partially built system in preparation for the beginning of initial testing
4. Maintenance Training – this is system support training for the analysts and IT staff supporting the system.

It is true that for Kansas City sessions Cerner recommended roughly 120 staff. This included most agency managers, executives, physicians, as well as the analyst and IT team. We estimated the cost of each trip to Kansas City to average \$1,000 assuming 3 days of travel. There was also the impact of taking so many people out the agency at once for several days. The cost of the recommended Cerner attendance was \$480,000. Our actual travel costs to Kansas City were less than \$250K with no material loss in fidelity of the information we provided or were given. This decision saved Ventura County \$230K.

There was no end user or manager training in Kansas City. All of this was performed at HCA. Over 3,000 employees and contract staff were trained over a 3 month period. The average training was approximately 16 hours with the minimum being 4 hours and some classes exceeding 40 hours. Cerner is a very comprehensive system and only so much can be learned in the classroom. More than half of the training came in either On-the-Job-Training (OJT) sessions or refresher training sessions held after go live.

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)

RESPONSE: Disagree

1. HCA purchased Cerner recommended, standard, off-the shelf hardware in all cases. Samples of each device were delivered early for testing in accordance with the Cerner methodology. No issues were found and further testing of this same standard, off the shelf equipment was not required. Electromagnetic interference was not found during testing because the interference is not homogenous throughout the hospitals. Upon being found, IT quickly developed a solution and implemented it across all wireless devices.

2. Despite focus group testing that included clinical staff, the tablets did not perform as anticipated. Their primary function was for medication administration and minimal charting. Clinical staff chose to use them for more extensive real time charting. As this was observed, these were quickly replaced by laptops.
3. The IV pumps and Monitors were not critical to the implementation of Cerner. As the implementation approached it became clear the IT staff, analysts and clinical staff would be overwhelmed by another new thing to implement and learn. The HCA project manager recommended these devices be postponed to a future phase, a standard PMI sanctioned technique when scope exceeds available time or resources.

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)

RESPONSE: Agree.

It should be noted that many hospitals and larger outpatient entities struggle to attain MU. The fact that both hospitals and over 98% of our eligible providers met MU in the first attestation period is a testament to the quality of the staff, training they received, support by the project team and the Cerner system.

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.

RESPONSE: Disagree

1. Problems with the system were reported on the first day and resolutions to these problems were implemented starting the next day. As with any new system many problems have been reported and many have been corrected. For example the system performance issues, equipment issues, training issues, have all been substantially addressed. All the major issues were reported to the Board Of Supervisors on March 18th in a Cerner Update presentation. This was a very frank, comprehensive and detailed presentation covering the project from inception through 9 months after go live. In addition, there were regular biweekly status meetings with the HCA Executive Steering Committee as well as updates provided to the HCA Oversight Committee and the County Executive Office.
2. A Command Center / Help Desk was staffed by call takers and teams of 2 people (1 Cerner and 1 HCA) per solution. This operated 24 hours every day for two weeks to ensure issues were addressed as quickly as possible.
3. Upon recognition of the revenue issues, a team was assembled to review the issues and substantial progress had been made by February. This team is continuing to review revenue related issues and make recommendations.
4. Reporting is always an issue on IT projects and Cerner was no exception. The project team has worked with Cerner to identify and standard reports that were not producing the correct outcome. There were also a large number of reports that Cerner does not produce that the HCA IT group is working on producing.

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)

RESPONSE: Agree. This is further evidence in overall system health, increased experience of our HCA support team and the tight partnership HCA has developed with Cerner.

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)

RESPONSE: Disagree

1. HCA was not solely responsible for planning the implementation. The testing, training, cutover and after go live support were all conducted following Cerner's Event Driven Methodology.
2. Cerner and HCA shared the responsibility for the hardware. Cerner responsible for the acquisition of the servers and some Cerner specific end user hardware. HCA was responsible generic end user hardware such as workstations, laptops and printers.

FI-02. VCHCA did not procure hardware in a timely manner. This led to time compression and inefficiency in the EHR implementation. (FA-09)

RESPONSE: Disagree

Although certain end-user equipment was delivered in the weeks before go-live, HCA purchased Cerner recommended standard, off the shelf hardware in all cases. Samples of each device were delivered early for testing in accordance with the Cerner methodology. No issues were found and therefore further testing of this equipment was not required. Electromagnetic interference was not found during testing because the interference is not homogenous throughout the hospitals. Upon being found, IT quickly developed a solution and implemented it across all wireless devices.

Cerner essentially donated over 200 laptops and other miscellaneous end user computers to assist the agency to get sufficient computers in place.

Despite focus group testing that included clinical staff, the tablets did not perform as anticipated. Their primary function was for medication administration and minimal charting. Clinical staff chose to use them for more extensive real time charting. As this was observed, these were quickly replaced by laptops.

The IV pumps and Monitors were not critical to the implementation of Cerner. As the implementation approached it became clear the IT staff, analysts and clinical staff would be overwhelmed by another new thing to implement and learn. The HCA project

manager recommended these devices be postponed to a future phase, a standard PMI sanctioned technique when scope exceeds available time or resources.

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)

RESPONSE: Agree

All large IT system implementations are based on estimates and adjustment after implementation is a matter of course. The original estimate for the initial system build for 600 was based on concurrent users in Meditech. The issue was found immediately and it took less than a week to acquire and install the additional licenses.

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)

RESPONSE: Disagree

1. In 2011, HCA selected their most senior IT manager to initially manage the EHR project during the RFP process, contract negotiations and then planning the details of the project kickoff. In April 2012, more than a full year before project go-live, HCA hired a full time contract project manager who reported to the agency director and had full authority for all aspects of the project related to HCA staff and resources planning and coordination. He also had full authority to manage the Cerner contract. It is important to understand that the project manager was required to adhere to the negotiated contract with Cerner and all decisions related to tasks and timelines were jointly made by both the HCA and Cerner project management teams.
2. The combined project team followed Cerner's project management methodology, which has been proven successful in implementing hundreds of Cerner clients.
3. HCA's project manager shared status with the Cerner project management team and his key staff at a weekly Cerner project meeting. Tasks were reviewed for progress. Issues were identified and plans developed for mitigation.
4. HCA's project manager provided bi-weekly status to the HCA executive steering committee including progress and issues.
5. Over 7,000 core team staff hours and several thousand super user hours were spent testing this system in the months before going live. Over 50,000 hours of training were provided. Hundreds of hours were spent planning the go live.
6. At go live over 400 HCA and Cerner staff were deployed to provide support for the clinicians using the system. This included a Command Center / Help Desk staffed by call takers and teams of 2 people (1 Cerner and 1 HCA) per solution. This operated 24 hours every day for two weeks to ensure issues were addressed as quickly as possible.

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)

RESPONSE: Disagree

1. HCA purchased Cerner recommended, standard, off the shelf hardware in all cases. Samples of each device were delivered early for testing in accordance with the Cerner methodology. No issues were found and further testing of this same equipment was not required. Electromagnetic interference was not found during testing because it is not homogenous throughout the hospitals. Upon being found, IT quickly developed a solution and implemented it across all wireless devices.
2. The IV pumps and Monitors were not critical to the implementation of Cerner. As the implementation approached it became clear the IT staff, analysts and clinical staff would be overwhelmed by another new thing to implement and learn. The decision was made to postpone this to future phase.

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)

RESPONSE: Disagree

1. HCA takes training of their staff very seriously and especially when related to patient care.
2. Many physicians have commented on how much improved their view of the patients medical history is as a result of the new system. This makes their patient visits more efficient and allows for them to provide better care.
3. The Joint Commission recently completed a thorough survey of our entire operation and determine that our patient care was outstanding and commented that the Cerner system was a great system to support our staff.
4. HCA purposefully reduced patient appointments in clinics for the first 2 months (except Oncology) in order to allow more time for staff to adopt the new EHR. Additional staffing was put into the Urgent Care unit to deal with urgent medical needs where patients were unable to get an appointment with their clinic physician.
5. Over 200 super users were given the additional time and responsibility to get trained on the new system before go live. They were then able to assist in adoption and provide rapid responses to questions and escalation of issues.
6. Funding was requested and approved in the July 2012 Cerner board letter to cover staff allocations for training.
7. A substantial amount of time and effort was spent by the Informatics manager responsible for training and over 20 analysts for each major solution area to plan out training schedules and content.
8. The analysts developed comprehensive classes that included hands on use of the system, user guides, and cheat sheets for use on the job.
9. Training schedules were developed with clinical manager's input and posted substantially in advance of the actual training dates. Manager's scheduled staff to attend one of the training sessions.
10. Training was mandatory.
11. The training covered over 3,000 staff members at 9 training centers. It also required training across the various shifts including evenings and weekends.
12. The average training was approximately 16 hours with the minimum being 4 hours and some classes exceeding 40 hours. This represents over 50,000 hours of training.

13. Cerner is a very comprehensive system and only so much can be learned in the classroom. More than half of the training came in either OJT sessions or refresher training sessions held after go live.

FI-07. VCHCA chose to go live July 1, 2013, to qualify for full Meaningful Use funding. (FA-03, FA-10, FA-14)

RESPONSE: Agree.

1. At least twice before go live, the project manager and Cerner reviewed the project plan with the Executive Steering Committee to weigh the pros and cons of proceeding with the "big bang" vs. looking at a staggered approach.
2. The decision was made to proceed for the following reasons:
 - a. The Cerner EHR system would improve patient care. HCA did not want to delay this improvement.
 - b. There would have been a loss of over 50% of the funding for the project related to Meaningful Use.
 - c. HCA would have had to maintain duplicate financials during the time between the multiple implementations. The actual financial issues encountered would likely have been magnified by this situation.
 - d. Resource costs would have increased and contractor staff and Cerner would have had to remain engaged longer.
 - e. Interface costs would have increased in order to find a way to bridge the old and new systems in the interim dual system time.
 - f. Training costs would have increased as some would have to be trained to interact with Cerner in a view only mode and then trained again later to enter data.
3. If we had delayed the following is also true:
 - a. No additional testing of hardware would have happened as the testing was deemed appropriate and complete.
 - b. Much of the hardware procured and configured could have been acquired, configured and deployed without the last minute rush.
 - c. System testing was completed using HCA developed test scripts built according to Cerner's methodology. The test results would not have been materially different if we delayed.
 - d. Training would have been deferred but the net level of competence at the time of go live would not have changed.
 - e. The initial performance issues encountered would not have surfaced until a later phase (if HCA had done the hospital first, there would not have been any license or performance issues noticed).
4. Having completed the implementation and roll, it is my opinion that the delay would have resulted in:
 - a. Patient care would have remained at status quo and no improvements would have been seen.
 - b. A loss of \$20 million in MU funds
 - c. No material improvement in personnel readiness, system quality, or system performance.
 - d. There would have been an opportunity to have more hardware ready sooner.

- e. If the implementation had been split into 2, the second implementation would have received some benefits from the first implementation.

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-01: The Health Care Agency follows PMI standard practices for all of its significant IT projects as put forth by the IT Department of the County of Ventura. The Cerner project did not use the PMI standard practices as the Cerner contract required that we utilize the Cerner Event Driven Project Management methodology. Although this methodology differs from the PMI methodology, it is a valid and standard protocol with system implementation.

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-02: The recommendation to have an experienced project manager with any large capital project is mandatory already. Although there was a transition in the project manager during the Cerner implementation, this was unanticipated and resolved immediately.

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-03: Significant material resources were in place for the system implementation. All of the recommended software and hardware was purchased prior to implementation, was on-site, tested, and installed to support implementation. Unanticipated required resources were acquired quickly.

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)

R-04: The Cerner project implementation adhered to a training schedule to ensure that all staff were prepared for the new system.