From: Blackburn, Scott R.

**Sent:** 21 Mar 2018 10:23:35 -0700

To: Windom, John H.; Zenooz, Ashwini; Truex, Matthew; Short, John

(VACO);(b) (6)

Subject: FW: [EXTERNAL] (b) (6)

Attachments: suggestions to VA on the contract.docx, Requests for Cerner EHR platform to Support Innovation and Interoperability smh.docx, Copy of 003 - VA EHRM Non-

Functional RTM (Amended 2.16.2018) smh.xlsx

In case you guys didn't get these note from (b) (6)

----Original Message----From: Blackburn, Scott R.

Sent: Wednesday, March 21, 2018 1:09 PM

To: 'Bruce Moskowitz'

Cc: IP; (b) (6) @gmail.com Subject: RE: [EXTERNAL] (b) (6)

Figured it out. Here are the files/notes that wrote up for us...

----Original Message-----

From: Bruce Moskowitz [mailto:(b) (6)

Sent: Wednesday, March 21, 2018 11:30 AM

To: Blackburn, Scott R.

Cc: IP; (b) (6) @gmail.com Subject: [EXTERNAL] (b) (6)

Can you send his notes to us? Thank you

Sent from my iPad Bruce Moskowitz M.D.

- 1. Read and write of all patient specific data through FHIR APIs and services by [specific date] post signing
  - a. Cerner progress on comprehensive support of FHIR has been slow. Only a few development resources are working on FHIR services. There should be timelines or at least a resource commitment of some kind to make sure continued development of FHIR resources is a priority.
- 2. Support for CDS Hooks
- 3. Support for an HL7 approved publish and subscribe (pub/sub) infrastructure and services.
- 4. Support model driven application development tools that use FHIR resources and profiles
- 5. Support a "time drive" infrastructure and services.
- 6. Provide a terminology server that is compliant with the FHIR Terminology Module
- 7. Support a knowledge repository for all kinds of knowledge artifacts: CDS logic, FHIR profiles, order sets, workflows, etc.
- 8. Provide the ability for the VA to quickly change workflows. Currently, workflows are hard coded into the applications. It makes it nearly impossible to change workflows to accommodate changes in clinical practice.
- 9. Specify the time frame after a new version of FHIR is approved that Cerner will upgrade its services one year?
- 10. Support VA or other 3<sup>rd</sup> party defined FHIR profiles
  - a. Use of FHIR profiles in model driven application development
  - b. Ability to test conformance of an application to a specific set of FHIR profiles
  - c. Services automatically test conformance to profiles in the Cerner FHIR services
- 11. It is difficult to discern an overall architecture for the desired system. I think there is a danger that Cerner will just add more unmaintainable code ("bolt-on functionality") to the existing spaghetti bowl to meet VA requirements, rather than creating a thoughtful new next-generation system. Would it be possible to add a diagram that would show a high level view of the future system with the relationship to external systems, etc.?
- 12. I think several of the requirements listed in "003 VA EHRM Non-Functional RTM (Amended 2.16.2018)" are unreasonable and/or infeasible.

#### Functionality Requests for Cerner EMR platform to Support Innovation and Interoperability

In order to meet the innovation needs of (b) (4) to be a model health system, several types of enhancements to the Cerner EMR platform are needed. These enhancement types consist of the following:

- 1. Open Services (i.e., FHIR resources)
  - a. Data Read Services
  - b. Data Write Services
  - c. Order Submission Services
  - d. Select Event Publication Services
- 2. Open Application Framework
- 3. Open CDS Integration (i.e., CDS Hooks)
- 4. Open Development Tools

Additionally, a governance structure is needed in order for determine specific functionality, prioritization, acceptance criteria and schedule for enhancements. The governance structure would also handle change requests and disputes.

These enhancement requests can be described in more detail by applying them to several applications that (b) (4) can deploy or could use as demonstrations of the innovation and interoperability capabilities and/or building blocks for future innovations on the platform. Example applications include: Pulmonary Embolism (PE) Diagnosis and Treatment, Pediatric Growth Chart, Neonatal Bilirubin Tracking, Opioid Management, Device Interoperability Pilot, Referral/Scheduling Management, and Health Information Exchange Data Viewer.

(b) (4) is working closely with the (b) (4) on several grantfunded projects to advance several of these applications.

For each of the enhancement types listed above, more detail is presented here, along with information about how these relate to the example applications.

#### **Open Services**

Open Services refers to the open, standards-based service API (application programming interface) on top of the Cerner EMR platform. It provides access from 3<sup>rd</sup> party applications and services to the underlying Cerner platform, particularly the data and knowledge assets within Cerner repositories, but also logic and services available within the Cerner platform. Intermountain and Cerner have agreed that this layer would utilize the HL7 FHIR specification, at least initially. Cerner has made considerable progress in implementing a FHIR service layer on top of its EMR, particularly for Data Read services to meet requirements of Meaningful Use and the Clinical Quality Framework (CQF). But additional and timelier enhancements in this area are needed.

Open Services enhancements fall under the following categories:

- 1. FHIR Resource Read Services: These Services allow a 3<sup>rd</sup> party application or service to access data from repositories within the Cerner platform. The Resources also allow query capability according to the FHIR standard, which can be enhanced by FHIR Profiles. The query capability is mentioned because we have found inconsistencies in the way that Cerner supports FHIR queries and we would like to resolve this with them. Cerner supports querying and reading most of the more "popular" FHIR resources under FHIR DSTU2, but specific data types within resources such as Observation and DocumentReference may not be fully available through the interface. There are also attributes of certain resources that are not returned by the services. These missing data types and attributes are essential to meet the needs of the example applications. More detail is provided for each example application.
- FHIR Resource Write Services: These Services allow a 3<sup>rd</sup> party application or service to
  write data into a repository within the Cerner platform. Cerner supports several
  Resource Write Services, but this list is far from complete to support functionality
  required by some of the example applications. More detail is provided for each example
  application.
- 3. Support for FHIR Profiles: FHIR Profiles allow a FHIR Resource to be tailored to a specific need, and can be used to specify a higher level of semantic interoperability for resource data shared between FHIR resource servers and consumers (e.g., a Cerner repository providing access through FHIR services, and a 3<sup>rd</sup> party application querying for data from the Cerner repository through the FHIR services). Use of FHIR Resources alone does not ensure true semantic interoperability. Cerner does provide support for the CQF FHIR Profiles, particularly as a result of participation in the Argonauts consortium, but these profiles are at a level too high to ensure true semantic interoperability, and they do not completely cover the data access needs of the example applications. We have also found inconsistencies in the way that EMR vendors provide support for FHIR profiles. We would like to work with Cerner, and other EMR vendors, to develop more complete specifications on what it means to support a FHIR profile (possibly through the Argonauts consortium). We would also like to work with Cerner on specific FHIR profiles developed through the HSPC/CIMI initiative to support the example applications. More detail for specific FHIR profiles is provided for some of the example applications.
- 4. <u>Support for higher-level FHIR Resources</u>: "Higher-level FHIR Resources" include functionality that goes beyond reading and writing data to/from a repository. These higher-level functions typically support workflow, such as ordering and scheduling. It also includes the ability to post events (the "Flag" resource in FHIR). More detail for specific higher-level resources is provided for some of the example applications.
- 5. Migration strategy for FHIR versions: FHIR is a developing standard, and HL7 continues to work on new versions of the standard. Most EMR vendors have settled on current support for the DSTU 2 version, but HL7 has published Release 3. Successive versions of FHIR have broken previous versions. This understandably leads to some hesitation about fully supporting a given release if it will be broken in a short time, and/or potentially never will be utilized in a production environment. We also have no guarantee from an application development perspective on if/when a vendor will support a given release, and when a previous release will become unsupported. We need to work with Cerner

on a strategy for handling support and migration of FHIR versions, and we need to come to agreement on whether the unknowns about HL7 FHIR development should deter current use of a given release version. This should probably be handled by the governance structure suggested earlier.

Examples of how the Open Services apply to the example applications are the following:

<u>Pulmonary Embolism (PE) Diagnosis and Treatment</u>: The accompanying Excel file (Pulmonary Embolism Factors.xlsx) presents details on the specific data types used by the PE tool, and the corresponding FHIR Resources and FHIR Profiles required. It also shows which services need Read and/or Write functionality. Note that the AlertEvent model is still under discussion, as we are unsure what Resource would correspond with this.

<u>Pediatric Growth Chart</u>: This application needs standard Patient and Encounter Resources, as well as the Observation Resource mapped to various data types for Height/Length, Weight, Head Circumference and BMI. These are Read services today, but it would be helpful to the clinician workflow to allow Writes if these are recorded during use of the application. Clinicians would also like to write the calculated percentiles (Observation Write) back to the patient's record so that they may be included in progress notes.

Neonatal Bilirubin Tracking: Enhancements made to this application by the latest version significantly better than the iCentra version. The application requires exact time of birth, bilirubin lab results (Observation, Read/Write), and bilirubin lights therapy (Procedure). The CDS support added to the application would allow ordering of light therapy or transfusion (Order, ProcedureRequest).

<u>Opioid Management</u>: The application requires fully specified Medication, Encounter and labrelated (Observation) Resources, where all structured elements (including medication route and frequency) use standard code systems.

<u>Device Interoperability Pilot</u>: We are working with the Center for Medical Interoperability on a FHIR-based standard for device data interchange. (Cerner is a member of C4MI, too.) For this pilot, we need the ability to write device data (Observation) to the patient record, and collect information about a Device.

<u>Referral/Scheduling Management</u>: The first use case for this application is for surgery referral requests and the workflow events that occur until the episode concludes (including the follow-up with the referring physician). The applications requires a ProcedureRequest Resource (Read/Write), C-CDA Document (Document Reference, Binary, Read/Write), Procedure, Patient and Encounter References, as well as information about the Organization, Practitioner, HealthcareService

<u>Health Information Exchange Data Viewer</u>: The Viewer application allows users to view health information exchange information shared from other organizations, perform reconciliation,

request data from other organizations, and create C-CDA documents to share with other organizations. The application requires Read and Write capabilities for C-CDA documents, as well as the ability to read sections of the patient's medical record in order to create a C-CDA document (e.g., Medication, Condition, AllergyIntolerance, Observation, Patient, Encounter, Procedure, etc.). Advanced features include the ability to decompose a C-CDA from another institution and Write the structured data into the patient's record.

#### **Open Application Framework**

The Open Application Framework refers to technology needed to integrate 3<sup>rd</sup> party applications within the "application desktop" of the Cerner EMR (Millennium/iCentra). This includes the ability to open an application directly from the EMR, keep the application's window within the parent window of the EMR, to support a security model allowing management of the security status of the application, and share application context (user, patient, encounter, etc.) with the application. Intermountain and Cerner have agreed that the SMART standard will be used for this framework. Cerner currently implements this by providing an mPage wrapper around a generic SMART container in which the 3<sup>rd</sup> party app is hosted. The app can be launched from a link within the iCentra left-hand navigation menu. For example, the Pediatric Growth Chart SMART on FHIR app is currently available in production in iCentra and can be launched from the navigation menu.

An enhancement that would be useful for several of the example applications is the ability to launch or embed applications from other locations within the EMR. For example, it would be more efficient for the Growth Chart app to be embedded directly within the clinician's workflow mPage so that it can be viewed in context with other information about the patient (without having to navigate to a separate app in the menu). We have also discussed the ability to launch apps from tracking boards (e.g., Launch Point), for example the ability to launch the PE diagnostic tool when an indicator on Launch Point suggests a possible pulmonary embolus that needs to be evaluated using the tool. The Bilirubin Tracking and Opioid Management apps would also benefit from such integration.

A general facility to communicate information from external processes would also be of value. The ability to publish data and events for applications to subscribe to invites asynchronous creation of observations, reminders, suggestions, and alerts. We would welcome the opportunity to work with Cerner to develop an efficient and effective mechanism to integrate these messages into the clinical workflow. A part of this can be accomplished using the CDS-Hooks technology described below.

In addition, we need to work with Cerner to handle other aspects of open application integration, such as handling of additional contexts and the ability to communicate from the app back to the EMR (in addition to FHIR data services) in order to perform other functions such as place an order on the order scratchpad, switch context, or launch another application.

#### **Open CDS Integration**

EMRs become much more robust and functional when they support clinical decision support (CDS), particularly when that CDS is delivered at the right time to the right person. There is growing support in the healthcare community for using CDS services that allow decision support content to be available from any trusted source and located either within the walls of the institution or EMR provider, or externally (in the "cloud"). Cerner is actively supporting the HL7 CDS Hooks standard for providing 3<sup>rd</sup> party CDS services. The CDS Hooks standard allows triggers ("hooks") from the EMR to call external services that provide responses in the form of information, suggestions and app links. The supported event triggers are a small set of the potential triggers that may be needed in the future, and the current methods for displaying the responses are limited.

[5] (4) and Cerner need to work together to expand both the set of triggers and the methods for handling the responses. We should also work with Cerner to push the testing and implementation of the app link CDS Hook response in order to launch example applications like the PE, Opioid Management, and Bilirubin tools. The supported triggers also need to expand beyond just user events (e.g., "Open patient chart", "Order med") to events triggered by internal actions (e.g., storing of an observation, result of a Discern rule).

We need to stay informed about the Clinical Query Language (CQL) HL7 standard for expressing decision support logic in a standard format so that these knowledge artifacts may be easily shared.

While considering CDS, we should also think beyond the single-session decision support rules that drive many of the alerts, reminders and suggestions that clinicians typically see, and also address the infrastructure needed to support long-running, stateful processes such as are found in care process models. HL7 and OMG are working on applying business process modeling standards to healthcare, and these may significantly enhance the way we develop and deliver CDS. Example applications such the PE tool involve stateful processes. (b) (4) version of this tool utilizes an open source BPMN engine, and we need to encourage Cerner to look at this technology in order to support innovation capabilities on their platform.

#### **Open Development Tools**

Open Development Tools may be used by development groups to develop applications (loosely defined as user-facing applications as well as services, CDS logic and other knowledge artifacts) using the open service, application and CDS standards mentioned above. These tools make it easier and more efficient to develop applications whose underlying terminology, data models and integrations are syntactically and semantically correct. The tools would incorporate FHIR profiles and FHIR terminology services. Cerner could have a true innovation platform if they provided such tools to 3<sup>rd</sup> parties as part of their platform. They could ensure that any application built using these tools would work out of the box and could be interoperable across any of their other customers using the open standards. Assuming common adoption of interoperability standards across vendors, the applications may also be assured of working across vendor EMRs. This will result in a knowledge sharing community, and one where the entire healthcare industry becomes a learning healthcare system.

From: Foster, Michele (SES)

**Sent:** 21 Mar 2018 09:01:24 -0700

To: Windom, John H.

**Subject:** RE: Meeting with Secretary Shulkin

Excellent-thank you John!

Sent with Good (www.good.com)

From: Windom, John H.

Sent: Wednesday, March 21, 2018 9:27:14 AM

**To:** Truex, Matthew; (b) (6) Foster, Michele (SES); (b) (6)

Subject: FW: Meeting with Secretary Shulkin

fyi

John H. Windom, Senior Executive Service (SES)

Program Executive for Electronic Health Record Modernization (PEO EHRM)

Special Advisor to the Under Secretary for Health

811 Vermont Avenue NW (b) (6)
Washington, DC 20420

Office (b) (6)

Mobile (b) (6)

Executive Assistant: (b) (6) — Appointments and Scheduling

(b) (6) @va.gov Office: (b) (6)

From: Blackburn, Scott R.

Sent: Wednesday, March 21, 2018 9:17 AM

To: Windom, John H.

Cc: Zenooz, Ashwini; (b) (6) Short, John (VACO)

Subject: RE: Meeting with Secretary Shulkin

Sounds like a plan. I will come in and be there in person.

From: Windom, John H.

Sent: Wednesday, March 21, 2018 9:16 AM

To: Blackburn, Scott R.

Cc: Zenooz, Ashwini; (b) (6) Short, John (VACO)

Subject: Meeting with Secretary Shulkin

Importance: High

Sir,

I recommend using the 1100-1130 meeting with Shulkin to get clear direction from him on what it takes to close out the contract. The only comments I would make from an action perspective:

We will be assembling the EHRM industry advisory council as discussed. Participants



- 2. We will setup the recommended interoperability test platform/sandbox as part of our IOC efforts and associated testing requirements.
- 3. We will solidify the DVP requirements and associated API strategies based on comments from the external experts.
- 4. Re-validate interoperability, device registry, etc. language contained in the contract.
- 5. Continue to solidify our PEO staffing structure in support of present and future contract oversight requirements.

Mr. Secretary, what else did your hear? I believe we are ready.

Thoughts....?

John

John H. Windom, Senior Executive Service (SES)
Program Executive for Electronic Health Record Modernization (PEO EHRM)
Special Advisor to the Under Secretary for Health
811 Vermont Avenue NW (b) (6)
Washington, DC 20420
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Executive Assistant: (b) (6) — Appointments and Scheduling (b) (6) — Office: (b) (6)

From: Blackburn, Scott R.

**Sent:** 20 Mar 2018 19:21:00 -0700

To: (b) (6)

Cc: Short, John (VACO); Zenooz, Ashwini; Windom, John H.

Subject: RE: [EXTERNAL] RE: VA EHR Call Update

I agree with you.

If you think it is helpful, I'd be happy to connect you directly with (b) (6) so you guys can talk this through and make sure we didn't miss a point (or make sure he understands what we are doing). I am afraid of the back-channel talk that happens with these guys.

From: (b) (6)

Sent: Tuesday, March 20, 2018 10:19 PM

**To:** Blackburn, Scott R.

Subject: RE: [EXTERNAL] RE: VA EHR Call Update

I don't get it. What is said below is where we are trying to go with standards. Our contract could site the specific standards (no argument here). But even if you did everything below there is still quite a bit of daylight between what he was saying on the phone (semantic interoperability, machine learning) and having the data appended to the EMR when the initiating institution passes the data using a standard. I don't see anything about how you make the sender adhere to standards, especially how you have Cerner "make" the other EHRs do it.



From: Blackburn, Scott R.

Sent: Tuesday, March 20, 2018 7:34:36 PM

To: (b) (b)

Subject: FW: [EXTERNAL] RE: VA EHR Call Update

From: (b) (6) [mailto (b) (6) @mayo.edu]

**Sent:** Tuesday, March 20, 2018 4:25 PM

To: Blackburn, Scott R.; (b) (6)

Cc: Windom, John H.; Truex, Matthew; Short, John (VACO)

Subject: Re: [EXTERNAL] RE: VA EHR Call Update

Scott,

I reviewed the material you sent regarding the proposed VA EMR contract and statement of work. I have one area of concern regarding the interoperability of the system with community care providers. For the

new VA EMR to efficiently serve patients, maximize safety and lower medical costs, medical records from the military, VA and community care providers under contract must be viewable in a seamless electronic format. The language of the contract and statement of work do not require this of the Cerner system.

In my experience using 3 versions of the Cerner EMR, the records from outside providers are imported as a CCD or CCA file and labeled as "Outside Material" with no way to identify file content or correlate internal study results with similar outside studies. For example a fax with a coronary angiogram report and a colonoscopy report will be included in the same "Outside Material" file. The date on the Outside Material file is the date of entry into the Cerner EMR, with no relation to the date of the file contents. These results are neither indexed nor searchable. The effort required of providers to open and read all pages of each file is infeasible and therefore tests are needlessly repeated at substantial cost and risk to patients.

I recommend that the VA EMR contract and statement of work be amended to require that a core interoperability strategy be operational at the time of initial EMR implementation. The amended contract and statement of work should specify that that all community care provider materials be indexed and searchable by specific diagnosis and test result, and that these results be linked to relevant parts of the internal VA records by date and medical discipline. For example, a coronary angiogram report at an outside facility performed in January 2018 should appear in the VA EMR under Cardiology Testing (nomenclature from Cerner Mayo installations) on the date of the study. Current operational examples of successful EMR interoperability at the level required include EPIC to EPIC data exchange or a proprietary intra-organization system used at Mayo Clinic called Synthesis. We would recommend that you utilize standards for this as promulgated by the Federal government (e.g., Meaningful Use 2015 edition, and the Trusted Exchange Framework and Common Agreement initiated by the Department of Health and Human Services) and by industry (e.g., the HL7 Fast Healthcare Interoperability Resource standards and industry-led Argonaut and SMART projects). This recommendation has been reviewed by Mayo Clinic leadership and we believe is consistent with other feedback you have received from Mayo Clinic experts.

I look forward to discussing the VA EMR during the conference call at 7:30. My flight to ATL is delayed slightly, but scheduled to land at 7:05 pm.

# (b) (6)

Chair, Enterprise Department of Cardiovascular Medicine Mayo Clinic

Thank you, Dr. Moskowitz mentioned very specifically to me that we should get your perspective on cloud so that we know we have that part correct. I am thinking we cover that issue from 7:30-8pm ET before others join at 8pm.

Thank you again for the support. Scott

From: (b) (6)

**Sent:** Monday, March 19, 2018 1:38 PM

To: (b) (6)

Cc: Blackburn, Scott R.; Windom, John H.; Truex, Matthew

Subject: RE: [EXTERNAL] VA EHR Call Update

thank you for your response. I have sent two outlook invites, one starting at 7:30PM EST for you to participate in as well as the 8PM EST with the group. Please let me know if you have any questions.

Thanks,



From:(b) (6) [mailto:(b) (6) @mayo.edu]

**Sent:** Saturday, March 17, 2018 9:36 PM

To: (b) (6)

Cc: Blackburn, Scott R.; Windom, John H.; Truex, Matthew

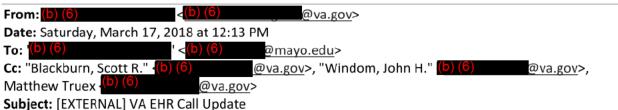
**Subject:** Re: [EXTERNAL] VA EHR Call Update

Importance: High

Tuesday I am in Rochester, MN. Meetings 10:30-2:00 and a 4 pm flight to Atlanta. If the call needs to be Tuesday, I have a layover in ATL 7:05-8:48 pm. Could I call in as soon as I land?

Wednesday I could make a call after 6:30 pm.

#### (b) (6)



Subject: [EXTERNAL] VA EHR Call Opdat

Good afternoon (b) (6)

I hope you are having a nice weekend! Sorry for the extra email but we are having trouble finding a time that works for everyone. Right now, Tuesday evening seems to be the best time. If we made the call later on Tuesday starting at 5pm, 6pm, 7pm or 8pm ET would you be able to make that work?

Thanks again!



#### (b) (6)

Executive Assistant to the Assistant Secretary
Office of Information and Technology

US Department of Veterans Affairs

Desk: (b) (6) Cell: (b) (6)

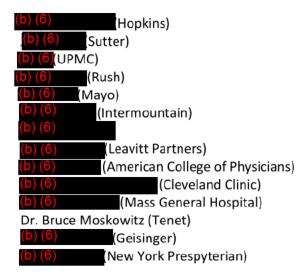
From: Blackburn, Scott R.

**Sent:** 20 Mar 2018 18:17:22 -0700

To: Zenooz, Ashwini; Windom, John H.

**Subject:** Advisory Committee

Let's start putting this together with ASAP. I know I have thoughts and "favorites". I am sure you guys do to. My candidates (Just off top of my head).



Scott Blackburn
Executive in Charge, Office of Information & Technology
US Department of Veterans Affairs

From: Short, John (VACO)

**Sent:** 20 Mar 2018 23:13:31 +0000

To: Windom, John H.

Cc: Zenooz, Ashwini (b) (6) ;Truex, Matthew

**Subject:** RE: VA EHR Call Update

Attachments: Cerner\_VA\_Interoperability\_Response\_v1.docx

Importance: High

JW – Response attached for your review. I wasn't sure if you wanted to send this over to Scott at this time, so this is going out minus him for the moment.

Also, our fax capability will have indexing, which she has not, apparently, experienced, but believes that is critical to patient safety.

BTW – I have lost almost all of my voice... 🕾

From: Windom, John H.

**Sent:** Tuesday, March 20, 2018 5:30 PM **To:** Short, John (VACO); Blackburn, Scott R.

Cc: Zenooz, Ashwini; (b) (6); Truex, Matthew

Subject: RE: VA EHR Call Update

All of this is in our contract and being done in phases.

Jw

Sent with Good (www.good.com)

From: Short, John (VACO)

**Sent:** Tuesday, March 20, 2018 2:24:14 PM **To:** Blackburn, Scott R.; Windom, John H.

Subject: RE: VA EHR Call Update

On Day one of GoLive we will have the ability to parse many portions of all the Community Care CCD and CCDAs directly into the Cerner Millennium EHR.

I'll have the details for you shortly.

From: Blackburn, Scott R.

**Sent:** Tuesday, March 20, 2018 5:13 PM **To:** Short, John (VACO); Windom, John H.

Subject: FW: [EXTERNAL] RE: VA EHR Call Update

Thoughts?

# Cerner Clarification on Advanced Interoperability

#### **Overview**

Cerner recognizes the need to have a multi-faceted approach to interoperability and integrating data through seamless or manual processes. Our solutions support all types of Continuity of Care Document (CCD) ingestion use cases including various forms of digital and manual faxing workflows. These solutions as well as the compliance with industry standards that support them have been included in the existing Performance Work Statement (PWS) provided to the Department of Veterans Affairs (VA).

## Clarification of Cerner Advanced Interoperability Capabilities

Cerner has committed to providing the VA Advanced Interoperability solutions, which include enhanced CCD parsing that involves extracting data from the CCD and discretely reconciling it into the Millennium record. These capabilities are outlined in the following sections of the existing PWS and were clarified by the MITRE Interoperability Assessment:

- In section 5.10.5 of the RFP: "m) The Contractor shall conduct an annual Interoperability Self-Assessment against standards that shall be specified by the VA, such as those promulgated by HIMSS or future standards to be identified by VA."
- In section 5.10.4(m) of the RFP: "The annual self-assessment will report on the state of each data element (e.g., which are supported in what capacities and in which formats). This will help assure standards implementation consistency and assure standards compliance with evolving national standards."
- In section 5.5.1 of the RFP: "j) The Contractor shall enable configuration of the application that supports external community data without requiring the clinician to go to special screens to see and use reconciled external data. By IOC entry, the Contractor shall support incorporation of the following external community data domains, including but not limited to these domains and sub-domains:
  - Problems
  - o Allergies
  - Home Medications
  - Procedures including associated reports and with appropriately filtered CPT codes
  - Immunizations
  - Discharge Summaries
  - Progress Notes
  - Consult Notes
  - History & Physicals
  - Operative Notes
  - o Radiology and Diagnostic Reports (Into "Documentation" component)

By IOC exit, the Contractor shall support incorporation of the following external community data domains, including but not limited to these domains and sub-domains:

- o Results
  - Labs (General, Pathology, Microbiology)



- Vitals
- o Radiology and Diagnostic Reports (Into "Diagnostic Report" component)
- Images"

To clarify capabilities on faxing, Cerner has committed to providing Remote Report Distribution (RRD) which is the Cerner automated fax solution. In the cases of manual faxed documents Cerner ProVision Document Imaging (CPDI) supports a scanned document workflow. With these solutions, the VA will be able to attach documents to a patient's record at the person or encounter level with an associated document type, which will provide indexing to that content.



From: (b) (6

**Sent:** 20 Mar 2018 22:04:17 +0000

To: VA CIO Executive Schedule;Blackburn, Scott R.;Windom, John H.;Truex,

Matthew; Bruce Moskowitz @Bruce Moskowitz, MD'; Marc Sherman; IP; (b) (6)

(b) (6) (b) (6)

Cc: (b) (6)

Subject: [EXTERNAL] RE: VA EHR Call

### Dear(b) (6)

I will be taking the call from my car as I drive from NY to Boston. I reviewed the documents and I have two lingering questions that I may figure out between now and our call, but I thought that I would send along while I still had email access:

- How do users who are on the legacy system see data that will be in the new EHRM/Cerner product (during the transition phase; as some VA users will be on the legacy system and others will be on the new system)
- 2. Do we have a list of the actual medical devices for which there will be device data integration? (I tried to find that list, but cannot seem to find it on review.)

I look forward to joining the call at 8pm.

Thanks and best,

(b) (6)

----Original Appointment----

From: VA CIO Executive Schedule [mailto (b) (6) @va.gov]

**Sent:** Sunday, March 18, 2018 2:32 PM

To: VA CIO Executive Schedule; Blackburn, Scott R.; Windom, John H.; Truex, Matthew; Bruce

Moskowitz; (b) (6) @Bruce Moskowitz, MD'; Marc Sherman; IP; (b) (6)

(b) (6)

 $Cc^{(b)}(b)$ 

Subject: VA EHR Call

When: Tuesday, March 20, 2018 8:00 PM-9:30 PM (UTC-05:00) Eastern Time (US & Canada).

Where (b) (b), (b) (5)

Scheduling POC: (b) (6)

@va.gov

All, I am including everyone in the group in case anyone has any last minute scheduling changes. Thanks,

## (b) (6)

The information in this e-mail is intended only for the person to whom it is addressed. If you believe this e-mail was sent to you in error and the e-mail contains patient information, please contact the Partners Compliance HelpLine at http://www.partners.org/complianceline. If the e-mail was sent to you in error but does not contain patient information, please contact the sender and properly dispose of the e-mail.

From: Bruce Moskowitz

**Sent:** 19 Mar 2018 17:59:25 -0400

To: Blackburn, Scott R.

Cc: Marc Sherman; Windom, John H.; (6)

Subject: [EXTERNAL] Re: (b) (6) - Cloud expertise

Perfect

Sent from my iPad Bruce Moskowitz M.D.

On Mar 19, 2018, at 2:45 PM, Blackburn, Scott R. < (b) (6) va.gov wrote:

FYI. (b) (6) time tomorrow night is limited (he will be in between flights). Given he is a "single issue" guy; we are going to start the call at 7:30 and cover the Cloud issue from 7:30-8pm ET before everyone else joins at 8pm ET. I think we will have everyone except (b) (6) on the call. (b) is working a time on Wednesday to get them on a call.

Scott

From: Blackburn, Scott R.

**Sent:** Monday, March 19, 2018 2:40 PM

To: (b) (6) (b) (6)

Cc: Windom, John H.; Truex, Matthew; Short, John (VACO)

**Subject:** RE: [EXTERNAL] VA EHR Call Update

Thank you, (b) (6) Dr. Moskowitz mentioned very specifically to me that we should get your perspective on cloud so that we know we have that part correct. I am thinking we cover that issue from 7:30-8pm ET before others join at 8pm.

Thank you again for the support.

Scott

From: (b) (6)

Sent: Monday, March 19, 2018 1:38 PM

To: (b) (6)

Cc: Blackburn, Scott R.; Windom, John H.; Truex, Matthew

Subject: RE: [EXTERNAL] VA EHR Call Update

thank you for your response. I have sent two outlook invites, one starting at 7:30PM EST for you to participate in as well as the 8PM EST with the group. Please let me know if you have any questions.

Thanks,

(b)

From: (b) (6) [mailto: (b) (6) mayo.edu]

Sent: Saturday, March 17, 2018 9:36 PM

From: Windom, John H.

**Sent:** 18 Mar 2018 12:06:48 +0000

To: Zenooz, Ashwini;Short, John (VACO)
Subject: FW: [EXTERNAL] Re: EHR VA Call

These are only a fraction of the emails and I still don't know what time the meeting will be. You will love this one.

Sent with Good (www.good.com)

From: Bruce Moskowitz

Sent: Thursday, March 15, 2018 10:27:32 AM

To: Windom, John H.; Blackburn, Scott R.; Truex, Matthew

Cc: (b) (6) gmail.com; IP; O'Rourke, Peter M.

Subject: [EXTERNAL] Re: EHR VA Call

I want to make sure we are all in agreement of how this is structured. Marc and I want to be on every call that the group is on to discuss the contract. The whole group needs to be on the same call so we all give input to the whole contract and hear the same considerations and comments. Let me know if there is any discrepancy to this. Thank you

Sent from my iPad Bruce Moskowitz M.D.

On Mar 15, 2018, at 12:28 PM, VA CIO Executive Schedule (a) (b) (c) (a) (wa.gov) wrote:

<mime-attachment.ics>

From: Windom, John H.

**Sent:** 18 Mar 2018 05:04:25 -0700

To: Zenooz, Ashwini;Short, John (VACO)
Subject: FW: [EXTERNAL] Re: EHR VA Call

Sent with Good (www.good.com)

From: Marc Sherman

Sent: Thursday, March 15, 2018 12:34:27 PM

To: (6) (6) @Bruce Moskowitz,MD

Cc: (b) (6) Truex, Matthew; Windom, John H.

Subject: Re: FW: [EXTERNAL] Re: EHR VA Call

I am available on Monday March 19th at either noon or at 4pm (but only until 6 p.m) and on Tuesday March 20th at 4 p.m. (but not at noon).

# Marc Sherman

On Mar 15, 2018 12:04 PM, (b) (6) @Bruce Moskowitz,MD"

<(b) (6) @gmail.com > wrote:

Dr. Moskowitz prefers to keep the calls at Noon or 4:00 pm. He would be available Monday (3/19) or Tuesday(3/20) at those times.

Good afternoon,

Per Dr. Moskowitz we are looking to get all 7 folks on a call at the same time. Would you be able to tell me what times are available on Monday afternoon, Tuesday before 1PM or Wednesday? I will go from there.

Thanks, (b) (6)

From: Bruce Moskowitz

Sent: Thursday, March 15, 2018 1:27:32 PM

To: Windom, John H.; Blackburn, Scott R.; Truex, Matthew

Cc: (b) (6) @gmail.com; IP; O'Rourke, Peter M.

Subject: [EXTERNAL] Re: EHR VA Call

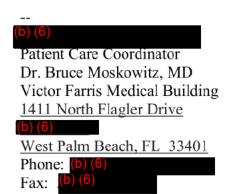
I want to make sure we are all in agreement of how this is structured. Marc and I want to be on every call that the group is on to discuss the contract. The whole group needs to be on the same call so we all give input to the whole contract and hear the same considerations and comments. Let me know if there is any discrepancy to this. Thank you

Sent from my iPad

Bruce Moskowitz M.D.

On Mar 15, 2018, at 12:28 PM, VA CIO Executive Schedule < (b) (6) wrote:

<mime-attachment.ics>



From: Windom, John H.

**Sent:** 18 Mar 2018 04:45:33 -0700

**To:** Zenooz, Ashwini;Short, John (VACO)

Subject: FW: [EXTERNAL] RE: Scheduling a Call Regarding Feedback on VA EHR

Sent with Good (www.good.com)

From: (b) (6)

Sent: Friday, March 16, 2018 4:18:29 PM

To: (b) (6)

Cc: Blackburn, Scott R.; Windom, John H.; Truex, Matthew

Subject: [EXTERNAL] RE: Scheduling a Call Regarding Feedback on VA EHR

(b) (6)

The best date for me is Monday 3/19 at 4PM EST. Thanks,

From: (b) (6) @va.gov]
Sent: Friday, March 16, 2018 5:12 PM

To:(b) (6) @imail.org>; (b) (6) @mayo.edu>;

(b) (6) @mgh.harvard.edu>; (b) (6) @gmail.com>

Cc: Blackburn, Scott R. < (b) (6) @va.gov>; Windom, John H. < (b) (6) @va.gov>;

Truex, Matthew (b) (6) @va.gov>

Subject: RE: Scheduling a Call Regarding Feedback on VA EHR

Importance: High

WARNING: Stop. Think. Read. This is an external email.

Good evening,

Another friendly reminder to please let me know which dates works best for your schedule.

Have a great evening,

(b)

From: (b) (6)

**Sent:** Friday, March 16, 2018 1:06 PM

**To:** (b) (6) (b) (b) (c) (b) @facs.org': (b) (6)

**Cc:** Blackburn, Scott R.; Windom, John H.; Truex, Matthew; 'Bruce Moskowitz'; (b) (6) @Bruce (b) (6) 'Marc Sherman'; 'IP'

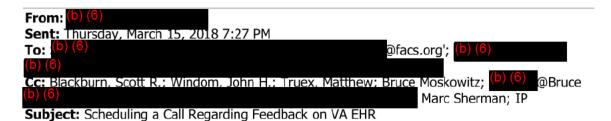
**Subject:** RE: Scheduling a Call Regarding Feedback on VA EHR

Importance: High

#### Good afternoon,

A friendly reminder to please let me know which date works best for your schedule. Please feel free to call me with any questions.

Thank you, (b) (6)



#### Good evening,

We would like to schedule a call in the next few days to share feedback on the VA EHR contract. I have been corresponding with many of you on different dates and times next week, but we are going to schedule the call for either Sunday 3/18 at 4PM EST, Monday 3/19 at 4PM EST or Tuesday 3/20 at 4PM EST. Please let me know which date will work best for your schedule. Feel free to call me with any questions and I look forward to hearing from you.

Thank you,

# (b) (6)

Executive Assistant to the Assistant Secretary Office of Information and Technology US Department of Veterans Affairs

Desk:(b) (6) Cell: (b) (6) From: Windom, John H.

**Sent:** 16 Mar 2018 12:09:55 +0000

**To:** Truex, Matthew; Foster, Michele (SES)

Cc: (b) (6)

Subject: RE: [EXTERNAL] Re: Scheduling a Call Regarding Feedback on VA EHR

#### Matt,

I can assure you that there is no new funding news. You do know that Congressmen Dent put \$800M in our FY18 funding line as part of the March 23<sup>rd</sup> appropriation, and told Shulkin that they no longer need a transfer letter? We will see how it plays out. I do not want to award at \$4.3M, but thanks for the heads up.

JW

John H. Windom, Senior Executive Service (SES)

Program Executive for Electronic Health Record Modernization (PEO EHRM)

Special Advisor to the Under Secretary for Health

811 Vermont Avenue NW (b) (6)

Washington, DC 20420

Office: (b) (6)

Mobile: (b) (6

Executive Assistant: (b) (6) — Appointments and Scheduling

(b) (6) @va.gov Office: (b) (6)

From: Truex, Matthew

**Sent:** Friday, March 16, 2018 7:53 AM **To:** Windom, John H.; Foster, Michele (SES)

Cc: (b) (6)

Subject: RE: [EXTERNAL] Re: Scheduling a Call Regarding Feedback on VA EHR

Thanks John. Relative to being ready to award once funding is received, are we talking about after the budget is approved and the EHRM appropriation is established, or are we talking about the \$4.5m John Short is aligning out of OI&T funds to award the Basic IDIQ and Task Order 2 only?

My team has the Congressional Notifications and FBO award notices drafted to cover the award scenarios. The Congressional Award Notification is usually submitted one business day prior to the award being announced, we will be sure to coordinate with our Congressional Liaisons as we did with the D&F notification. To avoid any delays, it is imperative that my team be apprised of the latest news regarding funding availability, authorization to proceed, etc.

Have any VA press releases been prepared for the award, or coordination of post-award communications strategy with Cerner?

Thanks,

#### Matt

Matthew Truex Contracting Officer Department of Veterans Affairs Office of Procurement, Acquisition and Logistics Technology Acquisition Center 23 Christopher Way Eatontown, New Jersey 07724 Office: (b) (6)

Mobile (b)

e-mail: @va.gov



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From: Windom, John H.

Sent: Friday, March 16, 2018 7:24 AM To: Truex, Matthew; Foster, Michele (SES)

Subject: FW: [EXTERNAL] Re: Scheduling a Call Regarding Feedback on VA EHR

FYI below. I have been in constant communication with Mr. Blackburn. Please see below. I think we are tracking. Let's be ready to sign this thing as soon as funding is in our account. Thank you. V/r,

John

John H. Windom, Senior Executive Service (SES)

Program Executive for Electronic Health Record Modernization (PEO EHRM)

Special Advisor to the Under Secretary for Health

811 Vermont Avenue NW (D) (6)

Washington, DC 20420

@va.gov

Office: (b) (6) Mobile: (b) (6

Executive Assistant: 1 Appointments and Scheduling

@va.gov Office:

From: Blackburn, Scott R.

**Sent:** Thursday, March 15, 2018 8:45 PM **To:** DJS; Windom, John H.; Bowman, Thomas

Subject: FW: [EXTERNAL] Re: Scheduling a Call Regarding Feedback on VA EHR

We are pushing to get this done no later than Tuesday so we can wrap this up. Talked to Bruce and we are perfectly aligned. He is going to help push these folks for us.

Sent with Good (www.good.com)

From: Bruce Moskowitz

**Sent:** Thursday, March 15, 2018 7:27:17 PM

To: Callaghan, Elizabeth

Cc: (b) (6)

@facs.org; (b) (6)

Blackburn, Scott R.; Windom, John H.; Truex,

Matthew; (b) (6)

@Bruce Moskowitz, MD; (b) (6)

Marc

Sherman; IP

Subject: [EXTERNAL] Re: Scheduling a Call Regarding Feedback on VA EHR

All work for me

Sent from my iPad Bruce Moskowitz M.D.

On Mar 15, 2018, at 7:26 PM, (b) (6) @va.gov> wrote:

Good evening,

We would like to schedule a call in the next few days to share feedback on the VA EHR contract. I have been corresponding with many of you on different dates and times next week, but we are going to schedule the call for either Sunday 3/18 at 4PM EST, Monday 3/19 at 4PM EST or Tuesday 3/20 at 4PM EST. Please let me know which date will work best for your schedule. Feel free to call me with any questions and I look forward to hearing from you.

Thank you,

(b) (6)

Executive Assistant to the Assistant Secretary Office of Information and Technology

**US Department of Veterans Affairs** 

Desk: (b) (6)
Cell (b) (6)

From: Zenooz, Ashwini

**Sent:** 15 Mar 2018 19:23:45 +0000

To: A Zenooz

**Subject**: FW: [EXTERNAL] Re: EHR VA Call

-Ash

#### Ashwini Zenooz, MD

Chief Medical Officer

Electronic Health Record Modernization

Department of Veterans Affairs

 $O^{-1}$  (b) (6)

Assistant: (b) (6) @va.gov
Web: https://vaww.ehrm.va.gov/

From: Windom, John H.

Sent: Thursday, March 15, 2018 3:23 PM

**To:** Zenooz, Ashwini

Subject: FW: [EXTERNAL] Re: EHR VA Call

It's about the Veterans?

Sent with Good (<u>www.good.com</u>)

From: (b) (6) Bruce Moskowitz, MD

Sent: Thursday, March 15, 2018 12:03:58 PM

To: (b) (6)

Cc: Marc Sherman; Truex, Matthew; Windom, John H. Subject: Re: FW: [EXTERNAL] Re: EHR VA Call

Dr. Moskowitz prefers to keep the calls at Noon or 4:00 pm. He would be available Monday (3/19) or Tuesday(3/20) at those times.

On Thu, Mar 15, 2018 at 2:27 PM, (b) (6) Good afternoon,

Per Dr. Moskowitz we are looking to get all 7 folks on a call at the same time. Would you be able to tell me what times are available on Monday afternoon, Tuesday before 1PM or Wednesday? I will go from there.

Thanks (b) (6)

From: (b) (

**Sent:** 15 Mar 2018 13:33:54 -0500

To: Windom, John H.

Subject: RE: [EXTERNAL] Re: EHR VA Call

Okay, great. This is going to be interesting.

From: Windom, John H.

Sent: Thursday, March 15, 2018 2:33 PM

To: (b) (6)

Subject: RE: [EXTERNAL] Re: EHR VA Call

# (b) (6)

Don't worry about me. Just book it and I will adjust anything in my schedule accordingly. Thanks for your efforts. Don't know how you remain sane.

Jw

Sent with Good (www.good.com)

From: (b) (6)

Sent: Thursday, March 15, 2018 11:27:32 AM

To: (b) (6) @Bruce Moskowitz,MD; Marc Sherman

Cc: Truex, Matthew; Windom, John H.
Subject: FW: [EXTERNAL] Re: EHR VA Call

Good afternoon,

Per Dr. Moskowitz we are looking to get all 7 folks on a call at the same time. Would you be able to tell me what times are available on Monday afternoon, Tuesday before 1PM or Wednesday? I will go from there.

Thanks, (b)

From: Bruce Moskowitz

Sent: Thursday, March 15, 2018 1:27:32 PM

To: Windom, John H.; Blackburn, Scott R.; Truex, Matthew

Cc: (b) (6) @gmail.com; IP; O'Rourke, Peter M.

Subject: [EXTERNAL] Re: EHR VA Call

I want to make sure we are all in agreement of how this is structured. Marc and I want to be on every call that the group is on to discuss the contract. The whole group needs to be on the same call so we all give input to the whole contract and hear the same considerations and comments. Let me know if there is any discrepancy to this. Thank you

Sent from my iPad Bruce Moskowitz M.D. From: Windom, John H.

**Sent:** 15 Mar 2018 18:01:17 +0000

To: Truex, Matthew
Cc: Foster, Michele (SES)

Subject: FW: [EXTERNAL] Re: EHR VA Call

Matt

Not yours or my place to respond to this direction.

Thx John

Sent with Good (www.good.com)

From: Bruce Moskowitz

Sent: Thursday, March 15, 2018 10:27:32 AM

To: Windom, John H.; Blackburn, Scott R.; Truex, Matthew

Cc: (b) (6) @gmail.com; IP; O'Rourke, Peter M.

Subject: [EXTERNAL] Re: EHR VA Call

I want to make sure we are all in agreement of how this is structured. Marc and I want to be on every call that the group is on to discuss the contract. The whole group needs to be on the same call so we all give input to the whole contract and hear the same considerations and comments. Let me know if there is any discrepancy to this. Thank you

Sent from my iPad Bruce Moskowitz M.D.

On Mar 15, 2018, at 12:28 PM, VA CIO Executive Schedule < (b) (6) (a) va.gov > wrote:

<mime-attachment.ics>

# On Mar 13, 2018 2:04 PM, "Blackburn, Scott R." < (b) (6) @va.gov> wrote:

Marc/Bruce/Ike – thank you so much for the prompt replies. I just spoke to Bruce. We've got 100% participation ((b) (6)
(b) (6)

and we are moving forward. Matt Truex (cc'd, our contracting officer) is making sure everyone has the right material. (b) my assistant, cc'd here) will be organizing a few phone calls in 2 steps:

Step 1 – Basic orientation to the government contract structure. This will be a 30-45 minute orientation so that folks know what they are looking at. John Windom and Matt Truex will host this and clue people into the parts to focus on and parts that are standard government things that are less relevant. This can be done in groups (ideally) or in one-offs to fit to accommodate people's busy schedules. This part already scheduled 2 times in case these work for you. If they do not, she will work with your schedulers to find other times in the next 24-48 hours (sooner the better).

- Thursday 8:30-9:15am ET Confirmed
- Thursday 11:30am-12:15pm ET (b) (6) confirmed

Step 2 – Feedback calls. Per Bruce's idea, we'll schedule 2 separate feedback calls for early next week. Both 90 minutes each. We are aiming for Monday, Tuesday or Wednesday at the latest.

- CIOs ((b) (6) and of course each of you are encouraged to join)
- Doctors (b) (6)
   and of course each of you are encouraged to join)

Let me know how this sounds. Thank you again for your support and assistance on this critical matter.

Scott

From: Marc Sherman [mailto(b)(6) @gmail.com]

**Sent:** Tuesday, March 13, 2018 1:40 PM

H.; DJS

Subject: [EXTERNAL] Re: VA EHR NDA

Scott, Matt and John

Thank you for the NDA draft that you sent along and the organized approach. I have attached the following to close the loop:

- 1. a marked up version of the NDA with a few necessary adjustments in red-line so you can see the changes that were made,
- 2. a blank copy of the amended NDA for Bruce and Ike to sign,
- 3. a signed version by me of the amended NDA.

Thanks and happy to help as requested.

Marc

On Tue, Mar 13, 2018 at 10:31 AM, Blackburn, Scott R.

<(b) (6) (a) (a)va.gov> wrote:

Ike, Bruce, Marc:

Thank each of you for agreeing to lend an extra set of outside eyes on the EHR contract. We appreciate your support and want to make sure we get to the best place possible for Veterans, the country and taxpayers. As we

are incredibly grateful to you for volunteering your time, we want to make this as easy as possible for you. Here are 3 next steps.

- 1) We will need you to sign the attached NDA. Please return to Matt Truex (cc'd).
- 2) Matt will then send you the latest package under separate cover.
- 3) Given government contracts are different than what you are used to reading, we would propose a quick phone call so that we can orient you to the contract and help focus you on the parts where your expertise will be most valuable. Matt Truex (who is the government contracting officer) and John Windom (who is our EHR leader) will lead this from our side. I will ask (b) (6) (cc'd) here to help set up a time. We can either do this all together, if calendars match up, or separately if need be.

We have also connected with (b) (6) are working with them. I am	who all have all received the NDA and we hoping to connect with (b) (6) today.
Thanks again!	
Scott	

#### Scott Blackburn

Acting CIO & Executive-in-Charge, Office of Information & Technology

Department of Veterans Affairs

From: Bruce Moskowitz

**Sent:** 15 Mar 2018 10:51:08 -0400

To: Windom, John H.; Blackburn, Scott R.

Cc: IP; (b) (6) @gmail.com
Subject: [EXTERNAL] EMR documents

I still have not received the EMR documents to review. You have my NDA. Please send ASAP. I am a reasonable speed reader so you can include all pages.

Sent from my iPad Bruce Moskowitz M.D. From: Blackburn, Scott R.

**Sent:** 15 Mar 2018 07:32:17 -0700

To: Windom, John H.; Zenooz, Ashwini; Short, John (VACO)

**Subject:** FW: [EXTERNAL] EMR calls

----Original Message-----

From: Bruce Moskowitz [mailto (6) (6)

Sent: Thursday, March 15, 2018 9:52 AM

To: Blackburn, Scott R.

Cc: IP; (b) (6) agmail.com; O'Rourke, Peter M.

Subject: Re: [EXTERNAL] EMR calls

Thank you this is important information. I can walk everyone through the device registry and the nutritional platform.

The critical area that is the main part of your due diligence which is much appreciated is remote patient monitoring. This will be the hospital platform of the very near future for the VA and is already well done in the private sector. (b) (6) (CIO at Mayo made a good point that the contract should not tie the VA to only this vendor for this important function. This technology is getting better at an accelerated pace. We could get stuck with a platform that is outdated and the contract will not allow us to innovate with another platform.

Sent from my iPad Bruce Moskowitz M.D.

> On Mar 15, 2018, at 9:24 AM, Blackburn, Scott R. < (b) (6) va.gov> wrote:

>

- > Bruce, thanks for raising this. Below is what I learned about what we have for intensive care units interacting with a central monitoring system. Let me know if this sounds right to you. Also you rattled off a couple of things (nutritional layout from Tufts, field to input the serial number for items in the device registry); if you could send me those I can hunt those down as well to save time. I just got off the phone with (6) (6) and she is excited to help; speaking to a few others at 11:30am ET.
- > The Cerner solution for ICU central monitoring, as part of the VA EHR, utilizes Cerner's CareAware iAware framework through the Apache Outcomes solution. This solution has the capability to configure dashboard views to enable monitoring of high acuity areas, specifically around performance and patient care. This capability is included in the scope of the Cerner acquisition as the Critical Care System, Cerner Apache Outcomes solution and End User License Agreement.

\_

- > Does this capability also monitors emergency rooms, recovery rooms and telemetry beds?
- > The current acquisition solutions meet these requirements and can be configured into a central command center model.
- > \* Emergency Room: Emergency Department (ED) Dashboard is built into the Emergency Department Care Management to monitor progression of patients through the patient care process. This solution has been included as an Emergency Medicine System and End User License Agreement.
- > \* Recovery Room: Surgical Management solution has tracking boards to monitor patient progress and efficiency of care provided. This solution has been included as Perioperative System and End User License Agreement.
- >\* Telemetry Beds: Traditional central monitoring systems as are used in telemetry, exist within the VA's current environment. During the acquisition process it was decided that these solutions will persist into the future state to reduce costs for the VA. However, the acquisition includes integration of this capability.

> In addition to these monitoring capabilities, CareAware Patient Flow, which is Cerner's capacity management solution that helps to operationalize patient care activities such as room cleaning offers specific dashboards that can be centralized to support a central command center model. > 
> -Scott

> From: Bruce Moskowitz [mailto: (b) (6) > Sent: Wednesday, March 14, 2018 12:18 PM

> To: Blackburn, Scott R.

> -----Original Message-----

> Subject: [EXTERNAL] EMR calls

>

> To save time can you tell me if the Cerner contract has a provision to have the EMR that is in Intensive care units interact with a central monitoring system? Currently all major institutions have a command and control center staff that monitors intensive care units located in different hospitals in their system. The future is expanding this to monitor emergency rooms, recovery rooms and telemetry beds. If it is not in place which should be a standard part of the contract we will have billions in further costs to the system.

@mac.com]

> Sent from my iPad

> Bruce Moskowitz M.D.

From: Blackburn, Scott R.

**Sent:** 15 Mar 2018 06:25:08 -0700

To: Short, John (VACO); Zenooz, Ashwini

Cc: Windom, John H.

Subject: RE: [EXTERNAL] EMR calls

Thanks. I passed this on.

From: Short, John (VACO)

Sent: Wednesday, March 14, 2018 8:45 PM

To: Zenooz, Ashwini

**Cc:** Blackburn, Scott R.; Windom, John H. **Subject:** RE: [EXTERNAL] EMR calls

Ash – Take a look at this DRAFT Response.

Cerner's proposed solution for ICU central monitoring, as part of the VA EHR, utilizes Cerner's CareAware iAware framework through the Apache Outcomes solution. This solution has the capability to configure dashboard views to enable monitoring of high acuity areas, specifically around performance and patient care. This capability is included in the scope of the Cerner acquisition as the Critical Care System, Cerner Apache Outcomes solution and End User License Agreement.

Does this capability also monitors emergency rooms, recovery rooms and telemetry beds? The current acquisition solutions meet these requirements and can be configured into a central command center model.

- Emergency Room: Emergency Department (ED) Dashboard is built into the Emergency
  Department Care Management to monitor progression of patients through the patient
  care process. This solution has been included as an Emergency Medicine System and
  End User License Agreement.
- Recovery Room: Surgical Management solution has tracking boards to monitor patient progress and efficiency of care provided. This solution has been included as Perioperative System and End User License Agreement.
- **Telemetry Beds:** Traditional central monitoring systems as are used in telemetry, exist within the VA's current environment. During the acquisition process it was decided that these solutions will persist into the future state to reduce costs for the VA. However, the acquisition includes integration of this capability.

In addition to these monitoring capabilities, CareAware Patient Flow, which is Cerner's capacity management solution that helps to operationalize patient care activities such as room cleaning offers specific dashboards that can be centralized to support a central command center model.

From: Windom, John H.

Sent: Wednesday, March 14, 2018 7:00 PM

**To:** Zenooz, Ashwini; Blackburn, Scott R.; Short, John (VACO)

Subject: RE: [EXTERNAL] EMR calls

I would it make the response overly complex.

Jw

## Sent with Good (www.good.com)

From: Zenooz, Ashwini

**Sent:** Wednesday, March 14, 2018 3:44:50 PM

To: Windom, John H.; Blackburn, Scott R.; Short, John (VACO)

Subject: RE: [EXTERNAL] EMR calls

John Short and I are working on a response. He should have something back from John Short by 8p. Thx

#### Sent with Good (www.good.com)

From: Windom, John H.

**Sent:** Wednesday, March 14, 2018 3:31:07 PM

To: Blackburn, Scott R.; Zenooz, Ashwini; Short, John (VACO)

Subject: RE: [EXTERNAL] EMR calls

Ash

Did you closeout this request from Mr Blackburn? I was not copied on anything. This is a doctor to doctor tasking.

Thx Jw

#### Sent with Good (www.good.com)

From: Blackburn, Scott R.

**Sent:** Wednesday, March 14, 2018 9:55:20 AM

To: Zenooz, Ashwini; Windom, John H.; Short, John (VACO)

Subject: RE: [EXTERNAL] EMR calls

Thanks. Can you guys write me a short response to Bruce that I can cut/paste? I want to nip these things in the bud so we can get this damn thing over the goalline! It is crunch time.

From: Zenooz, Ashwini

Sent: Wednesday, March 14, 2018 12:54 PM

To: Windom, John H.; Blackburn, Scott R.; Short, John (VACO)

Subject: RE: [EXTERNAL] EMR calls

That is correct. Through LightsOn and system config we would be able to view enterprise wide ICU, ED activity etc. at a central command.

Sent with Good (www.good.com)

From: Windom, John H.

**Sent:** Wednesday, March 14, 2018 9:50:28 AM

To: Blackburn, Scott R.; Short, John (VACO); Zenooz, Ashwini

Subject: RE: [EXTERNAL] EMR calls

This is part of contract and standard EHR implementation practices/solutions. The team will validate.

John

Sent with Good (www.good.com)

From: Blackburn, Scott R.

Sent: Wednesday, March 14, 2018 9:37:42 AM

To: Windom, John H.; Short, John (VACO); Zenooz, Ashwini

Subject: FW: [EXTERNAL] EMR calls

----Original Message----

From: Bruce Moskowitz [mailto (b) (6) @mac.com]

Sent: Wednesday, March 14, 2018 12:18 PM

To: Blackburn, Scott R.

Subject: [EXTERNAL] EMR calls

To save time can you tell me if the Cerner contract has a provision to have the EMR that is in Intensive care units interact with a central monitoring system? Currently all major institutions have a command and control center staff that monitors intensive care units located in different hospitals in their system. The future is expanding this to monitor emergency rooms, recovery rooms and telemetry beds. If it is not in place which should be a standard part of the contract we will have billions in further costs to the system.

Sent from my iPad Bruce Moskowitz M.D. From: Zenooz, Ashwini

**Sent:** 14 Mar 2018 19:52:19 -0500

**To:** Short, John (VACO)

Cc: Blackburn, Scott R.; Windom, John H.

Subject: RE: [EXTERNAL] EMR calls

Thanks. This looks accurate.

Sent with Good (www.good.com)

From: Short, John (VACO)

Sent: Wednesday, March 14, 2018 5:44:58 PM

To: Zenooz, Ashwini

**Cc:** Blackburn, Scott R.; Windom, John H. **Subject:** RE: [EXTERNAL] EMR calls

Ash – Take a look at this DRAFT Response.

Cerner's proposed solution for ICU central monitoring, as part of the VA EHR, utilizes Cerner's CareAware iAware framework through the Apache Outcomes solution. This solution has the capability to configure dashboard views to enable monitoring of high acuity areas, specifically around performance and patient care. This capability is included in the scope of the Cerner acquisition as the Critical Care System, Cerner Apache Outcomes solution and End User License Agreement.

Does this capability also monitors emergency rooms, recovery rooms and telemetry beds?

The current acquisition solutions meet these requirements and can be configured into a central command center model.

- Emergency Room: Emergency Department (ED) Dashboard is built into the Emergency Department Care Management to monitor progression of patients through the patient care process. This solution has been included as an Emergency Medicine System and End User License Agreement.
- Recovery Room: Surgical Management solution has tracking boards to monitor
  patient progress and efficiency of care provided. This solution has been included
  as Perioperative System and End User License Agreement.
- Telemetry Beds: Traditional central monitoring systems as are used in telemetry, exist within the VA's current environment. During the acquisition process it was decided that these solutions will persist into the future state to reduce costs for the VA. However, the acquisition includes integration of this capability.

In addition to these monitoring capabilities, CareAware Patient Flow, which is Cerner's capacity management solution that helps to operationalize patient care activities such as room cleaning offers specific dashboards that can be centralized to support a central command center model.

From: Windom, John H.

Sent: Wednesday, March 14, 2018 7:00 PM

**To:** Zenooz, Ashwini; Blackburn, Scott R.; Short, John (VACO)

Subject: RE: [EXTERNAL] EMR calls

I would it make the response overly complex.

Jw

Sent with Good (www.good.com)

From: Zenooz, Ashwini

Sent: Wednesday, March 14, 2018 3:44:50 PM

To: Windom, John H.; Blackburn, Scott R.; Short, John (VACO)

Subject: RE: [EXTERNAL] EMR calls

John Short and I are working on a response. He should have something back from John Short by 8p. Thx

Sent with Good (www.good.com)

From: Windom, John H.

Sent: Wednesday, March 14, 2018 3:31:07 PM

**To:** Blackburn, Scott R.; Zenooz, Ashwini; Short, John (VACO)

Subject: RE: [EXTERNAL] EMR calls

Ash

Did you closeout this request from Mr Blackburn? I was not copied on anything. This is a doctor to doctor tasking.

Thx Jw

Sent with Good (www.good.com)

From: Windom, John H.

**Sent:** 14 Mar 2018 18:03:24 +0000

To: (b) (6)

Subject: RE: [EXTERNAL] EMR calls

Thx. Jw

Sent with Good (www.good.com)

From: (b) (6)

**Sent:** Wednesday, March 14, 2018 10:57:08 AM

To: Windom, John H.

Subject: RE: [EXTERNAL] EMR calls

FYI on our answer below.

From (b) (6)

Sent: Wednesday, March 14, 2018 1:40 PM

T**o:(**b)(6) @CERNER.COM>; (b)(6) @cerner.com>

Subject: Re: [EXTERNAL] EMR calls

We will be connecting to bedside medical devices in the icu. We traditionally keep central monitoring systems that exist today but care aware iware can also serve for central monitoring. We have icu's in scope for smart pumps which includes iaware but have not expanded that scope to include telemetry and EDs. Net net, we would use whatever systems are in place for central monitoring if they choose not to use iaware for such locations.

I also think it would be safe to say coat is contained and should not be any outside of current acquisition costs that are planned for in the case described below.

(b) (b

Vice President & Chief Medical Officer Physician Alignment Organization

@Cerner.com

C: (b) (b)

Sent from a mobile device, please excuse any typos.

From: (b) (6)  Sent: Wednesday, March 14, 2018 11:49:14 AM  To: (b) (6) (b) (6)  Subject: Fwd: [EXTERNAL] EMR calls
Can u provide the quick thumbs up and little natrative
Sent from my Sprint Samsung Galaxy S7.
From: (b) (6)  Date: 3/14/18 12:47 PM (GMT-05:00)  To: "Windom, John H." < (b) (6) @va.gov>, "(b) (6) @CERNER.COM>  Subject: RE: [EXTERNAL] EMR calls
Sure its yes but will affirm
(b) (6)
Sent from my Sprint Samsung Galaxy S7.
Original message  From: "Windom, John H." < (b) (6) @va.gov >  Date: 3/14/18 12:41 PM (GMT-05:00)  To: '(b) (6) @CERNER.COM >  Subject: FW: [EXTERNAL] EMR calls
We are providing an answer but give me yours Too. Thx Jw
Sent with Good (b) (6)
From: Blackburn, Scott R.

Sent: Wednesday, March 14, 2018 9:37:42 AM

To: Windom, John H.; Short, John (VACO); Zenooz, Ashwini

Subject: FW: [EXTERNAL] EMR calls

----Original Message----

From: Bruce Moskowitz [mailto (6) (6) mac.com]

Sent: Wednesday, March 14, 2018 12:18 PM

To: Blackburn, Scott R.

Subject: [EXTERNAL] EMR calls

To save time can you tell me if the Cerner contract has a provision to have the EMR that is in Intensive care units interact with a central monitoring system? Currently all major institutions have a command and control center staff that monitors intensive care units located in different hospitals in their system. The future is expanding this to monitor emergency rooms, recovery rooms and telemetry beds. If it is not in place which should be a standard part of the contract we will have billions in further costs to the system.

Sent from my iPad Bruce Moskowitz M.D.

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