

From: Windom, John H.
Sent: 14 Nov 2017 19:44:03 +0000
To: (b) (6)
Subject: FW: [EXTERNAL] FW: VA MEETING close hold DO NOT SHARE

My note to Blackburn who sent me the same note:

Ok. Thanks. Not sure of the validity of any of his comments but will investigate. I could prepare a list of things Cerner has that Epic does not have that would serve no purpose. What Cerner does have is interoperability with DOD and an overall better product. I am not going to be drawn into the cherry picking game that is being done with the Cerner product. Please send that list of Epic overruns that I sent you last week to this person.

Thx
John

Thank you.
John

Sent with Good (www.good.com)

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To: Windom, John H.
Subject: [EXTERNAL] FW: VA MEETING close hold DO NOT SHARE

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Don't want you to be blindsided but these are two new names that have been added to the meeting tomorrow.
You can scroll down to the first email to see comments on Cerner. This should give you a heads up on objections that could be forthcoming.

Sent with BlackBerry Work
(www.blackberry.com)

From: Blackburn, Scott R. <(b) (6)@va.gov<mailto:(b) (6)@va.gov>>
Date: Tuesday, Nov 14, 2017, 2:21 PM
To: (b) (6)@mitre.org<mailto:(b) (6)@mitre.org>>
Cc: (b) (6)@mitre.org<mailto:(b) (6)@mitre.org>>
Subject: RE: VA MEETING

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For CIOs that ask about Bruce (like (b) (6) did last night), we can say that Bruce is an advisor and part of the extended White House / VA team.

From: (b) (6)@mitre.org]
Sent: Tuesday, November 14, 2017 12:47 PM

To: Blackburn, Scott R.
Cc: (b) (6)
Subject: [EXTERNAL] FW: VA MEETING

Hi Scott,
Please see the email trail below. Just want you aware in case we have people joining the call without your knowledge or approval.
Thanks,
Best,
(b) (6)

(b) (6)
MITRE
From: (b) (6)@PARTNERS.ORG<mailto:(b) (6)@PARTNERS.ORG>>
Date: Tuesday, Nov 14, 2017, 11:43 AM
To: (b) (6)
<(b) (6)@mgh.harvard.edu<mailto:(b) (6)@mgh.harvard.edu>>
Cc: (b) (6)@mitre.org<mailto:(b) (6)@mitre.org>>
Subject: RE: VA MEETING

But do the people hosting the call know you are going to be on the call? I am copying (b) (6) as he is helping coordinate the call. (b) (6)

From: (b) (6)
Sent: Tuesday, November 14, 2017 11:31 AM
To: (b) (6)@PARTNERS.ORG<mailto:(b) (6)@PARTNERS.ORG>>
Subject: RE: VA MEETING

Dear (b) (6)
Thanks for the note. I think that you and I may have a little mis-understanding. I agree that you can of course handle the call, but (b) (6) and Bruce Moskovitz invited me to the call tomorrow so that they can have a hands-on clinicians perspective. Bruce and I spoke very briefly (between his patients) a little while ago and Bruce sent me the below information. I am hoping to touch base with you before the call if that is possible for you. I am tied up in presentations/meetings the rest of the day, but could speak this evening (6pm?) or tomorrow if that is okay with you. (And if needed I will break out of other meetings today).
Many thanks,
(b) (6)

From: (b) (6)
Sent: Tuesday, November 14, 2017 11:16 AM
To: (b) (6)
<(b) (6)@mgh.harvard.edu<mailto:(b) (6)@mgh.harvard.edu>>
Subject: RE: VA MEETING

I had a call with them today in prep for tomorrow's call. I appreciate the offer but I don't think it is my place to invite you. It needs to come from the VA.

From: (b) (6)
Sent: Tuesday, November 14, 2017 11:11 AM
To: (b) (6)@PARTNERS.ORG<mailto:(b) (6)@PARTNERS.ORG>>
Subject: FW: VA MEETING

Dear (b) (6)
Given some conflicts that (b) (6) has being a senior advisor for the VA, (b) (6) has asked me to join the 3pm VA call tomorrow to be available for the clinician perspective. Would you be up for a 15 minute check-in

call with me at some point tomorrow before the VA call? If so, then I'll reach out to (b) (6) to get us a time.

Many thanks,

(b) (6)

From: (b) (6)

Sent: Tuesday, November 14, 2017 11:06 AM

To: 'Bruce Moskowitz' <(b) (6)@mac.com<mailto:(b) (6)@mac.com>>

Subject: RE: VA MEETING

Dear Bruce,

Many thanks for the note. I'll review the below a little later today and I'll be back in touch.

Many thanks and best,

(b) (6)

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

Sent: Tuesday, November 14, 2017 10:45 AM

To: (b) (6)

<(b) (6)@mgh.harvard.edu<mailto:(b) (6)@mgh.harvard.edu>>

Subject: VA MEETING

The call will take place this Wednesday, November 15th between 3:00 PM and 5:00 PM

Dial In Number: (b) (6)

Passcode (b) (6)

Thank you for your time and involvement. Some background information. These are my concerns as a clinician.

Cerner does not have the ability to provide the following in the Choice Program:

Tracking duplicate testing

Tracking over utilization by providers

Tracking duplicate prescriptions and medication errors.

Tracking tests that were ordered, completed and results go to all physicians involved in the Veterans care

Patient notification of critically abnormal results with followup resolution

Arranging appointment followup between the VA and Private sector

Emergency room visits in the private sector ability to access records immediately and VA physicians notified of emergency care and followup

Cerner has no registry to track what Cardiac and orthopedic devices are implanted in case there is a recall of the device

Automatic record transfer from the Choice Provider to the VA patient record with flagging new information to every VA health care worker

A radiology platform to see films in high definition to compare X-rays and ability for radiologists to efficiently find previous films. For instance a radiologist needs to know if a lung nodule is new or was there

previously and the same size.

Cardiologists need to access catheterization films in high definition

Cerner has no system to alert VA health care workers when a patient is at a particular office or hospital to participate in care management in real time.

Sent from my iPad
Bruce Moskowitz M.D.

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: Zenooz, Ashwini
Sent: 14 Nov 2017 22:07:09 +0000
To: Blackburn, Scott R.
Subject: RE: VA MEETING

Yup. Got it. I will have facts.

Ashwini Zenooz, MD
EHRM Program Office

Sent with Good (www.good.com)

From: Blackburn, Scott R.
Sent: Tuesday, November 14, 2017 1:38:51 PM
To: Zenooz, Ashwini
Subject: RE: VA MEETING

They are coming from POTUS friend/doctor. Will need to handle sensitively and with facts.

From: Zenooz, Ashwini
Sent: Tuesday, November 14, 2017 4:35 PM
To: Blackburn, Scott R.
Subject: RE: VA MEETING

Scott, thanks. I just landed from a trip to Orlando. I'd be happy to respond to this but these questions are just ridiculous. They don't make sense and there is basic lack of understanding of interoperability, the solutions, radiology etc. I'm just baffled.

Ashwini Zenooz, MD
EHRM Program Office

Sent with Good (www.good.com)

From: Blackburn, Scott R.
Sent: Tuesday, November 14, 2017 11:44:20 AM
To: Zenooz, Ashwini
Subject: FW: VA MEETING

I somehow left you off (I put Windom's name twice)...

From: Windom, John H.
Sent: Tuesday, November 14, 2017 2:42 PM
To: Blackburn, Scott R.; Short, John (VACO)
Subject: RE: VA MEETING

Ok. Thanks. Not sure of the validity of any of his comments but will investigate. I could prepare a list of things Cerner has that Epic does not have that would serve no purpose. What Cerner does have is interoperability with DOD and an overall better product. I am not going to be drawn into the cherry picking game that is being done with the Cerner product. Please send that list of Epic overruns that I sent you last week to this person.
Thx
John

Sent with Good (www.good.com)

From: Blackburn, Scott R.
Sent: Tuesday, November 14, 2017 11:24:58 AM
To: Windom, John H.; Windom, John H.; Short, John (VACO)
Subject: FW: VA MEETING

Sharing in the spirit of transparency.

Dr. Bruce Moskowitz will join the call tomorrow. He is a White House advisor. I don't know much about him other than he is important. He has asked at least one other person to join (a clinician from MGH). See trail to include questions at the bottom (that I sent earlier). I connected with the Secretary and he is ok with Bruce and whomever he invites to join the call.

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(b) (6)
MITRE

From: Windom, John H.
Sent: 14 Nov 2017 20:01:17 +0000
To: Blackburn, Scott R.
Subject: RE: VA MEETING

To me the session tomorrow is just a grin and bear it session. I will have my listening hat on for 2 hours.

Vr
John

Sent with Good (www.good.com)

From: Blackburn, Scott R.
Sent: Tuesday, November 14, 2017 11:56:17 AM
To: Windom, John H.
Subject: RE: VA MEETING

I believe this is the longtime personal doctor, and close friend, to POTUS

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From: (b) (6)
Sent: 13 Jun 2017 12:59:25 -0400
To: (b) (6); Short, John; (b) (6)
Subject: FW: [EXTERNAL] Agenda: Conference Call | VA, Apple & Medical/Digital Experts - Wednesday, June 14th / 11:00 AM - 12:30 PM EST (8:00 AM - 9:30 AM PST)
Attachments: confcallagenda.pdf

FYI.

From: (b) (6)
Sent: Tuesday, June 13, 2017 12:49 PM
To: (b) (6); (b) (6)
Subject: FW: [EXTERNAL] Agenda: Conference Call | VA, Apple & Medical/Digital Experts - Wednesday, June 14th / 11:00 AM - 12:30 PM EST (8:00 AM - 9:30 AM PST)

FYI -

(b) (6)
Office of the Acting Assistant Secretary/CIO
Office of Information & Technology
Work Cell: (b) (6)
Email: (b) (6)@va.gov

The Navy is much more than a job; much more than service to country. It is a way of life. It gets in your blood.
Albert Pratt, The Honorable Assistant Secretary of the Navy 1955

From: (b) (6) [mailto:(b) (6)@frenchangel59.com]
Sent: Tuesday, June 13, 2017 12:33 PM
To: (b) (6) 'Bruce Moskowitz'; (b) (6)@gmail.com; (b) (6)@frenchangel59.com; (b) (6)@va.com; (b) (6); (b) (6); (b) (6); (b) (6); (b) (6); (b) (6); (b) (6)@mayo.edu; (b) (6)@mayo.edu; (b) (6)@ccf.org; (b) (6)@ccf.org; (b) (6)@jhu.edu; (b) (6)@kp.org; (b) (6)@responsivehealth.org; (b) (6)@PARTNERS.ORG; (b) (6); (b) (6)@brefnet.org; (b) (6)@PARTNERS.ORG; (b) (6)@BWH.HARVARD.EDU; (b) (6); (b) (6); (b) (6)@PARTNERS.ORG; (b) (6); (b) (6); (b) (6)@cloverhealth.com; (b) (6)@cognizant.com; (b) (6)@cognizant.com
Subject: [EXTERNAL] Agenda: Conference Call | VA, Apple & Medical/Digital Experts - Wednesday, June 14th / 11:00 AM - 12:30 PM EST (8:00 AM - 9:30 AM PST)

Wednesday, June 14th

11:00 AM – 12:30 PM EST (8:00 AM – 9:30 AM PST)

Dial-in Information:

US: (b) (6)

International: (b) (6)

Passcode: (b) (6)

****6 – Mute or un-mute your line***

Thank you,

(b) (6)

(b) (6) (Office)

(b) (6) (Cell)

(b) (6) @frenchangel59.com

Conference Call | VA, Apple & Medical/Digital Experts

Date: Wednesday | June 14, 2017

Time: 11 a.m. – 12:30 p.m. ET/10 – 11:30 a.m. CT/8 – 9:30 a.m. PT

Dial-in Information: *United States:* (b) (6)

International: (b) (6)

Passcode: (b) (6)

Participants: Bruce Moskowitz, M.D.
Marc Sherman
Ike Perlmutter

Apple:

(b) (6) – Apple, Chief Executive Officer
(b) (6) – Apple, Chief Operating Officer
(b) (6) – Apple, Director of Global Government
(b) (6) – Apple, Vice President for Public Policy and Government Affairs

Office of Veterans Affairs:

David Shulkin, M.D. – Secretary of Veterans Affairs
Poonam Alaigh, M.D. – Acting Under-Secretary for Health
Darin Selnick – Senior Advisor to the Secretary
Rob C. Thomas II – Acting Assistant Secretary & Chief Information Officer
Department of Veterans Affairs
(b) (6) – Senior Advisor, Acting Under-Secretary for Health, Department of Veterans Affairs, Veterans Health Administration

Medical Institutions:

(b) (6) – Chief Information Officer, Mayo Clinic
(b) (6) – Associate Dean/Center for Connected Care, Mayo Clinic
(b) (6) – Interim Chief Information Officer, Cleveland Clinic
(b) (6) – Associate Chief Information Officer, Cleveland Clinic
(b) (6) – Senior Vice President and CIO, Johns Hopkins Health System, Johns Hopkins Medicine, Vice Provost and CIO, Johns Hopkins University
(b) (6) – Senior Vice President, Care Delivery Technology Services, Kaiser Permanente
(b) (6) – Cofounder, CEO - Responsive Health
(b) (6) M.D. – Co-founder, Responsive Health/ Mount Sinai Health System
(b) (6) – Payer Advisor, Responsive Health
(b) (6) – Development Head, Responsive Health
(b) (6) – SME for Public Sector, Responsive Health
(b) (6) – Biomedical Research & Education Foundation, Executive Director
(b) (6) – Vice President, Connected Health | Partners HealthCare
(b) (6) – Chief Information Officer and Vice President, Information Systems, Brigham Health

Moderator:

(b) (6) – Chair, Department of Public Affairs/Mayo Clinic

Agenda:

- 1) Introductions – (b) (6) Moderator
- 2) Review/Discussion of Purpose of Call – All
Draft Meeting Objectives:
 - Consensus/endorsement of goals
 - Define roadmap and next steps
 - Determine core working team moving forward/ARCIV
- 3) Project Objectives/Status | Veteran’s Administration Perspective – David Shulkin, M.D.
- 4) Perspective of the Medical Experts – What Works/What Doesn’t – Medical Experts
 - Status of portable medical record for the private sector
 - What will it take to get to “state of the art?”
 - Preventive health/early detection of disease
 - How does the medical record pick up that which may threaten health
 - What are medical centers working on that has been well received by patients?
- 5) Discussion of Digital/Veteran Platform Project Road Map – (b) (6)



Digital Veteran
Platform Experience.c

The attachment that reflects shared perspective of medical providers/Apple team.

- 6) Review/Discussion of Potential Project Requirements – All
 - Clinical needs re: obtaining information from the patient’s EMR
 - Quick reference screen
 - Patient problem list
 - Medications
 - Allergies
 - Laboratory results
 - Diagnostic tests by specialty
 - Clinical notes by specialty
 - Dynamic vs. static EMR
 - Early disease detection
 - Chart medication adherence
 - Laboratory results depicted by in graph form to permit lifestyle modification conversations
 - Alerts for follow-up appointments/tests
 - Integration of clinical notes, lab and diagnostic text into integrated platform
- 7) Next steps Discussion:
 - Defining the core working team – ARCIV
 - Timeline

Digital Veteran Platform: Veteran-Mediated Data Exchange

Background

Improving the Veterans' experience and enhancing strategic partnerships are two of the key focus areas for the 2015 myVA Transformational Plan. Recognizing that technology will be the foundation on which this transformation will occur, the VA has proposed a "Digital Veteran Platform." The objective of this platform is to "build an ecosystem enabling external integration and innovation enabling transparency with Veterans and their care providers while expanding use of data with real-time analytics to support automated recommendations for care."

As a complement to this platform, the VA and the White House have proposed a collaboration with innovative health systems and Apple to work on four initiatives:

1. **Care Finder:** a mechanism for Veterans to discover an appropriate medical facility and/or physician based on available services and location.
2. **Veteran Health Data Exchange (VHDE):** the ability for Veterans to download and view health records from both the Veteran sector and private sector on a portable device.
3. **Improve Medication Tracking:** a technology solution for Veterans to view medications and be able to track medication compliance, preventing over-utilization of controlled substances, and preventing medication errors.
4. **Transitions of Care:** a system that facilitates Veteran compliance with discharge recommendations (e.g., prescription pick-up, medication compliance, follow-up appointments, home health services) and communicates status to the care team.

This digital platform is being proposed at a time when the national health expenditure is rapidly increasing, representing 17.8% of GDP in 2015, or \$3.2 trillion (\$9,990 per person), a 5.8% rise compared to the previous year.ⁱ Despite these costs, the US remains well behind its peers in how efficiently that expenditure results in improved health and longevity.ⁱⁱ

There is growing recognition that the fundamental changes required to reduce costs and improve outcomes in our healthcare system must begin with empowering the patient to take a greater role in her/his care. Initiatives such as Open Notes - which the VA helped to pioneer - have shown that giving a patient full and transparent access to her/his health records improves safety as well as trust in the clinical relationship.ⁱⁱⁱ Furthermore, evidence is mounting that empowering patients to care for themselves results in decreased costs *and* improved outcomes.^{iv}

However, patients today lack the ability to get an integrated view of their health data across a myriad of electronic health record (EHR) systems in the marketplace. Fortunately, private sector initiatives such as the Argonaut Project^v have proven that EHR vendors can align with the interests of patients and health systems to agree on a path forward involving standard application programming interfaces (APIs) for health. Additionally, bipartisan legislation such as the 21st-Century Cures Act has required health IT products to expose health data via APIs. These advances, when taken together, pave the way for a true 21st-Century Health IT System designed with the patient at the center.^{vi} The National eHealth Exchange has also supported

health information exchange for clinicians, but this information is generally not directly available for patient viewing.

It is within this rich milieu of health IT advancement that the VA and the White House have proposed this collaboration to identify solutions to problems for which the feasibility of a solution is only just becoming a reality.

The VA has long been a pioneer in health IT innovation, which has been a necessity given their large and geographically diverse patient population. This is yet another opportunity for the VA to set an example for the rest of the country to follow, and it couldn't come at a more critical time for our nation.

Proposal

In order to achieve the greatest benefit for our Veterans in the shortest amount of time, we propose that this set of initiatives should begin by leveraging the work of the standards community to enable Veteran health data exchange (initiative #2 above). Only after this is in place will we be able to explore the feasibility of improved medication tracking and seamless transitions of care.

The 'Care Finder' functionality (initiative #1 above) represents an extension of the current VA tool found at vets.gov, however, a more patient-centric approach would likely improve Veteran engagement. The lack of a national health system, universal patient identifier, and common provider directory presents several challenges with respect to ensuring this resource is accurate and up to date. This concept and implementation will continue to be explored.

Five health systems have agreed to participate in support of these initiatives:

- Cleveland Clinic
- Johns Hopkins Medicine
- Kaiser Permanente
- Mayo Clinic
- Partners HealthCare

The 5 selected health systems will implement APIs based on the Fast Healthcare Interoperability Resources (FHIR) standard, as outlined in the Argonaut Data Query Implementation Guide 1.0.0:^{vii} All major EHR vendors, including Epic and Cerner, have implemented or are working on the implementation of this standard within their software. This is of critical importance given the recent announcement by U.S. Secretary of Veterans Affairs Dr. David J. Shulkin that the VA will adopt the Cerner EHR to replace their current VistA health records system.^{viii}

Once this is in place, Apple will enable the Veteran to access the following items from her/his health record: problems, medications, allergies, laboratory test results, and procedures. The health records of multiple institutions may be aggregated and harmonized into one 'virtual' master copy, available for viewing. This data will continue to reside within each organization, but be accessible to Veterans via APIs to present the information when requested.

Given the reality that many Veterans receive a portion of their care at non-VA health systems (a fact accelerated by the 2014 Choice Act^{ix}), this newfound data portability - with the patient at the center - will ensure that VA providers always have the most up-to-date information about a patient so that they can provide the most effective care.

This work will begin as a limited pilot among patients who receive care at both the VA and one of the 5 health systems listed above. It will then be implemented across the VA and to any interested health system in the U.S. who has an EHR platform compatible with this open standard.

Guiding Principles

Healthcare is complex, and the challenges will be difficult to address. In order to succeed, all participants must be aligned according to a set of guiding principles. We propose to adhere to the following:

1. We will act in the best interests of the Veteran.
2. We will support the ability of the Veteran's care team to provide the best care.
3. We will identify and implement standards-based solutions, where possible.
4. We will deploy solutions that can be leveraged and adopted by the healthcare industry more broadly.

Next Steps

Implementing the Veteran health data exchange functionality will require coordination across the health systems, the VA, and Apple. We propose that each entity select appropriate technical and business representatives to serve on an exploratory workgroup in order to define milestones, timelines, and priorities, and to have this workgroup in place by August 31, 2017. Additional members may be included as needed. This group should also identify any barriers, impediments or concerns that need to be addressed in order to further the work. The workgroup will be led by a designated representative from the VA.

While this scope of this initiative will initially be constrained in order to provide something of value to Veterans in a relatively short period of time, we recognize that there are many problems in health care worth solving, and see this as a stepping stone to work more closely with the VA to identify and find sustainable solutions to their most pressing needs.

It is hard to overstate the potential impact of this initiative; the nationwide implementation of a standards-based approach to patient-mediated data access and exchange across the VA and partner institutions will serve as a model for the future of healthcare, not only in the US, but around the world. It will set a standard by which all other health systems will be judged, and patients, once they realize the freedom and power it affords, will not settle for anything less.

ⁱ <https://www.cms.gov/research-statistics-data-and-systems/statistics-trends-and-reports/nationalhealthexpenddata/nationalhealthaccountshistorical.html>

ⁱⁱ <https://www.bloomberg.com/news/articles/2016-09-29/u-s-health-care-system-ranks-as-one-of-the-least-efficient>

ⁱⁱⁱ <http://www.nejm.org/doi/full/10.1056/NEJMp1310132>

^{iv} <https://hbr.org/2017/06/the-value-of-teaching-patients-to-administer-their-own-care>

-
- ^v http://argonautwiki.hl7.org/index.php?title=Main_Page
^{vi} <http://www.nejm.org/doi/full/10.1056/NEJMp1700235>
^{vii} <http://www.fhir.org/guides/argonaut/r2/>
^{viii} <https://www.va.gov/opa/pressrel/pressrelease.cfm?id=2914>
^{ix} <https://www.va.gov/opa/choiceact/documents/choice-act-summary.pdf>

From: (b) (6)
Sent: 10 Jun 2017 13:16:08 -0400
To: Mulligan, Ricci;Thomas, Rob C. II
Cc: Short, John
Subject: Re: Update on Center Discussions
Attachments: Notes from meeting with Apple June 8.docx, Bullet Points for June 14 call with 5 Centers, WH and Apple.docx

All,

Bruce is on vacation until Monday. Darin has a call with him scheduled at 5pm. We can revise our plan Monday evening.

Attached are the notes from the meeting and the bullet points for review.

I am available this weekend to do revisions if you have feedback or questions.

(b) (6)

(b) (6)

Cell: (b) (6)

From: Ricci Mulligan <(b) (6)@va.gov>
Date: Thursday, June 8, 2017 at 4:53 PM
To: "Thomas, Rob C. II" <(b) (6)@va.gov>, (b) (6) <(b) (6)@va.gov>
Cc: "Short, John" <(b) (6)@va.gov>
Subject: Update on Center Discussions

Sir, great meeting today. Darin has a conversation with Bruce to clarify two points that were raised today concerning the App that Bruce developed. Once we receive those answers we will put together the talking points for the 14th.

(b) (6) will send to you tomorrow morning and we will have a hard copy ready for you Monday.

Have a great trip. Ricci

Ricci L. Mulligan
Acting Principal Deputy Assistant Secretary
VA OI&T

(b) (6) (O)

(b) (6) Cell

Summary of notes from meeting with Apple preparing for June 14 meeting.

Challenge #1 – Medical Facility Finder App

VA and Apple discussed the use case and current state of the EMCL facility finder mobile app. Apple started the process by asking, “What problem are we trying to solve?” Apple and VHA then focused on the need/likelihood of Veteran using a native mobile application to find a medical facility. There was doubt on Apple and VHA’s side that a Veteran in need of medical care would use the app. Maintenance of the application was also discussed. The requirements to maintain and improve the data that powers the app would be persistent to keep the app up to date. Finally, while the application seems straight forward, simply showing nearby medical facilities broken down by specialty, there would be significant challenges in showing the Veteran facilities they qualify for based on their current insurance and VA eligibility.

However, both Apple and VA are in agreement about the importance of building the Medical Facility finder app in order to insure that the overall effort is successful. Both agreed that Dr. Moskowitz considers this app a priority and he feels it will have a valuable impact on the Veteran and show that solutions can be delivered quickly inside the government.

The current state of the application is of concern to Apple. None of the Apple team could get the application to work after downloading. They also stated that a considerable rework would be required before they would put their name on it. Apple disclosed that Dr. Moskowitz’s son owns a mobile app development company that built the original app, and may be the team Bruce has in mind to deliver the updated VA branded app. Darin was added to the conversation to gain any additional insight into Bruce’s intention. He agreed that it was unclear who would be building the app and would follow-up with Bruce on the following questions:

- Who will be developing and maintaining the application?
- What are the required data sources needed to keep the list of centers up to date?

Once we hear back from Bruce we can move forward with a more clearly defined plan.

Challenge #2 – Ability for Veterans to access medical records from multiple sources using their mobile device.

VA described their vision for the DVP. Apple asked some specific questions around how we would develop our FHIR resources. We stated that we would be developing the 18 resources identified by the Argonaut project and use SAML for security until we implement OAuth 2.0. Apple seemed very pleased by our proposed approach. VHA also described their intent to enable the Veteran to be the data owner of their health information. They currently are working to develop FHIR endpoints for

Connected Care's patient generated data (PGD) database. Their next focus would be to develop similar FHIR solutions for MyHealtheVet.

Apple walked VA through the plan for the next feature set for their HealthKit offering. They disclosed that in March or April of 2018 medical providers would be able to leverage HealthKit to allow patients to access a number of components of their medical record including read access to medications, allergies, conditions, and labs. The providers would have to adhere to Apple's requirements for data sharing, but they stated that these would be FHIR based following the Argonaut project and secured by OAuth 2.0. There is great alignment between the way VA is approaching the development of our FHIR solutions and the way Apple is intending to consume them. Both sides were excited about the opportunity of working together and have VA as a partner for their release next spring.

Apple also disclosed that the 5 Centers, all users of Epic, are intending to be included in the rollout. Apple, VA, and the 5 Centers are in agreement that Challenge #2 is the area of greatest common interest, and potential to help liberate health data empowering the Veteran.

VA asked Apple their interest and capability to help develop and maintain VA's API Gateway. Apple expressed concern about their ability to bring relevant resources, SMEs and engineers, to the proposed solution because it is an area that they don't have a deep experience in. They validated our current technology selection and the approach in general.

Challenge #3 and #4 – Medication Tracking and Disposition Pathway

VA described our current plan to transition to a new EHR, and see value in working with the 5 Centers to come up with a technologically agnostic approach to dealing with these two complex problems. VHA described the number of efforts currently under way to address these issues inside their organization. We discussed utilizing a human centered design approach to better understand the processes within VA, the 5 Centers and the greater healthcare provider community. There is agreement that this is not an area of quick wins, or something that there are any obvious "silver bullet" technology solutions. These two challenges will take a much longer timeline to show quantifiable gains, but need to be pursued diligently.

Other areas that were discussed were security, analytics and the Secretary's priority of Suicide Prevention. OIT described its interest in leveraging two and three factor identification to provide Veterans. Apple discussed the importance of utilizing tokens to for end users so they wouldn't have to enter their username and password every time they need want to access their health information. This is an area that VA and Apple will further explore. Apple described their capabilities and interest in working on projects with VA involving analytics. Million Veteran's Project (MVP) was discussed as an opportunity to work together. OIT is confident it can establish a legal vehicle to be able to work together, CRADA, Strategic Partnership, Public

Partnership, etc. VHA expressed concern about VA's ability to share that data because it cannot be de-identified. Both sides agreed to find specific areas to collaborate on in the future. Regarding Suicide Prevention, Apple has a strong interest in helping anyway they can. There were no specific projects identified, but a general agreement to work together in the future.

From: Thomas, Rob C. II
Sent: 8 Jun 2017 15:20:01 +0000
To: Thomas, Rob C. II; (b) (6) Short, John (b) (6) (b) (6)
(b) (6); (b) (6)
Subject: Prep for OSHERA and Dr. Moskowitz Call

Please be on stand by for last minute prep.

From: Thomas, Rob C. II
Sent: 7 Jun 2017 20:31:48 -0400
To: (b) (6)
Cc: Mulligan, Ricci; Short, John
Subject: RE: 5 Centers Engagement Challenges narrative

Thank you (b) (6)

Warm Regards, Rob

ROB C. THOMAS II
Acting Assistant Secretary &
Chief Information Officer
Department of Veterans Affairs
Email: (b) (6)@va.gov
Office: (b) (6)

-----Original Message-----

From: (b) (6)
Sent: Wednesday, June 07, 2017 07:32 PM Eastern Standard Time
To: Thomas, Rob C. II
Cc: Mulligan, Ricci; Short, John
Subject: 5 Centers Engagement Challenges narrative

Sir -

Here is a narrative of the 5 Centers Engagement challenges and solutions.

Objective

To provide a series of health information technology solutions to support 4 mission critical Veteran healthcare functions including healthcare facility location, democratized health data exchange by the Veteran, tracking medical compliance, and improving transitions of care.

Challenge #1:

Develop a mobile app that provides a Veteran the appropriate medical facility and or physician that is geotagged to their location. It should list the closest certified cardiac center, stroke center, trauma center and pediatric center. It should also list qualified urgent care centers.

Solution:

Leverage Dr. Moskowitz's mobile app (Emergency Medical Center Locator) to develop a VA version that provides Veterans the ability to rapidly locate and navigate to a VA healthcare or urgent care facility.

Challenge #2:

Provide Veterans ability to download the records from both the Veteran sector (Veterans have access to a portable record) and private sector on their portable device. It should have the feature that would prevent duplication of tests at the time of ordering at the point of contact and the ability to send information back to their primary doctor in real time. It should also have a feature to prevent unnecessary testing and over utilization.

Solution:

Develop a FHIR based mobile application platform that provides the ability to intake Veteran health data from multiple EHR systems. The health data will have multiple uses including determining and avoiding repetition in treatment and tests. This model simplifies the development experience for all developers who need not know the internals of FHIR to produce apps.

Challenge #3:

Develop a technology solution for tracking medication compliance, prevention of over utilization of controlled substances and prevention of medication errors.

Challenge #4:

Currently the medical discharge everywhere is antiated. Patients are discharged by a floor nurse with a list of medication. We need a system that automatically checks that the patient picked up the medication and does not confuse it with medication at home. Second, track follow up appointments, health care services for home care and distributes all information to the health care team.

Solution:

The challenges of medication tracking for compliance, prevention of controlled substance overuse, and preventing adverse drug events as well as transitions of care are common across these organizations. Nuances exist within patient population, geography, reimbursements, and underlying health information technology solutions. Additionally, these challenges involve people, processes, and technology. Opportunities exist to bring leaders in this domain from across the 5Cs along with national VA experts to more closely address these issues, cross-pollinate ideas and best practices, and design future solutions. A human centered designed approach with the right participants across all participating organizations would be useful in identifying common problems to be addressed and designing the new solutions each organization needs.

(b) (6)

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(b) (6)

Cell: (b) (6)

From: Thomas, Rob C. II
Sent: 7 Jun 2017 16:06:11 -0400
To: Short, John
Subject: FW: [EXTERNAL] Re: next steps on VA project

FYI

Warm Regards, Rob

ROB C. THOMAS II
Acting Assistant Secretary &
Chief Information Officer
Department of Veterans Affairs
Email: (b) (6)@va.gov
Office: (b) (6)

-----Original Message-----

From: Bruce Moskowitz [mailto:(b) (6)@mac.com]
Sent: Wednesday, May 31, 2017 12:41 PM Eastern Standard Time
To: (b) (6)
Cc: (b) (6); (b) (6); (b) (6); Thomas, Rob C. II; David Shulkin; Poonam Alaigh
Subject: [EXTERNAL] Re: next steps on VA project

The individual, the Secretary David Shulkin, is assigning to head the VA contingent is the CIO (b) (6) Thomas who I CC'd. Mr. Perlmutter who is in direct contact with (b) (6) has asked me to coordinate who is presenting which agenda item from those on our side of the call including those from the academic centers and the VA. Since I am responsible to keep our side focused on as getting as much done prior to the call as possible your approach is on target. Mr. Perlmutter and I would hope that the call can reflect what the academic partners pointed out; that we can use existing technology at the academic centers so we do not have to reinvent the wheel. We also need an NDA for the group at responsive health who are part of Mount Sinai and if I need to sign an NDA let me know. Thank you

Sent from my iPad
Bruce Moskowitz M.D.

On May 31, 2017, at 12:16 PM, (b) (6)@apple.com> wrote:

Bruce,

Thanks very much for organizing the call last Friday. Here is what we plan as next steps:

We have draft NDAs for the five medical centers ready, and we will send directly to the contacts on the conference call last week to try to get them in place as soon as possible.

The Apple technical team wants to speak or meet with the VA so that they can obtain information they need to plan and answer the type of questions the five medical centers were asking on the conference call. We will set that up, again as soon as possible.

Once the NDAs are signed and we have been able to refine how Apple would like to approach the project, we can set up another conference call with the medical centers where Apple can participate. The goal on that call would be to dive deeper into the specifics of the work and set the agenda for getting the work done. Ideally, this can all happen before the June 14th call so we can have real progress to report.

Of course we will copy you on all emails. Please let me know if you have questions.

Thanks,

□ (b) (6) Vice President for Public Policy, Americas • le • (b) (6)

From: (b) (6)
Sent: 23 May 2017 10:35:08 -0400
To: Mulligan, Ricci
Cc: James, Bill; Short, John (b) (6)
Subject: Re: Special Project Task

Following up with this am.

(b) (6)

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

From: Ricci Mulligan (b) (6) @va.gov>
Date: Tuesday, May 23, 2017 at 10:33 AM
To: (b) (6) (b) (6) @va.gov>
Cc: "James, Bill" (b) (6) @va.gov>, "Short, John" <(b) (6) @va.gov>, (b) (6) <(b) (6) @va.gov>
Subject: RE: Special Project Task

We use the POC that Darin will set us up with at Apple. Please get with Darin. Ricci

Ricci L. Mulligan
Acting Principal Deputy Assistant Secretary
VA OI&T

(b) (6) (O)
(b) (6) Cell

From: (b) (6)
Sent: Tuesday, May 23, 2017 9:07 AM
To: Mulligan, Ricci
Cc: James, Bill; Short, John; (b) (6)
Subject: RE: Special Project Task

I don't have a number for them. Do we use the POC that Mr. Thomas was talking to?

Sent with Good (www.good.com)

-----Original Message-----

From: Mulligan, Ricci
Sent: Tuesday, May 23, 2017 08:32 AM Eastern Standard Time
To: (b) (6)

Cc: James, Bill; Short, John; (b) (6)

Subject: RE: Special Project Task

Excellent, they want us to work with Apple but do we have a number we can call, if not we will get from the boss. Ricci

Ricci L. Mulligan
Acting Principal Deputy Assistant Secretary
VA OI&T

(b) (6) (O)
(b) (6) Cell

From: (b) (6)
Sent: Tuesday, May 23, 2017 8:28 AM
To: Mulligan, Ricci
Cc: James, Bill; Short, John; (b) (6)
Subject: RE: Special Project Task

Morning Ma'am

We started working this yesterday. It is a pretty straightforward app.

I can update you later this am.

Thanks,
(b) (6)

Sent with Good (www.good.com)

-----Original Message-----

From: Mulligan, Ricci
Sent: Tuesday, May 23, 2017 08:20 AM Eastern Standard Time
To: (b) (6)
Cc: James, Bill; Short, John
Subject: Special Project Task

(b) (6) can you work this this morning. I believe Bill or John Short can assist. Please include (b) (6) Ricci

Ricci L. Mulligan
Acting Principal Deputy Assistant Secretary

VA OI&T

(b) (6) (O)
(b) (6) Cell

-----Original Message-----

From: Thomas, Rob C. II
Sent: Tuesday, May 23, 2017 8:11 AM
To: Mulligan, Ricci
Cc: (b) (6) James, Bill
Subject: FW: [EXTERNAL] Apple

Ricci,

Can (b) (6) and the Dr. take this on for us?

Warm Regards, Rob

ROB C. THOMAS II
Acting Assistant Secretary &
Chief Information Officer
Department of Veterans Affairs
Email: (b) (6)@va.gov
Office: (b) (6)

-----Original Message-----

From: Bruce Moskowitz [mailto:(b) (6)@mac.com]
Sent: Tuesday, May 23, 2017 07:56 AM Eastern Standard Time
To: Thomas, Rob C. II
Subject: [EXTERNAL] Apple

The EMCL app can be modified very quickly. Please have the group from Apple review it prior to the call June 14 and if your group can tell us if the format works then we can add what the VA needs for the choice program. We need this information prior to the June 14 call.

Sent from my iPad
Bruce Moskowitz M.D.

From: Mulligan, Ricci
Sent: 21 May 2017 19:32:25 -0400
To: Thomas, Rob C. II; (b) (6) Short, John
Subject: RE: [EXTERNAL] Apple

Yes Sir, we, Darin, (b) (6) and I with VHA had a conversation with him on Thursday where we talked through each of these issues. Darin is meeting with the team to go over the due outs from that meeting and we are then scheduled to meet virtually with the Centers, Apple and Bruce and discuss expedited roadmap. I will forward Darin's email with my notes. I did not see any feedback from VHA.

These issues are separate from the email that you sent to Apple, but at some point they will merge.

Darin has a strategy of how he wants to work this.

In the meantime, I would ask that we have a conversation with Darin to go over past conversations with VHA and how Bruce is bringing the Centers and Apple together with VA.

I will forward the email with the notes from Darin. (b) (6) has some good notes that we will add in.

Ricci

Sent with Good (www.good.com)

-----Original Message-----

From: Thomas, Rob C. II
Sent: Sunday, May 21, 2017 07:11 PM Eastern Standard Time
To: Mulligan, Ricci; (b) (6) Short, John
Subject: FW: [EXTERNAL] Apple

I could use some help here. This is the President's family doctor. It looks like I will need to talk with him tomorrow.

Can you help me with taking points on our viewpoint?

See below with the back and forth. Is this something you are familiar with?

Warm Regards, Rob

ROB C. THOMAS II
Acting Assistant Secretary &
Chief Information Officer
Department of Veterans Affairs
Email: (b) (6)@va.gov
Office: (b) (6)

-----Original Message-----

From: Bruce Moskowitz [mailto:(b) (6)@mac.com]
Sent: Sunday, May 21, 2017 06:41 PM Eastern Standard Time
To: Thomas, Rob C. II
Subject: [EXTERNAL] Apple

This is the agenda and VA reply give me best time to discuss. Thank you

1. The Veterans will need an app that provides for the appropriate medical facility and or physician that is geotagged to their location. It should list the closest certified cardiac center, stroke center, trauma center and pediatric center. It should also list qualified urgent care centers.

a. We suggest a modified use case: A telehealth provider wants to direct their patient to a nearby healthcare resource (e.g. urgent care center or call 911 for patient). The app should be able to send to the patient and the patient's telehealth providers, the location of the patient and the healthcare resources that are nearby to the patient. For example, the closest VA location, closest pharmacy, closest urgent care center, and closest contact center phone number.

2. We will need the ability for Veterans to download the records from both the Veteran sector (Veterans have access to a portable record) and private sector on their portable device. It should have the feature that would prevent duplication of tests at the time of ordering at the point of contact and the ability to send information back to their primary doctor in real time. It should also have a feature to prevent unnecessary testing and over utilization.

a. This is the FHIR Patient-Mediated data exchange concept. Please see attached FHIR concept paper.

3. We need a technology solution for tracking medication compliance, prevention of over utilization of controlled substances and prevention of medication errors.

a. This is a problem but we do not believe that this is something that can be solved with an app.

4. Currently the medical discharge everywhere is antiquated. Patients are discharged by a floor nurse with a list of medication. We need a system that automatically checks that the patient picked up the medication and does not confuse it with medication at home. Second, track follow up appointments, health care services for home care and distributes all information to the health care team.

a. This is a problem but we do not believe that this is something that can be solved with an app.

Sent from my iPad
Bruce Moskowitz M.D.

On May 21, 2017, at 6:14 PM, Thomas, Rob C. II <(b) (6)@va.gov> wrote:

Thank you Secretary.

Dr. Moskowitz, a pleasure to meet you virtually. I wrote the original thought piece we sent to Apple.

Most recently, we seem to be bogged down on the way forward. I surely welcome a conversation at your convenience.

Warm Regards, Rob

ROB C. THOMAS II
Acting Assistant Secretary &
Chief Information Officer
Department of Veterans Affairs
Email: (b) (6)@va.gov
Office: 202-461-6910

-----Original Message-----

From: David shulkin [mailto:(b) (6)@aol.com]
Sent: Sunday, May 21, 2017 03:41 PM Eastern Standard Time
To: Bruce Moskowitz
Cc: Thomas, Rob C. II
Subject:

Rob- i would like to connect you with Dr Bruce Moskowitz, a trusted advisor, to see if the two you could have a conversation about our Apple discussions

David

Sent from my iPhone