About the LOT Internship: Washington DC

American University
• The Professional Development in DC seminar covered:
  • Networking in Washington, DC
  • Career opportunities inside and outside of the federal government
  • Identifying and communicating your strengths to employers
  • Intercultural communication skills for the workplace
  • Social media: do's and don'ts to boost your professional profile

The National Coordination Center
• 8 weeks – 30 hours, from Monday June 3 to Friday July 26, 2019
• Tasks included:
  • Shadowed NCC, partner, and Government employees
  • Contributed to discussions or work sessions
  • Developed processes or communications
  • Attended weekly meeting/round ribbons and lunch-and-learns
The U.S. Department of Veterans Affairs

- Mission Statement: To fulfill President Lincoln’s promise, “To care for him who shall have borne the battle and for his widow, and his orphan.”
- Includes three subdivisions:
  - The Veterans Health Administration (VHA)
  - The Veterans Benefits Administration (VBA)
  - The VA National Cemetery Administration (NCA)
- VA FY2018 – 2024 Strategic Goals & Objectives: Top 5 Priorities
  - Customer Service
  - MISSION Act
  - Electronic Health Record
  - Business Systems Transformation
  - Suicide Prevention
Electronic Health Record Modernization Program

• In May 2018, VA awarded Cerner a $16B, 10-year contract to replace their current EHR systems with the commercial-off-the-shelf solution - Cerner Millennium - currently being deployed by the Department of Defense (DoD).

• THE EHRM EFFORT HAS THREE MAJOR COMPONENTS:
  1) Modernize VA’s legacy systems and associated infrastructure required to support a new industry-leading EHR solution.
  2) Provide Veterans and clinicians with a complete picture of patients’ medical history, driving connections between military service and health outcomes through data analytics.
  3) Implement a new EHR solution that is interoperable with DoD and community care providers, enabling the seamless sharing of records.
The Reason

• Eligible veterans may seek disability compensation and receive care for service-related or ‘service-connection’ injuries and or illness. To qualify, veterans must provide evidence and supporting documents; evidence concluding a service-connection injury must establish.

One of the two factors must be established to prove claimed service-connection injury or illness:

| **Chronicity** – Involves an injury or disease sustained during or developed after military service that can be medically diagnosed as a chronic disease. |
| **Continuity** – If chronicity cannot be established, the evidence of continuity can be used. |
June 2017
VA Secretary announced decision on next-generation EHR

VA adopts the same EHR system (i.e. Cerner Millennium) as DoD, now known as MHS GENESIS

May 2018
VA signed a contract with Cerner to modernize the VA’s health care IT system.

July 2018
VA established OEHRM Support Transition from VistA

Manage the preparation, deployment and maintenance of VA’s new EHR system

October 2018
VA kicks off initial operating capability of the new EHR at VISN 20, northwest US

Mann-Grandstaff VA Medical Center
VA Puget Sound Health Care System
WCPAC in Las Vegas

March 2020
VA set to launch Cerner Millennium at VISN 20
Veterans Integrated Service Networks (VISN)

Source: The U.S. Department of Veterans Affairs, 2019
Prime Contractor:

- Headquarters: North Kansas City, MO, USA
- NASDAQ Symbol: CERN
- 2018 revenue: $5.4 billion
- Cumulative R&D investment of over $7 billion
- More than 29,000 Cerner associates in 26 countries worldwide
- Cerner solutions are contracted at more than 27,500 facilities in over 35 countries

Source: Cerner, 2019
The National Coordination Center

• NCC is a low-profit, ‘purpose before profit’ company

• Connects the nation’s brightest minds to help solve some of the most pressing issues in healthcare. The NCC identifies experts and organizations that are solving the nation’s healthcare challenges and connects them with organizations in need.

• Current Project:
  • Electronic Health Modernization Program – creating a seamless record for servicemember, veterans, and their families.
    • Task Order 5 (TO5), for which NCC provides Industry Best Practice Advisor (IBPA)/Subject Matter Experts (SMEs) to advise Cerner during the design/build/test phase as requirements for system functionality are designed/built/tested as required for the IOC Go Live March 2020.
    • Task Order 7 (TO7): Revenue Cycle Management
The Leaders of Tomorrow – Deliverables

(1) Standardized Guidance Product

(2) Scenario Development

Other work completed:
- Verification and Integration Validation
- Mock Go-live Documentation
- Data Integration
- IBPAs Interviews
(1) Standardized Guidance Product

- Centralized repository to house all directives, policies, handbooks, standard operating procedures, and clinical guidelines

- Methodology:
  - Developed Problem Definition
  - Literature Reviews
  - Strategic Analytics for Improvement and Learning (SAIL)
An Outcry for Standardization of Clinical Practices – The Need to Establish a Baseline for Quality Care Outcomes

- Problem Statement: *Successful implementation is at risk due to a misalignment between policy and clinical practice that impacts clinical content decision-making.*

- Veterans Health Administration system is divided into three levels:
  - National (also referred as Enterprise)
  - Veterans Integrated Service Networks (VISN)
  - Local level

Currently, there is no standard/baseline that will help organizations determine best practices or how much customization is appropriate.
Office of Electronic Health Record Modernization Program

- Established to manage the preparation, deployment, and maintenance of its new electronic health record system and the health IT tools to reliant on it.

- Has 18 National Councils:
  - Responsible for reviewing and finalizing the design of nationally standardized clinical and business processes.

<table>
<thead>
<tr>
<th>Acute Care Delivery</th>
<th>Acute Provider</th>
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</thead>
<tbody>
<tr>
<td>Ambulatory</td>
<td>Behavior Health</td>
</tr>
<tr>
<td>Business Operations (Revenue Cycle)</td>
<td>Clinical Support Services</td>
</tr>
<tr>
<td>Community Data Integration</td>
<td>Dentistry</td>
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<tr>
<td>Emergency Medicine</td>
<td>Geriatrics and Extended Care</td>
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<tr>
<td>Patient Engagement</td>
<td>Perioperative Care</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>Quality, Safety, and Value</td>
</tr>
<tr>
<td>Reb and Acute Clinical Ancillaries</td>
<td>Supply Chain</td>
</tr>
<tr>
<td>Technical Management</td>
<td>Workforce Management and Operations</td>
</tr>
</tbody>
</table>
## Five Key Groups Enable VA EHR Redesign Process and Governance

<table>
<thead>
<tr>
<th>Group</th>
<th>Task</th>
<th>Percentage</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joint Governance Boards (3)</td>
<td>Adjudicate conflicting configuration</td>
<td>&lt;1%</td>
<td>Full system life cycle</td>
</tr>
<tr>
<td>VA Governance Boards (3)</td>
<td>Address clinical and business issues elevated from EHR councils</td>
<td>&lt;1%</td>
<td>Full system life cycle</td>
</tr>
<tr>
<td>National Councils (18)</td>
<td>Complete design of national baseline</td>
<td>~85%</td>
<td>Through deployment</td>
</tr>
<tr>
<td>VISN Councils (18)</td>
<td>Provide consistency around VISN implementation</td>
<td>~10%</td>
<td>12-months prior to go-live</td>
</tr>
<tr>
<td>Local Subject Matter Experts</td>
<td>Review national guideline, identify all variances</td>
<td>~5%</td>
<td>Through stabilization period</td>
</tr>
</tbody>
</table>
Major Takeaways

• Lack of standardization causes:
  • Misalignment between policy and clinical practice
  • Poor quality reporting
  • Medical errors
  • Uncertainty of best treatment options

• There is a need to establish a baseline to identify best practices to help determine how much customization is appropriate.
Other Areas of Focus
Strategic Analytics for Improvement and Learning (SAIL)

Care Transition – inpatient (HCAHPS)

The Care Transition composite is extracted from the SHEP Inpatient survey, basing on the HCAHPS survey, to measure patients’ perception of care provided when transitioning them out of hospital setting.

• This composite is consisted of 3 questions:

  Q23. During this hospital stay, staff took my preferences and those of my family or caregiver into account in deciding what my health care needs would be when I left.

  Q24. When I left the hospital, I had a good understanding of the things I was responsible for in managing my health.

  Q25. When I left the hospital, I clearly understood the purpose for taking each of my medications.
## Results

- Based on VISN 6
- Higher Value is Better

<table>
<thead>
<tr>
<th>Hospital Name</th>
<th>Care Transition (Composite measure)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DURHAM VA MEDICAL CENTER</td>
<td>57</td>
</tr>
<tr>
<td>ALAMANCE REGIONAL MEDICAL CENTER</td>
<td>48</td>
</tr>
<tr>
<td>CAPE FEAR VALLEY HOKE HOSPITAL</td>
<td>54</td>
</tr>
<tr>
<td>CENTRAL CAROLINA HOSPITAL</td>
<td>46</td>
</tr>
<tr>
<td>DUKE REGIONAL HOSPITAL</td>
<td>59</td>
</tr>
<tr>
<td>DUKE UNIVERSITY HOSPITAL</td>
<td>60</td>
</tr>
<tr>
<td>FIRSTHEALTH MOORE REGIONAL HOSPITAL</td>
<td>60</td>
</tr>
<tr>
<td>GRANVILLE HEALTH SYSTEMS</td>
<td>50</td>
</tr>
<tr>
<td>MARIA PARHAM MEDICAL CENTER</td>
<td>43</td>
</tr>
<tr>
<td>NORTH CAROLINA SPECIALTY HOSPITAL</td>
<td>68</td>
</tr>
<tr>
<td>PERSON MEMORIAL HOSPITAL</td>
<td>42</td>
</tr>
<tr>
<td>SCOTLAND MEMORIAL HOSPITAL</td>
<td>56</td>
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<tr>
<td>SENTARA HALIFAX REGIONAL HOSPITAL</td>
<td>53</td>
</tr>
<tr>
<td>SOUTHEASTERN REGIONAL MEDICAL CENTER</td>
<td>46</td>
</tr>
<tr>
<td>SOVAH HEALTH DANVILLE</td>
<td>41</td>
</tr>
<tr>
<td>UNIVERSITY OF NORTH CAROLINA HOSPITAL</td>
<td>60</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>VA Top 10%</td>
<td>62.00</td>
</tr>
<tr>
<td>VA Top 25%</td>
<td>57.00</td>
</tr>
<tr>
<td>National Average</td>
<td>53.14</td>
</tr>
<tr>
<td>National Median</td>
<td>53.00</td>
</tr>
<tr>
<td>Regional Average</td>
<td>52.40</td>
</tr>
<tr>
<td>Regional Median</td>
<td>53.00</td>
</tr>
</tbody>
</table>
HL7 CDS Knowledge Artifact Specification (KNARTS)

• In April 2017, the VHA awarded a $22B, one-year contract to B3 Group, Cognitive Medical Systems Inc., and Motive Medical Intelligence to implement clinical decision support (CDS) technology into its EHR. CDS tool will include:
  • Computerized alerts and reminders
  • Clinical guidelines
  • Order sets
  • Patient data reports and dashboards
  • Documentation templates
  • Diagnostic support and clinical workflow tools
**CDS Knowledge Artifact Specification (KNARTS) cont’d**

<table>
<thead>
<tr>
<th>Purpose:</th>
<th>Challenge:</th>
<th>Findings:</th>
<th>Recommendation:</th>
</tr>
</thead>
</table>
| • Aims to achieve standardization of clinical content (i.e. checklists, documents, and forms) “by organizing clinical knowledge and login in a way that is universally shareable via any CDS tool, any EHR, or any IT platform” (B3, 2019). | • VHA clinical system and practices are varied across the massive VHA healthcare network  
• Nonexistent Platform: Current system is not compatible with XML files | • The evidence for KNARTS is provided by VA and DoD clinical practice guidelines | • Couple KNARTS CDS + Standardized Guidance Product  
• In the future: More focus on patient centered care and tailoring clinical content to fit patient specific needs. |
(2) Scenario Development

- Scenarios are descriptive text of a simulated event that is usually conducted in the health care setting. Includes transition of care:
  - Admissions > Inpatient > Step Down Unit > Discharge/Referral
  - Used for test scripts in the verification and integration validation testing phrase

- Due to a lack of standardization, it can be challenging to develop scenarios if each variation of clinical practices is accounted.
Other Work Completed

- **Verification and Integration Validation**
  - Deliverable: Slide deck presentation

- **Mock Go-live Documentation**
  - Deliverable: Slide deck presentation

- **Data Integration**
  - Deliverable: Compiling NPIs (National Provide Identifier)

- **IBPAs Interviews**
  - Deliverable: EHR implementation best practices, Areas of improvement, and General insights
Challenges

- Overall, the greatest challenge experienced during the Leaders of Tomorrow Internship:
  - Ability to manage ambiguity
Lessons Learned and Recommendations

• Team Dynamics
• Organizational Culture
• BE A SPONGE!
• Recommendations:
  • More opportunities to engage in lunch-and-lears
  • More involvement in working sessions
Acknowledgements

Larnie Yuson VP, Dan Altman, Jennifer Meffert, Joanna Warden, Elena Spieker, & Elaine Dueland (Left to Right, Top to Bottom)

Dr. Kevin Carr, CEO
NCC TOTs
References


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• Department of VA. (2019). Hospital Compare Data. Retrieved from https://www.accesstocare.va.gov/Healthcare/HospitalCompareData?s=NC&f=558&m=CARE

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