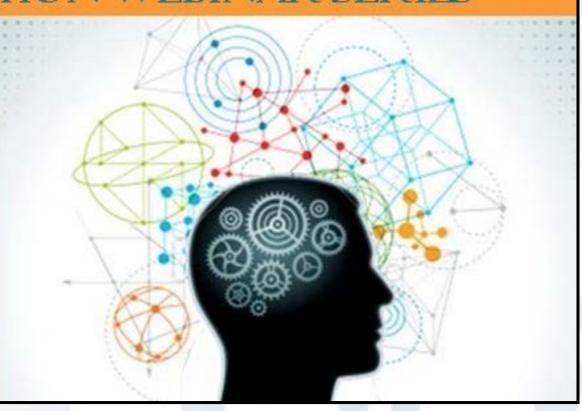
INNOVATION WEBINAR SERIES

Join us for monthly presentations on cutting-edge projects in open source!

Today's Special Time: 1PM - 1:45PM EST



Thank you for joining.
This presentation will begin shortly.

Introduction by Seong K. Mun, PhD

- Goal of this webinar is to share some information and assist in responding to the RFI
- This session will end at 1:45 PM sharp
- The session will be recorded
- Some IHS executives may join the call
- Questions can be submitted via the WebEx chat feature



Welcome to the OSEHRA Innovation Webinar

IHS RFI on RPMS Discussion



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Outline

- 1. Why Now?
- 2. Clinical IT situation
- 3. What is RPMS and how is it unique?
- 4. History of RPMS
- 5. Viability of RPMS without VistA
- 6. RPMS and the Open Source Community
- 7. OSEHRA Resources for RPMS



Why Now?

- VA Cerner decision
- Indian Health Service needs a solution that is affordable, maintainable, and meets the unique needs of providing comprehensive care in the most remote areas of the US
- Financial constraints are significant compared to the VHA and DoD
- Support needed for RPMS after ARRA Incentives discontinued
- Opportunity to jumpstart a new way to provide HIT support



Clinical IT situation

- Primary care
 - High vacancy rates; many 'moonlighters'
- Few specialists
- Most hospitals are small, rural, with limited resources
 - Though there are medical centers and they need to be supported also
- Team based care with historical and ongoing commitments to care improvement (e.g. IHI initiative)
- Tracking measures that are principally primary care based (as opposed to SAIL at the VHA)
- Local IT staff is mostly locally hired



What is RPMS?

- A VistA sibling, not child
 - Shares the same infrastructure
 - Different Clinical Applications
- An EHR that is strongly focused on primary and team based care, prevention and health maintenance, and attention to social determinants of health
- Committed to support a longitudinal health record and Population Health
- Needs to meet federal GPRA reporting requirements, as well as, sending data to the National Data Warehouse
- ARRA Stage II Certified



History of RPMS

- IHS started retaining medical records in 1969
- RADEN → PCIS → RPMS
- Early success stories with PCIS included the stopping of the death of infants from gastroenteritis



Lessons from PCIS and RADEN

- + Strong population focus with statistical research
- reliance on mainframe and non-DBMS technology made PCIS too expensive; constant target of cutbacks
- RADEN was difficult to move from its aging platform



Founding Ideas for RPMS

- Decentralized to the point of patient care
- Vendor-independent and portable across hardwares
- More local control over data systems
- Responsive to community and population health needs



RPMS Development

- Stuck to vendor independent platform (Plessy rather than PDP-11; MSM rather than DSM)
- Written and deployed by the clinicians using the system; sometimes the same people doing both jobs (esp Dr. Greg Shorr)
- Strong push to use RPMS with patient care;
 rather than "after the fact" record system.
- The strongest RPMS developers were women



 More on RPMS history can be found on https://www.osehra.org/content/rpms



RPMS Technical Stack

Intersystems Caché on

- MS Windows Servers (majority)
- IBM AIX Servers
- Majority of server code is standard M95
 - Recent exceptions in a handful of packages written in COS
- Clients
 - Windows Applications written in Delphi, C#, and some VB6



Viability of RPMS w/o VistA

- RPMS uses the same infrastructure as VistA, almost completely unmodified.
- RPMS uses many clinical applications from VistA, modifications range from slight (Radiology), to heavy (Pharmacy, TIU), to heaviest (Lab).
- BCMA, VistA Imaging, the Lexicon, ICD/CPT code sets, and the National Drug File are identical.
- More info: <u>http://smh101.com/articles/rpms_vista_convergen</u> <u>ce.html</u>



Viability (cont)

- IHS has always maintained the clinical applications fine on their own with successful delivery of useful software
- But beholden to VA for
 - Infrastructure Code
 - Terminologies
 - Unmodified Applications (e.g. VistA Imaging)



Viability (cont)

- Independent of VistA and VA, RPMS is difficult to configure and support.
 - Requires a lot of expertise
- ARRA legislation burdened IHS with developing and maintaining inconsequential improvements to RPMS (MU II certified now)
- Lack of funding makes keeping-up difficult
- Let's address Politico's comment of "antiquated system"



RPMS in Open Source

- The open source community has always focused on systems that can run hospitals rather than clinics
 - Choose OpenMRS/OpenEMR instead
- Places that implemented RPMS that match IHS in needs (Guam, Samoa, Hawaii, West Virginia)
- Some had to leave it due to lack of support



RPMS in Open Source

- Use of proprietary technologies in the last few years made RPMS open source unfriendly
 - -COS
 - Use of Ensemble
 - Use of Silverlight
- RPMS can be a viable open source EMR, but it needs work to get there



OSEHRA Resources

- ViViaN-R, for exploring RPMS
 - http://code.osehra.org/vivianr/
- Docker image, for running all of FOIA-RPMS
 - https://hub.docker.com/r/osehra/rpms/





Thank You for Attending! Please Join our next Webinar:

February 20, 2018 3:00 PM EST

Blockchain for Health Data and Its Potential Use in Health IT and Health Care Related Research

Presented By: Laure Linn CTO, HyperLinkMed.com