



OSEHRA

Open Source Electronic Health Record Alliance

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

History of RPMS (cont)

- **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

History of RPMS (cont)

- **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

History of RPMS (cont)

- **RPMS Development**

- Stuck to vendor independent platform (Plessey 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

History of RPMS (cont)

- 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:
http://smh101.com/articles/rpms_vista_convergence.html

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/>

Questions?

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