**HL7 Electronic Health Record Work Group**

**Reducing Clinician Burden**

**Conference Call**

**Monday at 1500 ET US for 60 minutes**

**2018-11-05 Minutes**

Presiding Co-chair: Gary Dickinson

Scribe: Dr. Mark Janczewski

***To join the HL7 EHR WG Meeting:***

Audio: Dial: +1 (415) 930-5321; 803-7

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**Attendance:**

* Dr. Michael Brody – EHR WG Co-Chair
* Gary Dickinson – EHR WG Co-Chair
* Dr. Steve Hufnagel – EHR WG Co-Chair
* Dr. Mark Janczewski – EHR WG Co-Chair
* John Ritter – EHR WG Co-Chair
* Dr. Pele Yu – EHR WG Co-Chair
* Liz Amos
* Lisa Anderson
* Calvin Beebe
* Julia Chan
* Gora Datta
* Dr. John Gachago
* Laura Heerman-Langford
* Dr. Mitchell Hilsen
* Dr. Reed Gelzer
* Dr. John Dalton
* Dr. Andy Gettinger
* Dr. Thomas Mason
* Dr. Lisa Masson
* Susan Matney
* Dr. James McClay
* Brian Pech
* Andrea Pitkus
* Scott Robertson
* Dr. David Schlossman
* Dr. James Sorace
* Lynne VanArsdale
* Alpo Värri
* LuAnn Whittenburg
* Danny Williams
* Bjorn-Erik Erlandsson
* Dr. Howard Landa
* Mia Niavera
* Dr. Frank Opelka
* Dr. Barry Newman
* Dr. Rob Hausam
* Dr. Richard Dixon Hughes
* Elizabeth Keller

**Regrets**

* Peter Goldschmidt
* Dr. James Tcheng
* Susan Mattney

**Materials:**

* Updated “Reducing Clinician Burden” slide deck provided by Gary Dickinson
* RCB Analysis Worksheet
1. **Project Overview Slide Deck**:
	1. Gary started by noting that HL7 EHR WG is sponsoring this effort and briefly described HL7 and HL7.
	2. He then discussed survey results that demonstrate the EHR Burden on Physicians
2. 3 out of 4 physicians believe that EHRs increase practice costs, outweighing any efficiency savings
3. 7 out of 10 physicians think that EHRs reduce their productivity
4. 4 in 10 primary care physicians (40%) believe there are more challenges with EHRs than benefits
5. 7 out of 10 physicians (71%) agree that EHRs greatly contribute to physician burnout
6. 6 out of 10 physicians (59%) think EHRs need a complete overhaul
7. Only 8% say the primary value of their EHR is clinically related
	1. He followed this by how we are looing to assess this burden in view of design, usability, regulatory and other processes. Looking at:
		1. Regulatory, operational, administrative, payor mandates
		2. EHR/HIT system design, functionality, usability and implementation
		3. Data quality and usability
	2. Next, Gary reiterated the terms Reduce, Clinician and Burden
	3. Gary then discussed Outreach and the numerous organizations expressing interest in supporting this projects, to include SDOs, international Healthcare community, US Government agenices, Accreditation bodies, and individual clinicians.
	4. Analysis Worksheet Tabs– An Excel® Workbook with 7 tabs. Gary focused on Targeted Recommendations – separated into two columns, “What” (Burden Targeted) and “Who” might best address the Burden. Some the of “What”s and “Who”s include:
8. Standards – HL7, IHE, DICOM, ISO TC215, etc.
9. Regulation and Policies – Government and Accreditation Agencies
10. Claims and Payment Policies - Payers
11. Systems/Software Design – EHR Developers
12. System/Software Implementation – EHR System Implementers
13. Advisories – Professional Societies and Consultants
14. **DISCUSSION**
	1. Lynne Van Arsdale discussed the potential for developing a project proposal and can help develop it. Andy Gettinger noted that ONC is in the process of developing an RFP along these lines; it is still being drafted.
	2. So far, three teams have been formed:
		1. Lock-in, data liquidity, switching costs – Dr. Michael Brody
		2. Clinical Documentation – Dr. Lisa Masson
		3. Clinical Workflow – Dr. David Schlossman
		4. Establish small teams to address burden topics/categories
		5. Refine, develop targeted recommendations to reduce burdens
		6. Identify:
		7. What is the Burden Targeted?
		8. Who might Best Address Burden?
		9. Burdens already tackled: with proposals or with successful solutions
	3. We still need team leaders to help Review the ONC RCB Draft for Comment and refining our RCB terms.
	4. Other things to consider are impacts of our work; for example, what would happen if some burdens were reduced or eliminated.
	5. Project Team Schedules
		1. Semi-monthly schedule, 1st and 3rd Mondays at 3 pm (15 Oct; 5 & 19 Nov; 3 & 17 Dec; 7 Jan)
		2. Continue environmental scan
		3. Continue to compile burden topics
	6. Contacts – Info about the EHR WG Co-Chairs was provided
	7. Document Repository is at: <http://wiki.hl7.org/index.php?title=EHR_Interoperability_WG>
	8. Dr. Lisa Masson started to discuss her team (Clinical Documentation) inititation by posing the question of who the audiences are. She emphasized that we need to maintain scope and not “boil the ocean” as has been stated. She also expressed concern that we need to look at not just functionality but documentation.
	9. Dr. David Schlossman addressed Clinical Workflow. This is a potentially huge area and he proosed that work be focused intiatilly on a specific Use Case, such as a patient with hypertension. Also, we need to focus on a key or “core” dataset for what clinicians need. Dr.Janczewski added comments about the Military Health Service experience about 10 years ago and the 100 Tiger Teams looking at EHR requirements and workflows. David noted we need to consider not contraining ourselves to starting with paper workflows. Barry Newman added a question about how do you gauge the responses of responsible parties, such as vendors, and informatics administrators to addressing these issues, and how do you make this a priority? Frank Opelka added futher comments about modular “digital services” that are outside the EHR but useful.
	10. Lynne van Arsdale added that an idea to consider might be to create a resource such as TRIZ for engineering. TRIZ provides standard methods for resolving engineering contradictions. We might have a "matrix" for addressing workflow burdens created by EHRs -- either changing the EHR or changing the work flow.

**Follow-up messages:**

Begin message:

**From:**Frank Opelka <fopelka@facs.org>

**Subject: Re: "Reducing Clinician Burden" Project - Next Teleconference - Monday, 5 November - 3PM US ET**

**Date:**5 November 2018 at 12:35:52 PST

**To:**Gary Dickinson <gary.dickinson@ehr-standards.com>

Gary,

Very important work. Our efforts as ACS, HSPC and CiiC is to recognize burden, and seek to define the ideal state rather than simply to reduce the burden state. Healthcare has gotten ever increasingly more complex. Patients are on a journey which extends beyond a single transactional, office visit. The question is how to aggregate data across the care continuum and to represent that data in a moment of time, during that single transactional office visit - fit for the end user (be it a primary care, a specialist, a patient, etc).

I disagree with measuring burden against paper. EHRs that have only replaced paper are more burdensome and costly - that's obvious. The burdens come from a transactional business model which no longer fits a longiitudinal clinical model and now tries to fit on a digtial information model.

So, to solve for budern alone could end up in failure if one avoids building a digital information model which maps to the clinical model... which payers should map to business maps (something other than Fee For Service).

All that said, HSPC and CiiC are technology and clinical teams who are building infrastructure for clinical logic models which can turn into computable logic models for FHIR production APIs. Do these efforts fit with your efforts?

Frank

Begin message:

**From:**Alpo Värri <Alpo.Varri@tut.fi>

**Subject: Fwd: HL7 - Reducing Clinician Burden Confirmation**

**Date:**5 November 2018 at 13:43:01 PST

**To:**<mbrody@cmeonline.com>

**Cc:**<gary.dickinson@ehr-standards.com>

There have been relatively large surveys in Finland concerning the user
satisfaction of the clinicians with the EHR systems. None of the systems
have received very high marks.

Reasons listed include (but are not limited to) the following
-technical problems such as too long waiting times, crashes
-need to log in to multiple systems
-interruptions and switching between tasks
-having to document the same things more than once
-shortages in education/training to use digital technology
-limited possibilities to give feedback about the systems in
a way that would lead to improvements

Other factors which do not stem from the EHR systems have an effect on
the EHR user satisfaction, as well:
-the cognitive burden of the work in general
-work satisfaction
-hurry
-problems in relationships among the work team
-problems in the leadership of the unit

These are documented in two publications:

Tarja Heponiemi, Hannele Hyppönen, Tuulikki Vehko, Sari Kujala, Anna-Mari Aalto, Jukka Vänskä, Marko Elovainio. (2017) Finnish physicians stress related to information systems keeps increasing: A longitudinal three wave survey study. BMC Medical informatics and Decision Making 17:147
BMC Med Inform Decis Mak. 2017; 17: 147. Published online 2017 Oct 17. doi:  [10.1186/s12911-017-0545-y]
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5646125/

Tarja Heponiemi, Hannele Hyppönen, Sari Kujala, Anna-Mari Aalto, Tuulikki Vehko, Jukka Vänskä, Marko Elovainio. (2018) Predictors of physicians stress related to information systems: A nine-year follow-up survey study. BMC Health Services Research
BMC Health Serv Res. 2018; 18: 284. Published online 2018 Apr 13. doi:  [10.1186/s12913-018-3094-x]
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5899365/

       Best wishes,
         Alpo
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Associate Prof., Dr.Tech. Alpo Värri
Convener of CEN/TC251/WG II
BioMediTech Institute and Faculty of Biomedical Sciences and Engineering
Tampere University of Technology
P.O. Box 553, FIN-33101 Tampere, Finland
Street address: Korkeakoulunkatu 1, TE308, FIN-33720 Tampere, Finland
Tel. +358-40-8490780, Fax. +358-3-3641352
E-mail: Alpo.Varri@tut.fi, web: http://www.cs.tut.fi/sgn/wgiv/

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Begin message:

**From:**Lynne VanArsdale <lynne.vanarsdale@orthofi.com>

**Subject: Follow up on yesterday's call**

**Date:**6 November 2018 at 11:57:24 PST

**To:**Gary Dickinson <gary.dickinson@ehr-standards.com>

Gary,

Thanks for the opportunity to throw out two ideas on how to forge ahead in addressing EHR burden on clinicians.

The first idea I mentioned was to approach the work as one might approach a research project, an observational study.  The steps would be,

·        Identify specific aims

·        Propose hypotheses for investigation

·        Describe how the hypotheses will be tested (methods)

·        Collect information and apply to hypothesis tests

·        Form conclusions

·        Make recommendations

An example might be:

Research Title: A survey of methods for reducing “Clinician Burden” associated with EHR use

Aims: Explore methods of cataloging clinician burden in ways that identify tradeoffs as well as proven methods of reducing the burden

Hypothesis: Methods in practice today reduce the impact or extent of burden that EHRs put on clinicians who use them.  Reduction in this study is in comparison with

·        The ideal clinician work flow

·        No change in clinician work flow (“the way we used to do it”)

·        The value produced by the work flow modified to use EHRs

Method:

1.      Identify and catalogue types of clinician burden

2.      Compare the burden along the three comparison dimensions:

a.      Ideal clinician work flow

b.      No change in clinician work flow

c.      Value produced by the burden

3.      Identify approaches that reduced burden in any of the three dimensions

4.      Qualify or quantify the reduction for each of the approaches

5.      Recognize patterns that could be identified for general use

The second idea I mentioned was to look at burden much like TRIZ approaches engineering problems. To learn more about TRIZ, this website is helpful: [https://triz.org](https://triz.org/) .  TRIZ is a method of problem solving for innovation that maps contradicting or conflicting requirements to a proven or theoretical solution or solutions.  TRIZ analyses are usually presented as a matrix.  So for instance applying TRIZ to address EHR burden one might map advantages of shared health information to issues in sharing health information (workflow issues, availability, trustworthiness, etc.).

If you think that either of these approaches would be helpful to organize our work, I would be glad to offer additional help, as needed.

Thanks for your consideration,

Lynne VanArsdale

Co-chair ADA SCDI WG 11.1

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Lynne VanArsdale

Product Manager, Integrations

OrthoFi, Inc.

lynne.vanarsdale@orthofi.com

719 659 2444 (mobile