“Reducing Clinician Burden”
Project Overview

Health Level Seven (HL7)
Electronic Health Record Work Group (EHR WG)
8 May 2019
Quantifying the EHR Burden

Surveys Say...

- 3 out of 4 physicians believe that EHRs increase practice costs, outweighing any efficiency savings — Deloitte Survey of US Physicians, 2016
- 7 out of 10 physicians think that EHRs reduce their productivity — Deloitte
- 4 in 10 primary care physicians (40%) believe there are more challenges with EHRs than benefits — Stanford Medicine/Harris Poll, 2018
- 7 out of 10 physicians (71%) agree that EHRs greatly contribute to physician burnout — Stanford/Harris
- 6 out of 10 physicians (59%) think EHRs need a complete overhaul — Stanford/Harris
- Only 8% say the primary value of their EHR is clinically related — Stanford/Harris
- [Physicians express that EHR] systems had detracted from professional satisfaction (54%) as well as from their clinical effectiveness (49%) — Stanford/Harris
Reducing Clinician Burden

Stakeholders

<table>
<thead>
<tr>
<th>WHAT/WHEN – Burden Targeted</th>
<th>WHO – Might Best Address Burden</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Clinical Practice – At Point of Care</td>
<td>Providers, Clinical Professional Societies</td>
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<tr>
<td>In Health Informatics Standards, e.g.</td>
<td>Standards Developers/Profilers:</td>
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<tr>
<td>• EHR System Functional Model/Profiles</td>
<td>• HL7, DICOM, IHE, ISO TC215, NCPDP,</td>
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<tr>
<td>• Messages (HL7 v.2x), Documents (HL7 CDA), Resources (HL7 FHIR)</td>
<td>ASC X12N, SNOMED...</td>
</tr>
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<td>• Implementation Guides (C-CDA, IPS)</td>
<td>Standards Coordinating Bodies</td>
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<tr>
<td>• Vocabulary</td>
<td>• Joint Initiative Council</td>
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<tr>
<td>In Regulation, Policies</td>
<td>Government, Accreditation Agencies</td>
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<td>In Claims, Payment Policies</td>
<td>Public and Private Payers</td>
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<tr>
<td>During System/Software Design</td>
<td>EHR/HIT System Developers/Vendors</td>
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<tr>
<td>During System/Software Implementation</td>
<td>EHR/HIT System Implementers</td>
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Reducing Clinician Burden

Defining Terms (DRAFT)

<table>
<thead>
<tr>
<th>Reducing (reduce)</th>
<th>Clinician</th>
<th>Burden</th>
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</table>
| • “To bring down, as in extent, amount, or degree; diminish”, and “To gain control of... [to] conquer”, and “To simplify the form of... without changing the value”, also “To restore... to a normal condition or position” – The Free Dictionary | • “A health professional whose practice is based on direct observation and treatment of a patient” – Mosby’s Medical Dictionary  
  • “An expert clinical practitioner and teacher” – Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health  
  • “A health professional, such as a physician, psychologist, or nurse, who is directly involved in patient care” – American Heritage Medical Dictionary | • “A source of great worry or stress”, and “[Something that] cause[s] difficulty [or] distress”, also “To load or overload” – The Free Dictionary  
  • “Something that is carried, [as in a] duty [or] responsibility”, also “Something oppressive or worrisome” – Merriam-Webster Dictionary |
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Defining Terms (DRAFT)

| Clinician Burden | Anything that hinders patient care, either directly or indirectly [such as]:
|                  | 1) Undue cost or loss of revenue,
|                  | 2) Undue time,
|                  | 3) Undue effort,
|                  | 4) Undue complexity of workflow,
|                  | 5) Undue cognitive burden,
|                  | 6) [Uncertain quality/reliability of data/record content,]
|                  | 7) Anything that contributes to burnout, lack of productivity, inefficiency, etc.,
|                  | 8) Anything that gets in the way of a productive clinician-patient relationship.
|                  | -- Peter Goldschmidt |
How physicians use their computers
Percent of time spent per day by EHR task category

- Clerical (documentation, order entry, etc.), 44%
- Medical care (chart review, etc.), 32%
- Inbox management, 24%

Source: Health Data Management
Average characters per ambulatory progress note in U.S. and international health systems.

Source: Annals of Internal Medicine – Physician Burnout in the Electronic Health Record Era: Are We Ignoring the Real Cause? N Lance Downing MD, David W Bates MD MSc, Christopher A Longhurst MD MS, 8 May 2018
Reducing Clinician Burden

Burden Sometimes leads to Burnout

• “‘Physician burnout’ has skyrocketed to the top of the agenda in medicine. A 2018 Merritt Hawkins survey found a staggering 78% of doctors suffered symptoms of burnout, and in January [2019] the Harvard School of Public Health and other institutions deemed it a ‘public health crisis.’”

From: Physician stress and burnout: the impact of health information technology
From: Physician stress and burnout: the impact of health information technology
I'll be right back with your health data

Here you go...
Reducing Clinician Burden

Assessing the Burden

• Our primary focus is on clinician burdens including time and data quality burdens associated with:
  • Use/engagement of EHR/HIT systems
  • Capture, exchange and use of health information
• Considering:
  • Clinical practice – at the point of care
  • Regulatory, accreditation, administrative, payor mandates
  • EHR/HIT system design, functionality, usability and implementation
  • Data quality and usability
• Gather details from many reference sources:
  • Trade publications, professional society journals, articles, studies, personal experience
• Our goal is not to boil the ocean, rather to understand the substance and extent of the burden, to recognize root causes and identify success stories.
### Reducing Clinician Burden – Breaking It Down

#### Topics/Categories

1.1) Clinician Burden – In General
1.2) Clinician Burnout – Sometimes the Result
2) Patient Safety (and Clinical Integrity)
3) Administrative tasks
4) Data entry requirements
5) Data entry scribes and proxies
6) **Clinical documentation**: quality and usability
7) Prior authorization, coverage verification, eligibility tasks
8) Provider/patient face to face interaction
9) Provider/patient communication
10) Care coordination, team-based care
11) **Clinical work flow**
12) Disease management, care and treatment plans
13) Clinical decision support, medical logic, artificial intelligence
14) Alerts, reminders, notifications, inbox management
15) Information overload
16) Transitions of care
17) Health information exchange, claimed “interoperability”
18) Medical/personal device integration
19) Orders for equipment and supplies
20) Support for payment, claims and reimbursement
21) Support for cost review
22) Support for measures: administrative, operations, quality, performance, productivity, cost, utilization
23) Support for public and population health
24) **Legal aspects and risks**
25) User training, user proficiency
26) Common function, information and process models
27) Software development and improvement priorities, end-user feedback
28) Product transparency
29) Product modularity
30) Lock-in, data liquidity, switching costs
31) Financial burden
32) Security
33) Professional credentialing
34.1) Identity matching
34.2) Identity and credential management
35) **Data quality and integrity**
36) Process integrity
37.1) Problem list
37.2) Medication list
37.3) Allergy list
37.4) Immunization list
37.5) Surgery, intervention and procedure list
Reducing Clinician Burden

Project Plan

• Now
  • Continue environmental scan – to document burdens
  • Engage focus teams to address burden topics
  • Focus on root causes
    • What is the problem and its source?
    • Why did it happen?
    • What will be done to prevent it from happening (now and in the future)?
      • Who (stakeholder(s)) might best address burden?
    • Have burden(s) already been tackled?
      • Are there RCB proposals and/or successful solutions that can be referenced?

• Then
  • Publish findings and work to implement solutions
Reducing Clinician Burden

Focus Teams

• Clinical documentation, quality and usability
  • Lead: Dr. Lisa Masson (lisa.masson@cshs.org)
• Clinical decision support, medical logic, artificial intelligence + Alerts, reminders, notifications, inbox management + Information overload
  • Lead: Dr. James McClay (jmcclay@unmc.edu)
• Clinical workflow
  • Lead: Dr. David Schlossman (dschloss39@gmail.com)
• Legal aspects and risks
  • Lead: Dr. Barry Newman (barrynewman@earthlink.net)
• System lock-in, data liquidity, switching costs
  • Lead: Dr. Michael Brody (mbrody@tldsystems.com)
• State of data content quality
  • Leads: Dr. Reed Gelzer (r.gelzer@trustworthyehr.com)
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Focus Teams (con’t)

• Process is open, transparent and inclusive – All are welcome!
• Anticipated: More teams to form (convened on RCB topics)
• To participate: Contact team lead(s)
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Additional Considerations

• What are the risks if burden is not reduced?
  • e.g., clinician burnout, clinicians choosing other roles/assignments

• If clinician burdens are reduced...
  • Are burdens increased elsewhere (e.g., to other members of the healthcare team)?
  • Are benefits to other aspects of the health/healthcare business model also reduced?
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Schedule

• Bimonthly teleconferences, Monday at 3PM ET (US)
  • 1st and 3rd Mondays each month
    20 May, 3 June, 17 June, 1 July (TBD), 15 July
  • [https://global.gotomeeting.com/meeting/join/798931918](https://global.gotomeeting.com/meeting/join/798931918)

• Face-to-Face
  • HL7 May Working Group Meeting: Montreal, Quebec, Canada
  • Wednesday, 8 May 2019, 1:45 – 5 PM ET (US/Canada)
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Contact

• Comments on the DRAFT analysis worksheet are welcome (including additional reference sources) and should be addressed to the HL7 EHR WG Co-Chairs:
  • Gary Dickinson FHL7, Lead: gary.dickinson@ehr-standards.com
    CentriHealth/UnitedHealth Group
  • Michael Brody DPM: mbrody@tldsystems.com
    TLD Systems
  • Stephen Hufnagel PhD: stephen.hufnagel.hl7@gmail.com
    Apprio Inc
  • Mark Janczewzki MD: mark.janczewski@gmail.com
    Medical Networks LLC
  • John Ritter FHL7: johnritter1@verizon.net
  • Pele Yu MD: pele.yu@archildrens.org
    Arkansas Children’s Hospital/University of Arkansas
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Reference Points

• Latest Project Documents – New Project Wiki
  • Project Overview
  • DRAFT RCB Analysis Worksheet
  • Links to Reference Sources
  • Links to Success Stories

• Comments may also be directed to:
  • US Centers for Medicare/Medicaid Services (CMS)
    reducingproviderburden@cms.hhs.gov
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Outreach + Expressed Interest

• Standards Developers
  • Joint Initiative Council (JIC), comprising HL7, ISO TC215 (HIT/International), CEN TC251 (HIT/Europe), DICOM (Diagnostic Imaging), CDISC (Clinical Research), GS1 (IDs/Labeling), SNOMED (Clinical Vocabulary), IHE (Standards Profiling)

• International Healthcare Community
  • Australia, Canada, Chile, Finland, Italy, Netherlands, New Zealand, Poland, Sweden, United Kingdom

• Government
  • US Centers for Medicare and Medicaid Services (CMS)
  • US Office of National Coordinator for HIT (ONC)
  • US National Institutes of Health (NIH)
  • US Veterans Administration (VA)
  • UK National Health Service (NHS)

• Accreditation Bodies
  • Joint Commission

• Clinical Professional Societies
  • American College of Physicians (ACP)
  • American College of Surgeons (ACS)
  • American Medical Informatics Association (AMIA)
  • American Nurses Association (ANA)

• Providers
  • Adventist Health, Beth Israel/Deaconess, Cedars-Sinai Medical Center, Duke University, Intermountain Healthcare, Kaiser Permanente, Loma Linda University, Mayo, Sutter Health, University of Arkansas, University of Nebraska, VA

• Payers
  • UnitedHealth Group

• EHR/HIT System Developers
  • CentriHealth, Cerner, Epic, TLD Systems

• Consortia
  • Health Record Banking Alliance
  • Health Services Platform Consortia
  • Clinical Information Interoperability Council
Reducing Clinician Burden

Analysis Worksheet – Tabs

1. Burdens
2. Time Burdens
3. Data Quality Burdens
4. Clinician Stories
5. Terms: Reducing, Clinician, Burden
6. Root Causes
7. Reference Sources
8. Leads: EHR WG Co-Chairs
9. Acknowledgements: Reviewers + Contributors
10. RCB Topics
Reducing Clinician Burden

Analysis Worksheet

First Tab – Burdens - Columns
B) Clinician Burdens (the current situation) – Raw Input
C) Recommendations – Raw Input
D) Reference Sources
E) Targeted RCB Recommendation(s) – refined from our reference (and other) sources
F) RCB Proposals and Successful Solutions

8 May 2019