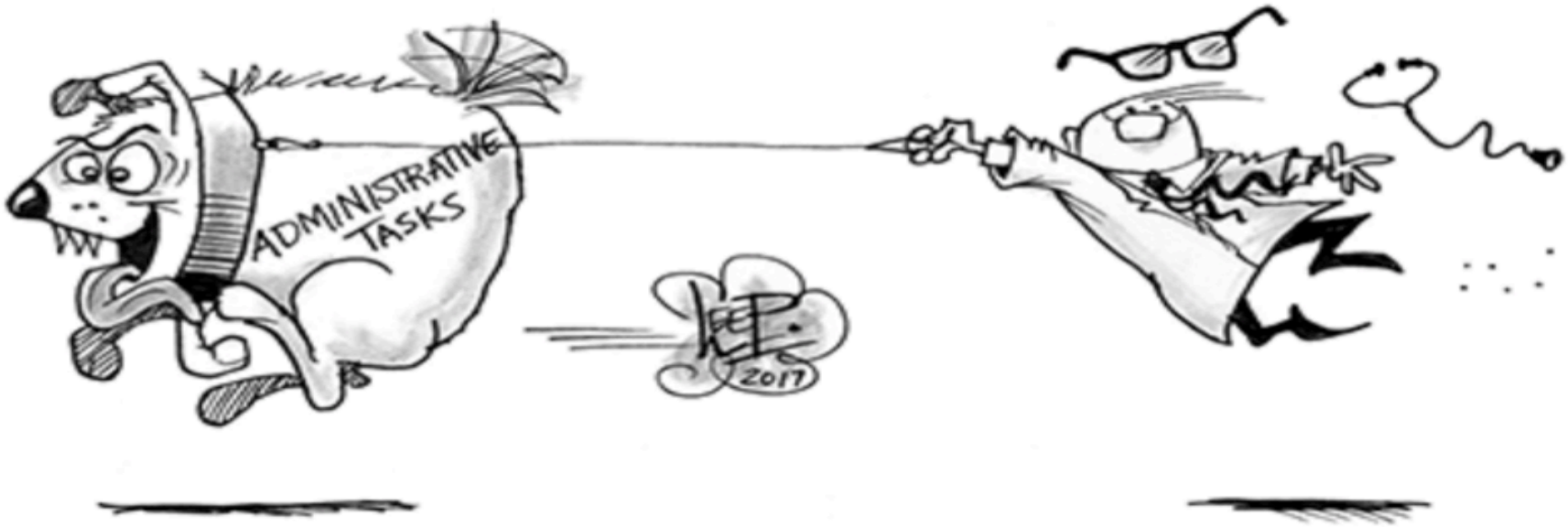
“Reducing Clinician Burden” Project Overview

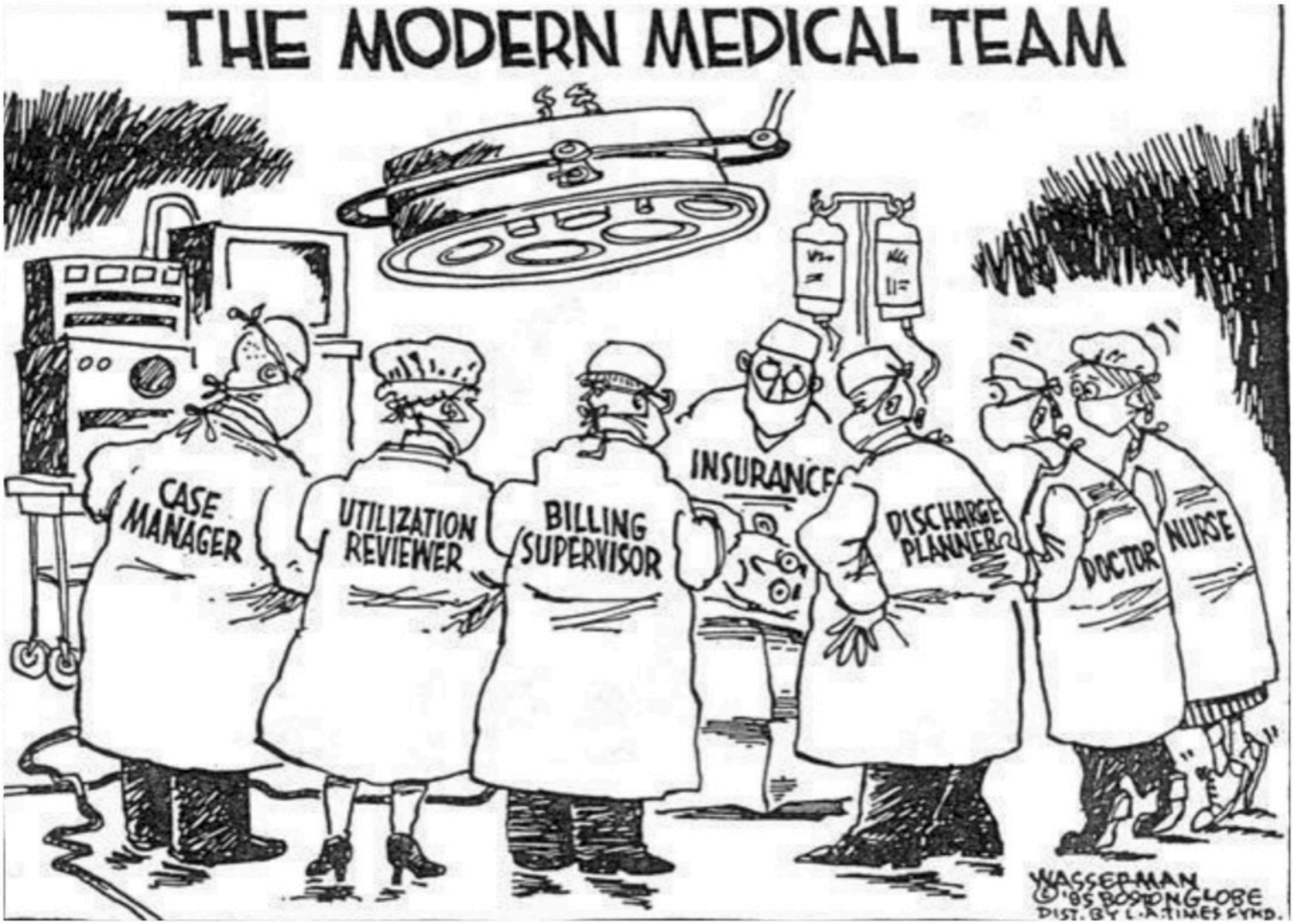
Health Level Seven (HL7)
Electronic Health Record Work Group (EHR WG)
3 June 2019


ADMINISTRATIVE TASKS
2017

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


THE MODERN MEDICAL TEAM
CASE MANAGER
UTILIZATION REVIEWER
BILLING SUPERVISOR
INSURANCE
DISCHARGE PLANNER
DOCTOR
NURSE
WASSERMAN
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Reducing Clinician Burden

Stakeholders

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

Reducing Clinician Burden

Defining Terms (DRAFT)

Reducing (reduce)	• “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 • “To lower in... intensity” – Dictionary.com • “To narrow down”, also “To bring to a specified state or condition” – Merriam-Webster
Clinician	• “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
Burden	• “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

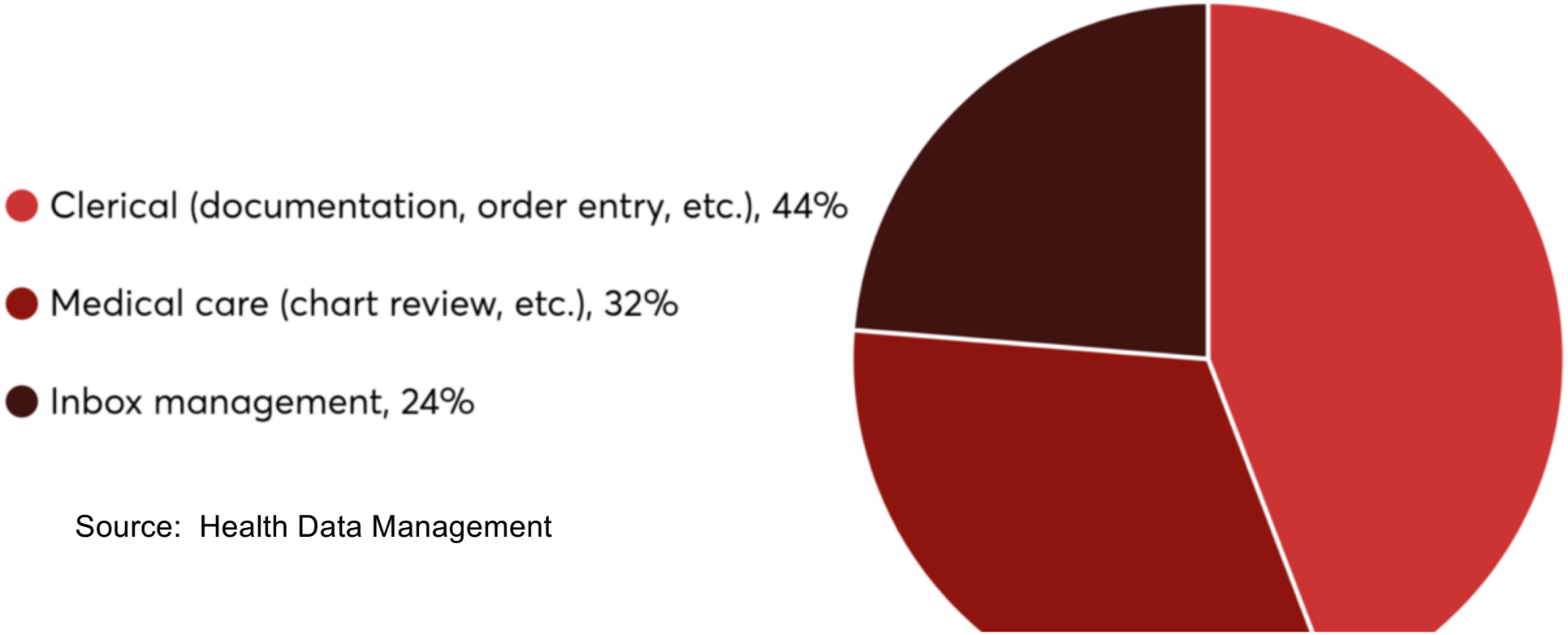
Reducing Clinician Burden

Defining Terms (DRAFT)

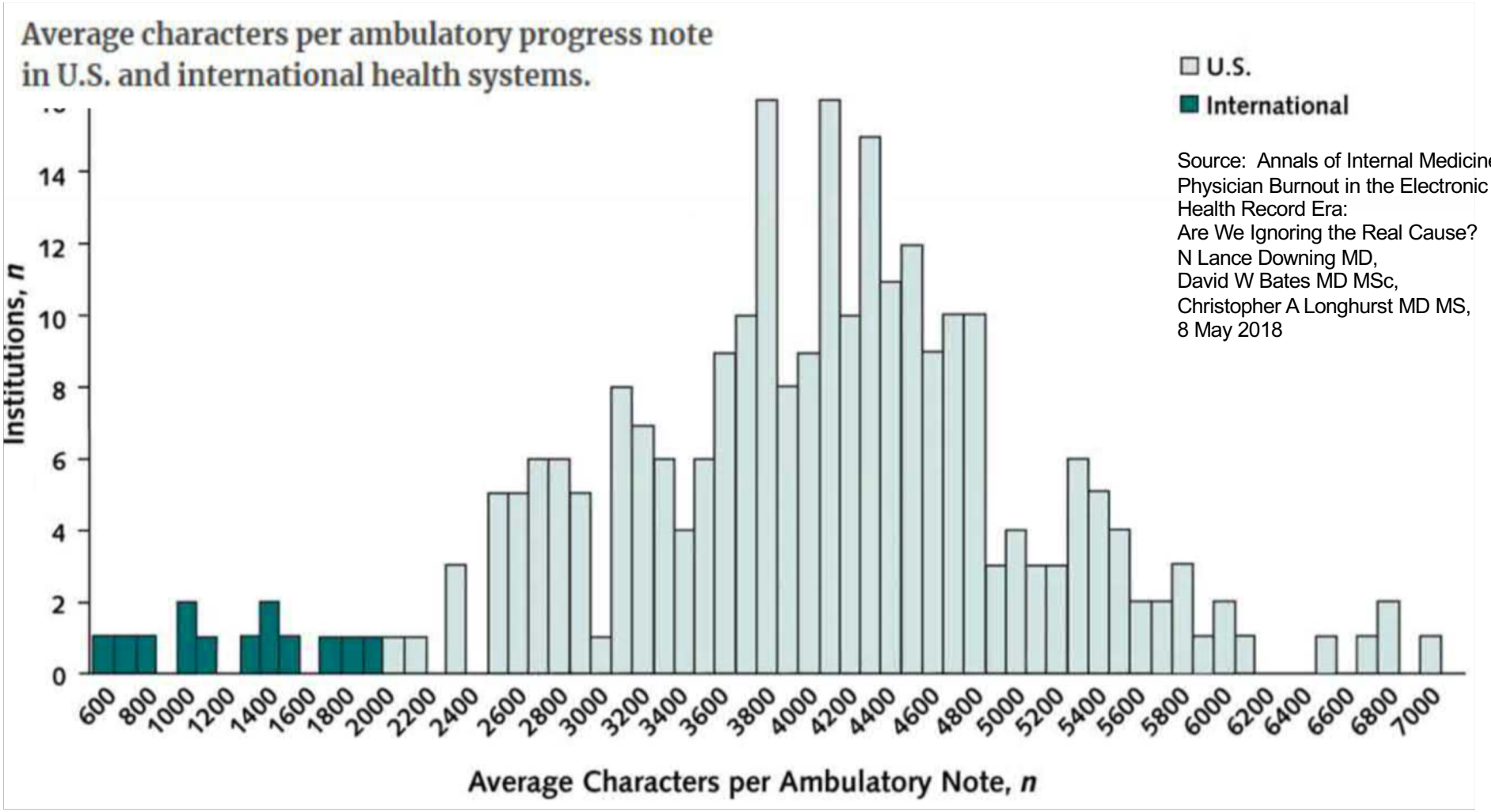
Clinician Burden	Anything that hinders patient care, either directly of indirectly [such as]: 1) Undue cost or loss of revenue, 2) Undue time, 3) Undue effort, 4) Undue complexity of workflow, 5) Undue cognitive burden, 6) [Uncertain quality/reliability of data/record content,] 7) Anything that contributes 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



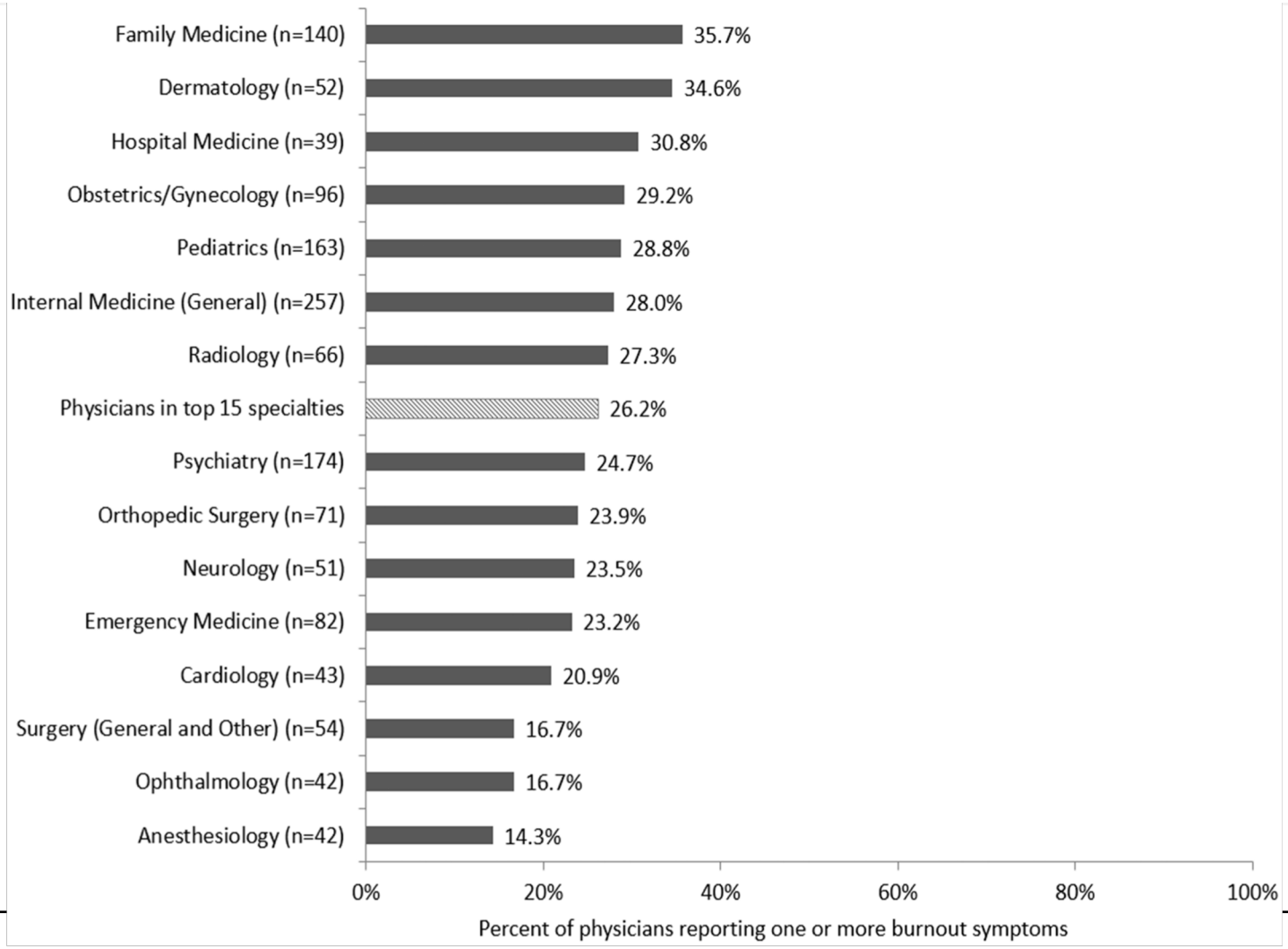
Source: Health Data Management



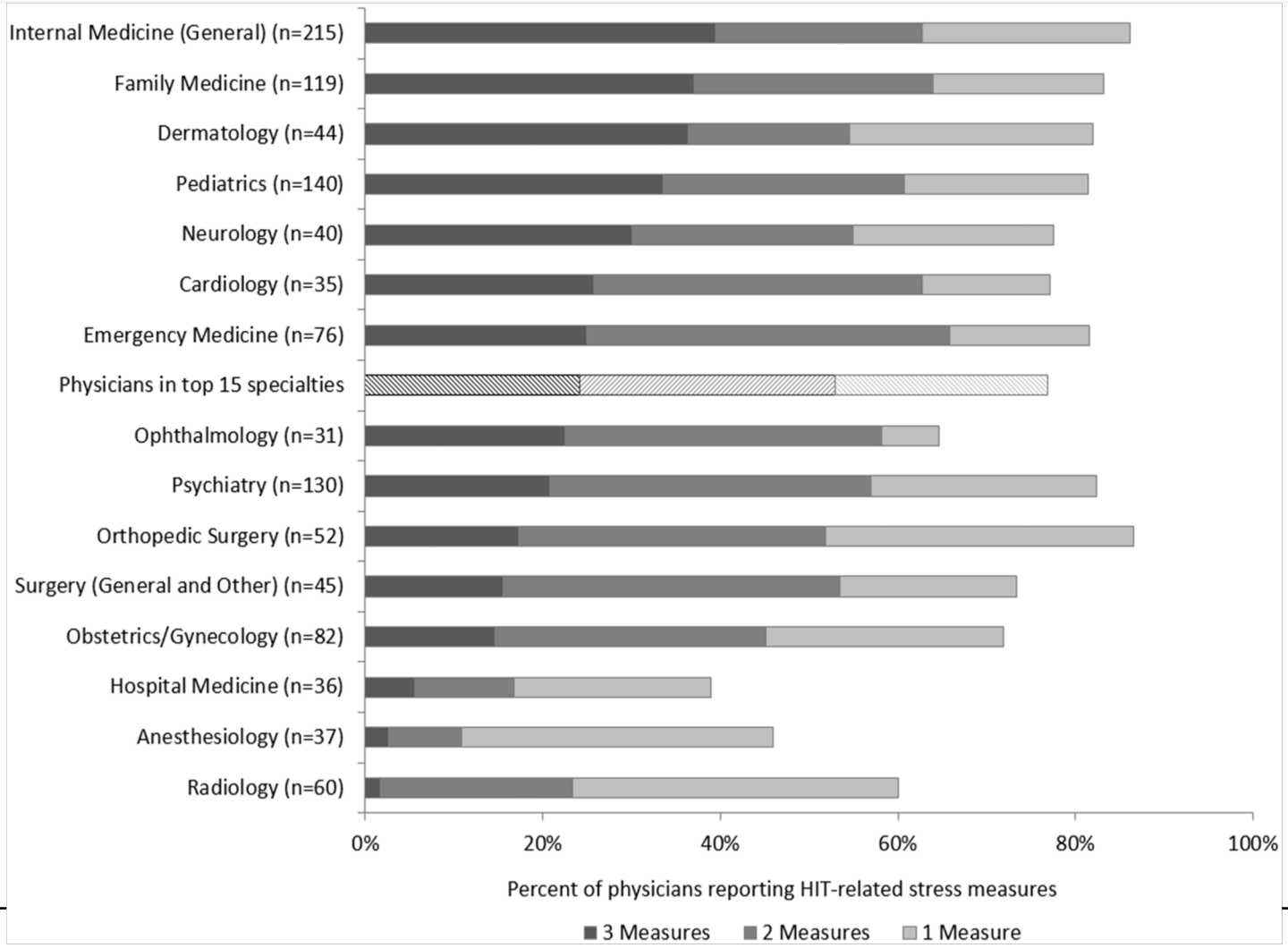
Source: Annals of Internal Medicine – Physician Burnout in the Electronic Health Record Era:
Are We Ignoring the Real Cause?
N Lance Downing MD,
David W Bates MD MSc,
Christopher A Longhurst MD MS,
8 May 2018

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.'"
- Fortune and Kaiser Health News: "Death by a Thousand Clicks: Where Electronic Health Records Went Wrong", Erika Fry and Fred Schulte, published 18 Mar 2019



From: Physician stress and burnout: the impact of health information technology
J Am Med Inform Assoc. 2018;26(2):106-114. doi:10.1093/jamia/ocy145



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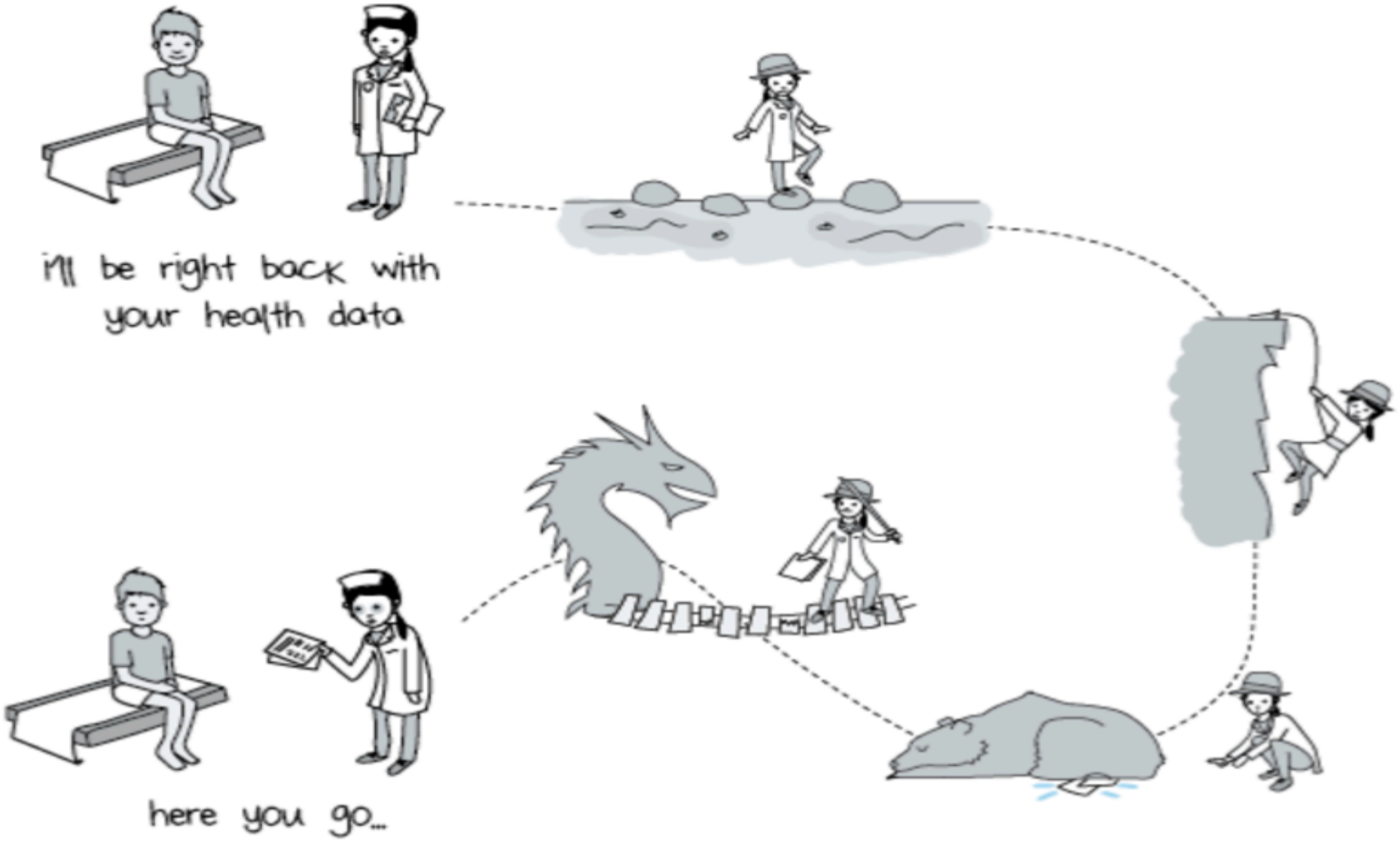
i'll be right back with your health data
here you go...

Reducing Clinician Burden Project

Overview

- Is a formal project of the HL7 EHR Work Group
- Has an extensive list of active participants and followers
- Is oriented to both US and international interests
- Has undertaken an extensive review of reference sources to document the substance and extent of clinician burden
- Continues work to identify root causes in each RCB topic area (not just EHR system functionality and usability issues - although that is important)
- Is looking for success stories specifically addressing burden reduction
- Intends to use our findings as part of the foundation (and springboard) for EHR-S FM Release 3
- Will influence future directions for HL7 (beyond the EHR WG, e.g., Da Vinci), JIC, ISO TC215, SNOMED and other standards development efforts

Reducing Clinician Burden Project

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 success stories that can be referenced?
- Then
  - Publish findings and work to implement solutions

Reducing Clinician Burden Project

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)

Reducing Clinician Burden Project

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?
  - What is the trade-off: Safety? Cost? Time? Efficiency? Effectiveness?

Reducing Clinician Burden

Success Stories

1. Duke Heart Business Unit – Procedure Reporting
   James Tcheng MD, Duke University
2. Burnout: How EHR Usability Improves Efficiency & Satisfaction
   Greta Branford MD, University of Michigan (presented 15 April 2019)
3. Benefits of SNOMED CT from a clinical perspective, The Rotherham experience
   Monica Jones, NHS Rotherham Foundation Trust (UK) (scheduled 1 July 2019)
4. Getting Time Back in Your Day! Implementing a Multi-Faceted Approach to Optimizing Epic in the Ambulatory Setting (scheduled 15 July 2019)
   Jeff Tokazewski MD, Carole Rosen, Shane Thomas, University of Pennsylvania
5. Well-Being Playbook, A Guide for Hospital and Health System Leaders
   American Hospital Association

[more to come...]

Reducing Clinician Burden Project

Reference Points

- Project Documents – New Project Wiki
  - http://bit.ly/reducing_burden
  - Project Overview
  - DRAFT RCB Analysis Worksheet
  - Reference Sources
  - Success Stories: http://bit.ly/RCB_success
- Comments may also be directed to:
  - US Centers for Medicare/Medicaid Services (CMS) reducingproviderburden@cms.hhs.gov

Reducing Clinician Burden Project

Schedule

- Bimonthly teleconferences, Monday at 3PM ET (US)
  - 1st and 3rd Mondays each month
    3/17 June, 1/15 July, 5/19 August
  - https://global.gotomeeting.com/meeting/join/798931918
- Face-to-Face
  - HL7 September Working Group Meeting: Atlanta, Georgia, USA
  - Wednesday, 18 September 2019, 1:45 – 5 PM ET (US/Canada)

Reducing Clinician Burden Project

Contact

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  CentriHealth/UnitedHealth Group
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  MedInfoDoc LLC

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- 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

Reducing Clinician Burden Project

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, Norway, 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 Isreal/Deaconess, Cedars-Sinai Medical Center, Duke University, Intermountain Healthcare, Kaiser Permanente, Loma Linda University, Mayo, Sutter Health, University of Arkansas, University of Nebraska, University of Michigan, University of Pennsylvania, US Veterans Administration
- 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