

# “Reducing Clinician Burden” Project Overview

Health Level Seven (HL7)  
Electronic Health Record Work Group (EHR WG)  
1 April 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



## Reducing Clinician Burden Stakeholders

WHAT/WHEN – Burden Targeted	WHO – Might Best Address Burden	
In Clinical Practice – At Point of Care	Providers, Clinical Professional Societies	
In Health Informatics Standards, e.g. <ul style="list-style-type: none"> <li>• HL7 EHR System Functional Model and Profiles</li> <li>• Messages (HL7 v.2x), Documents (HL7 CDA), Resources (HL7 FHIR)</li> <li>• Implementation Guides (C-CDA, IPS)</li> </ul>	Standards Developers/Profilers: <ul style="list-style-type: none"> <li>• <a href="#">HL7</a>, DICOM, IHE, ISO TC215, NCPDP, ASC X12N...</li> </ul> Standards Coordinating Bodies <ul style="list-style-type: none"> <li>• Joint Initiative Council</li> </ul>	
In Regulation, Policies	Government, Accreditation Agencies	
In Claims, Payment Policies	Public and Private Payers	
During System/Software Design	EHR/HIT System Developers/Vendors	
During System/Software Implementation	EHR/HIT System Implementers	

With Engaged Clinicians

## Reducing Clinician Burden

# Defining Terms (DRAFT)

Reducing (reduce)	<ul style="list-style-type: none"><li>• “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</li><li>• “To lower in... intensity” – Dictionary.com</li><li>• “To narrow down”, also “To bring to a specified state or condition” – Merriam-Webster</li></ul>
Clinician	<ul style="list-style-type: none"><li>• “A health professional whose practice is based on direct observation and treatment of a patient” – Mosby's Medical Dictionary</li><li>• “An expert clinical practitioner and teacher” – Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health</li><li>• “A health professional, such as a physician, psychologist, or nurse, who is directly involved in patient care” – American Heritage Medical Dictionary</li></ul>
Burden	<ul style="list-style-type: none"><li>• “A source of great worry or stress”, and “[Something that] cause[s] difficulty [or] distress”, also “To load or overload” – The Free Dictionary</li><li>• “Something that is carried, [as in a] duty [or] responsibility”, also “Something oppressive or worrisome” – Merriam-Webster Dictionary</li></ul>

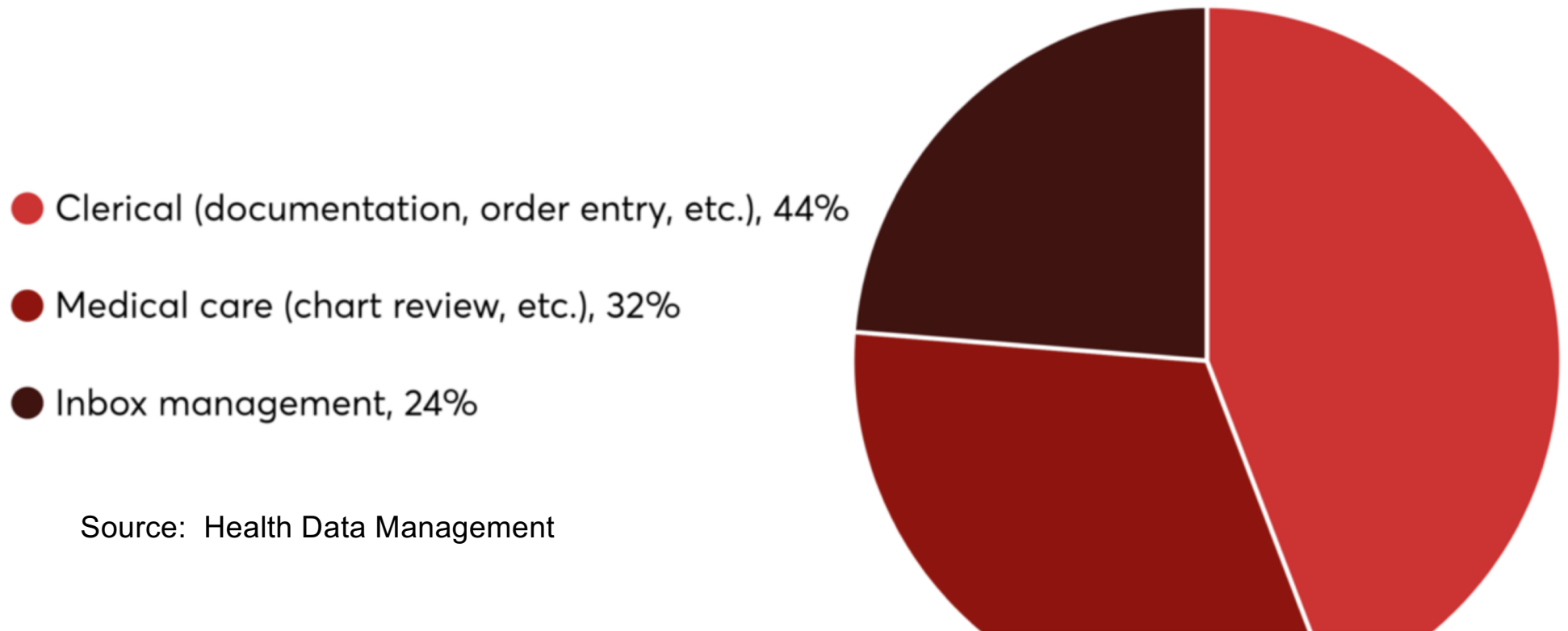
## Reducing Clinician Burden

# Defining Terms (DRAFT)

<b>Clinician Burden</b>	<p>Anything that hinders patient care, either directly or indirectly [such as]:</p> <ol style="list-style-type: none"><li>1) Undue cost or loss of revenue,</li><li>2) Undue time,</li><li>3) Undue effort,</li><li>4) Undue complexity of workflow,</li><li>5) Undue cognitive burden,</li><li>6) [Uncertain quality/reliability of data/record content,]</li><li>7) Anything that contributes to burnout, lack of productivity, inefficiency, etc.,</li><li>8) Anything that gets in the way of a productive clinician-patient relationship.</li></ol> <p>-- Peter Goldschmidt</p>
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# How physicians use their computers

Percent of time spent per day by EHR task category

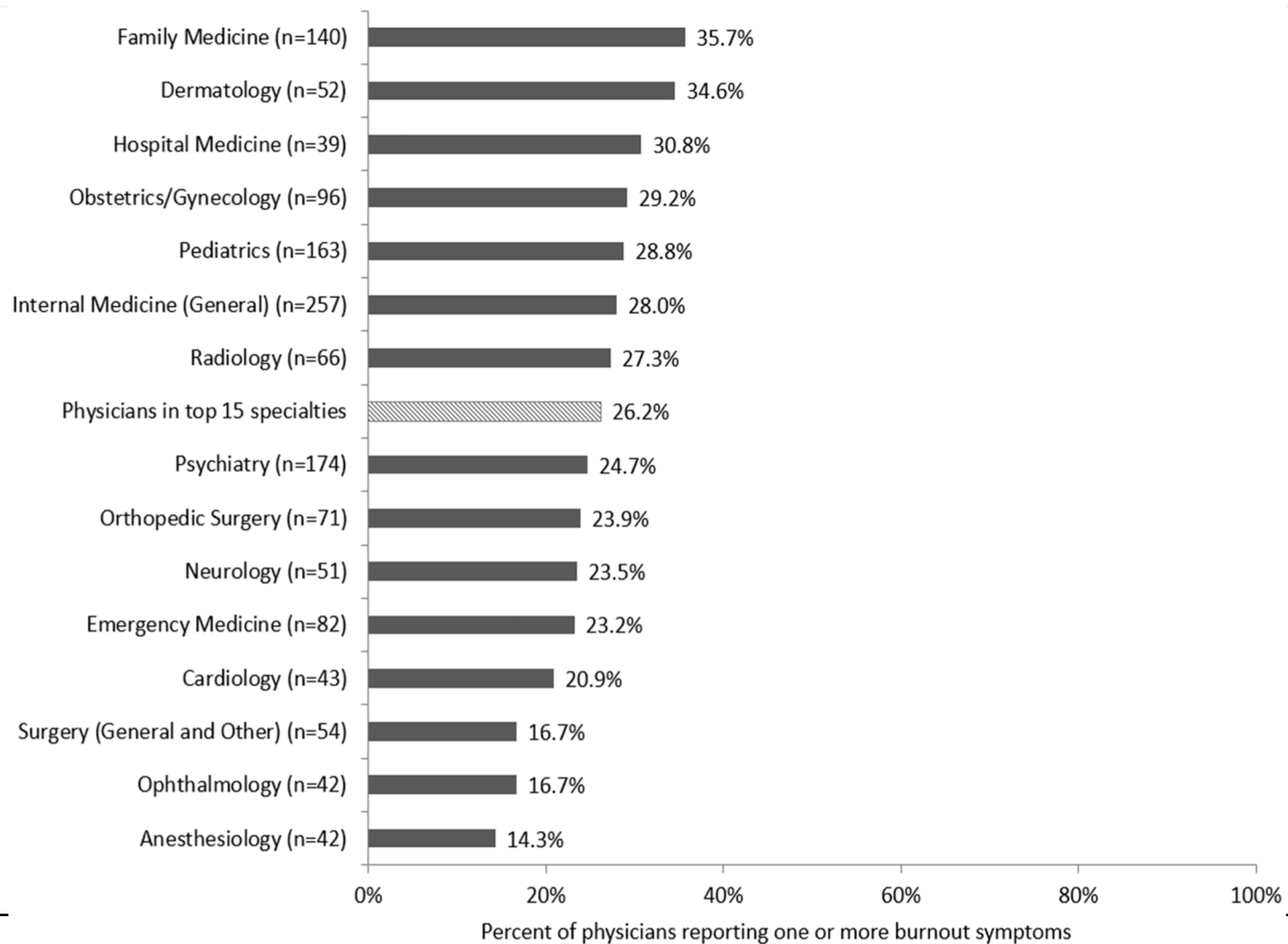


Source: Health Data Management

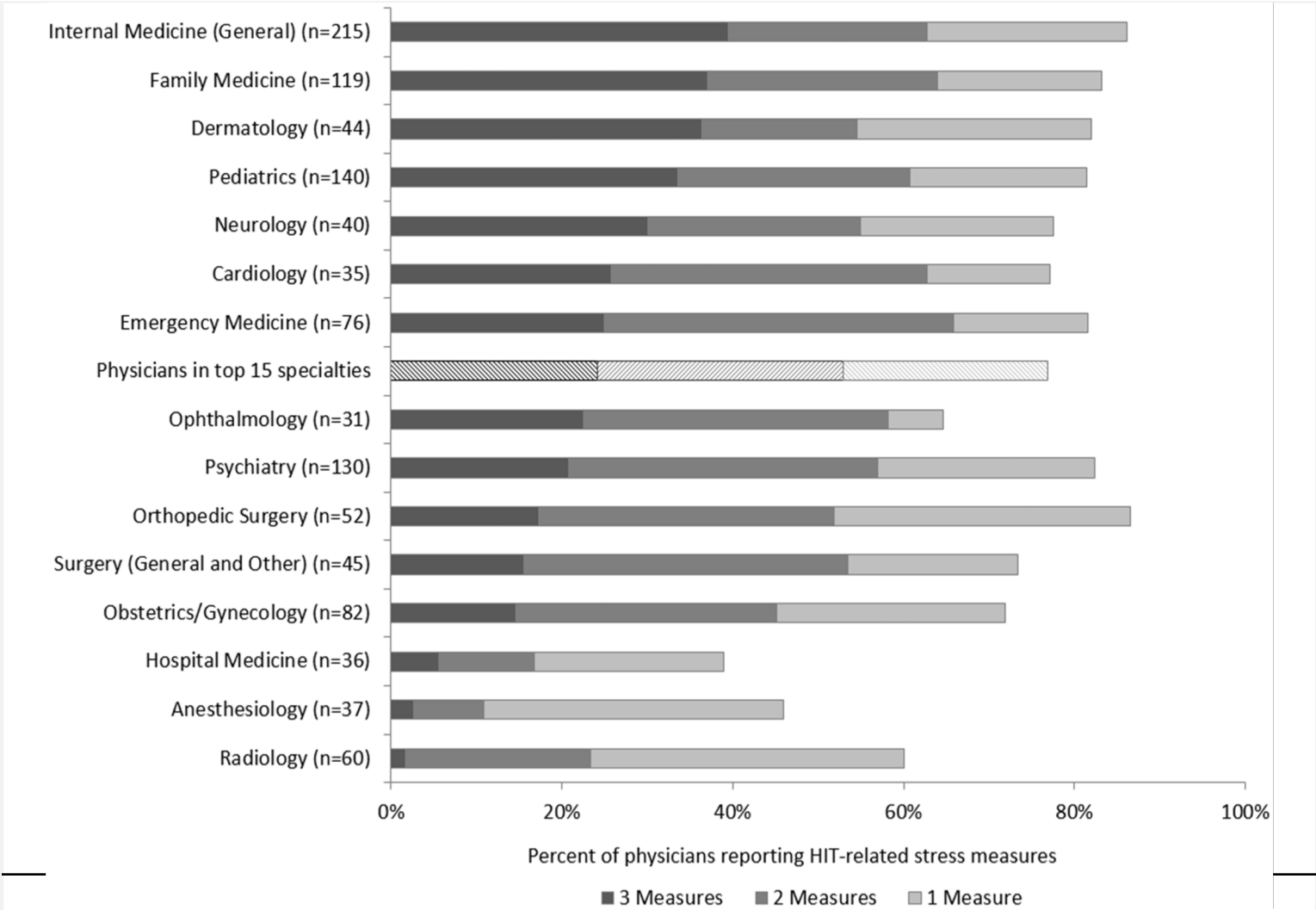
# Burden often leads to Burnout

- In recent years, “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.”
- One of the coauthors of the Harvard study, Ashish Jha, pinned much of the blame on “the growth in poorly designed digital health records ... that [have] required that physicians spend more and more time on tasks that don’t directly benefit patients.”
- [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](#)



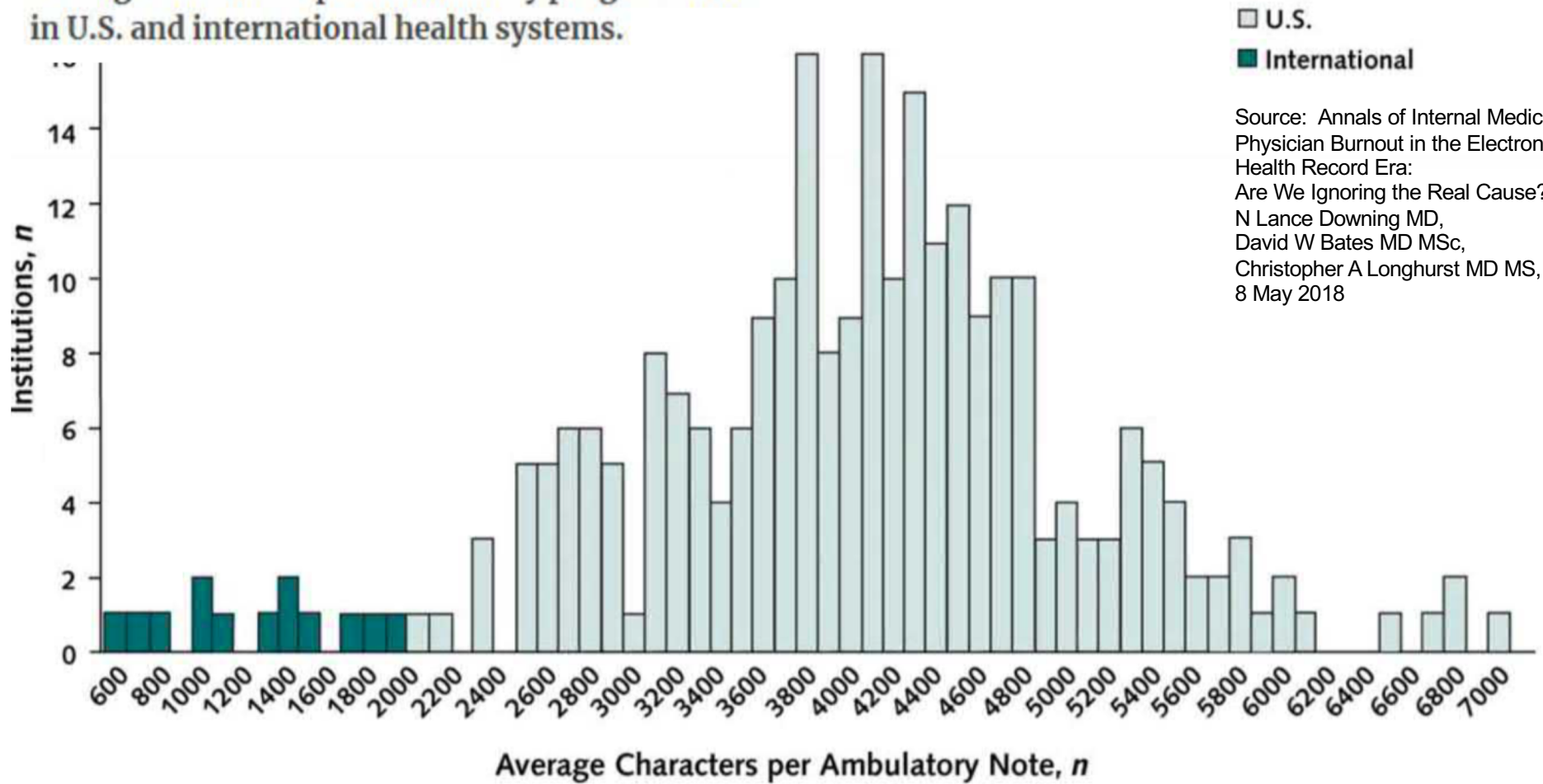


From: Physician stress and burnout: the impact of health information technology  
 J Am Med Inform Assoc. 2018;26(2):106-114. doi:10.1093/jamia/ocy145



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## Average characters per ambulatory progress note in U.S. and international health systems.



## 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) Generally
- 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 compile burden topics
  - 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@cs.hs.org](mailto:lisa.masson@cs.hs.org))
- Clinical decision support, medical logic, artificial intelligence + Alerts, reminders, notifications, inbox management + Information overload
  - Lead: Dr. James McClay ([jmccclay@unmc.edu](mailto:jmccclay@unmc.edu))
- Clinical workflow
  - Lead: Dr. David Schlossman ([dschloss39@gmail.com](mailto:dschloss39@gmail.com))
- Legal aspects and risks
  - Lead: Dr. Barry Newman ([barrynewman@earthlink.net](mailto:barrynewman@earthlink.net))
- System lock-in, data liquidity, switching costs
  - Lead: Dr. Michael Brody ([mbrody@tldsystems.com](mailto:mbrody@tldsystems.com))
- State of data content quality
  - Leads: Dr. Reed Gelzer ([r.gelzer@trustworthyehr.com](mailto:r.gelzer@trustworthyehr.com))

Reducing Clinician Burden

## 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)



# 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

# Schedule

- Bimonthly teleconferences, Monday at 3PM ET (US)
  - 1st and 3rd Mondays each month  
1 April, 15 April, **NOT 6 May**, but then again on 20 May
  - <https://global.gotomeeting.com/meeting/join/798931918>
- Next Face-to-Face
  - HL7 May Working Group Meeting: Montreal, Quebec, Canada
  - Wednesday, 8 May 2019, 1:30 – 5 PM ET (US/Canada)
  - Meeting Registration:  
<http://www.hl7.org/events/working%5Fgroup%5Fmeeting/2019/05/>
- Focus teams meet independently: TBA

## Reducing Clinician Burden

# 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](mailto:gary.dickinson@ehr-standards.com)  
CentriHealth/UnitedHealth Group
  - Michael Brody DPM: [mbrody@tldsystems.com](mailto:mbrody@tldsystems.com)  
TLD Systems
  - Stephen Hufnagel PhD: [stephen.hufnagel.hl7@gmail.com](mailto:stephen.hufnagel.hl7@gmail.com)  
Apprio Inc
  - Mark Janczewski MD: [mark.janczewski@gmail.com](mailto:mark.janczewski@gmail.com)  
Medical Networks LLC
  - John Ritter FHL7: [johnritter1@verizon.net](mailto:johnritter1@verizon.net)
  - Pele Yu MD: [pele.yu@archildrens.org](mailto:pele.yu@archildrens.org)  
Arkansas Children's Hospital/University of Arkansas

## Reducing Clinician Burden

# Reference Points

- Latest Project Documents
  - Project Overview
  - DRAFT RCB Analysis Worksheet
  - Links to Reference Sources
  - Links to Success Stories
  - [http://www.bit.ly/Reducing\\_Burden](http://www.bit.ly/Reducing_Burden)
- Comments may also be directed to:
  - US Centers for Medicare/Medicaid Services (CMS)  
[reducingproviderburden@cms.hhs.gov](mailto:reducingproviderburden@cms.hhs.gov)

Reducing Clinician Burden

# Analysis Worksheet – Tabs

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

## Reducing Clinician Burden Project

# Outreach + Expressed Interest

- Standards Developers
  - Joint Initiative Council (JIC), comprising HL7, ISO TC215 (HIT), CEN TC251 (HIT/Europe), DICOM (Diagnostic Imaging), CDISC (Clinical Research), GS1 (IDs/Labeling), SNOMED (Clinical Vocabulary), IHE (Standards Profiling), PCHCA (Personal Connectivity)
- International Healthcare Community
  - Australia, Canada, Finland, Italy, Netherlands, New Zealand, 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