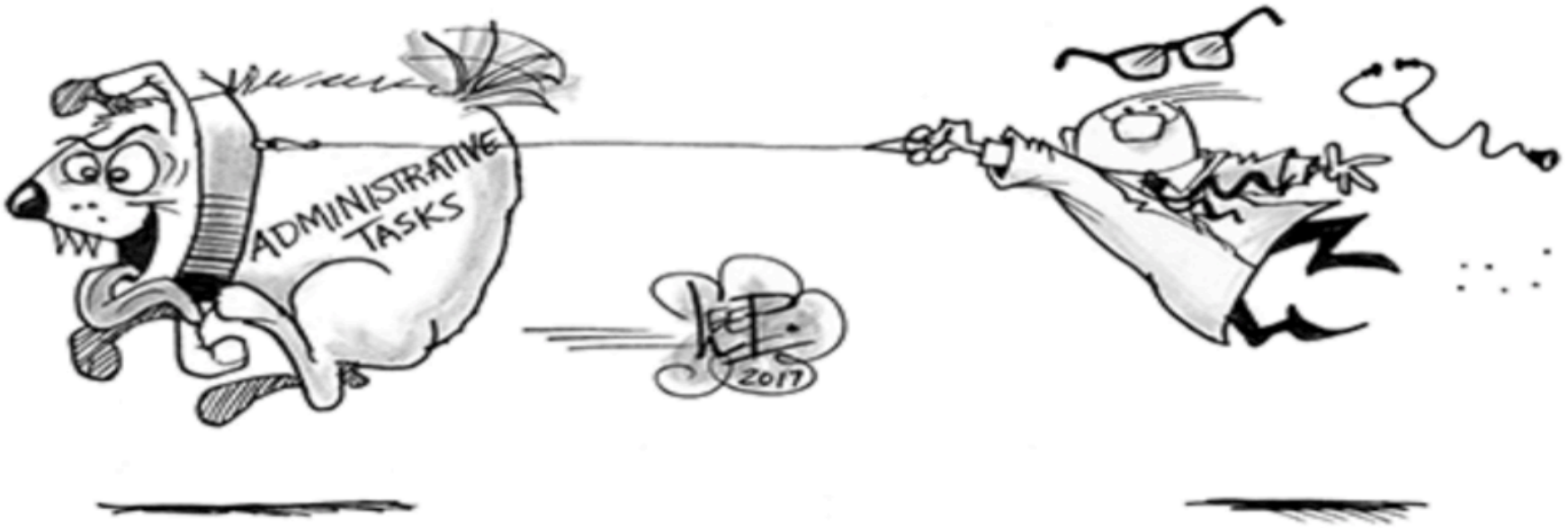
“Reducing Clinician Burden” Project Overview

Health Level Seven (HL7)
Electronic Health Record Work Group (EHR WG)
6 January 2020


ADMINISTRATIVE TASKS
2017

Quantifying the EHR Burden

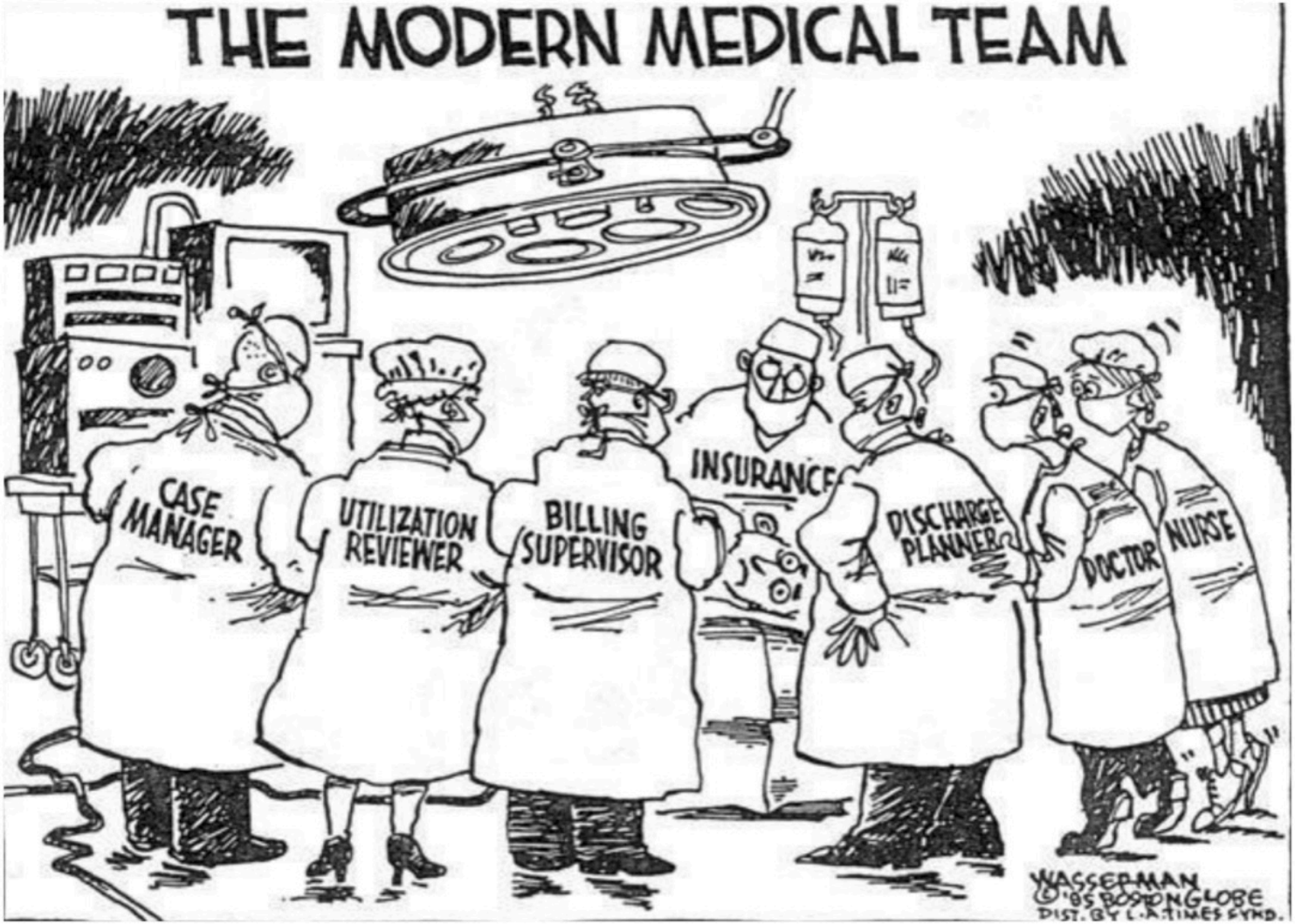
Surveys Say...

- 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

Quantifying the EHR Burden

Few Clinicians Involved in EHR Decision

- "No other industry... has been under a universal mandate to adopt a new technology before its effects are fully understood, and before the technology has reached a level of usability that is acceptable to its core users." – New England Journal of Medicine, Transitional Chaos or Enduring Harm? The EHR and the Disruption of Medicine, 22 Oct 2015
- "Many clinicians know what they want — but haven't been asked... Our biggest mistake lies not in adopting clunky systems but in dismissing the concerns of the people who must use them." – Ibid.
- "Few physicians and nurses were involved in the decision-making process of which EHR to implement in their workplace. Of physician participants, 66 percent said they had no input, 28 percent had input... Of nurse and [advance practice nurse] participants, 80 percent said they had no input, 18 percent had input..." – Becker's Healthcare - [Survey finds] Nearly half of physicians think EHRs have decreased quality of care, 1 May 2019
- "Of the physician and nurse/APRN participants who had input in choosing their workplace's EHR system, just 2 percent said the system they wanted was chosen." – Ibid.


THE MODERN MEDICAL TEAM
CASE MANAGER
UTILIZATION REVIEWER
BILLING SUPERVISOR
INSURANCE
DISCHARGE PLANNER
DOCTOR
NURSE
WASSERMAN
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Quantifying the EHR Burden

EHRs Co-Opted for Other Purposes

- "Although the original intent behind the design of EHRs was to facilitate patient management and care, the technology largely has been co-opted for other purposes.
  - "Payers see the EHR as the source of billing documentation.
  - "Health care enterprises see it as a tool for enforcing compliance with organizational directives.
  - "The legal system sees the EHR as a statement of legal facts.
  - "Public health entities see it as a way to use clinicians to collect their data at drastically reduced costs.
  - "Measurement entities see the EHR as a way to automate the collection of measure data, reducing their reliance on chart abstraction.
  - "Governmental entities see it as a way to observe and enforce compliance with regulations.

"All these impositions on EHR systems have created distractions from their potential value in supporting care delivery... The ability of these systems to support care delivery will not improve unless physicians and others who deliver care insist that the functions needed by clinicians and their patients take priority over non-clinical requirements."

– American College of Physicians, Putting Patients First by Reducing Administrative Tasks... 2 May 2017

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, ISO TC215, DICOM, IHE, 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

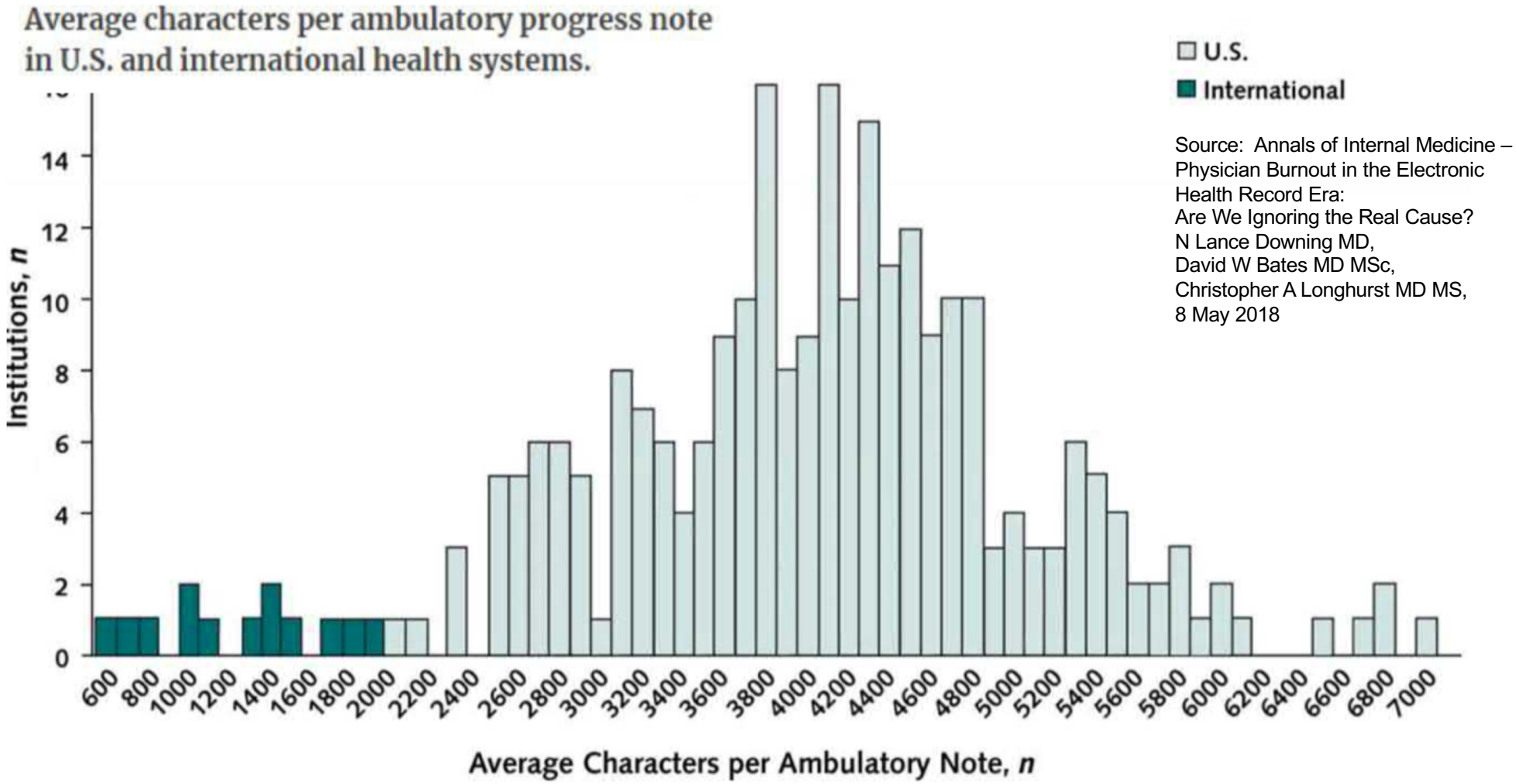
Defining Terms (DRAFT)

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



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 Can Lead 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

SPOK CLINICIAN BURNOUT SURVEY RESULTS AT-A-GLANCE

A public health crisis

92% of clinicians called burnout "a public health crisis."

Contributing factors

90% of clinicians believe increased and ineffective technology contributes to risk of clinician burnout.

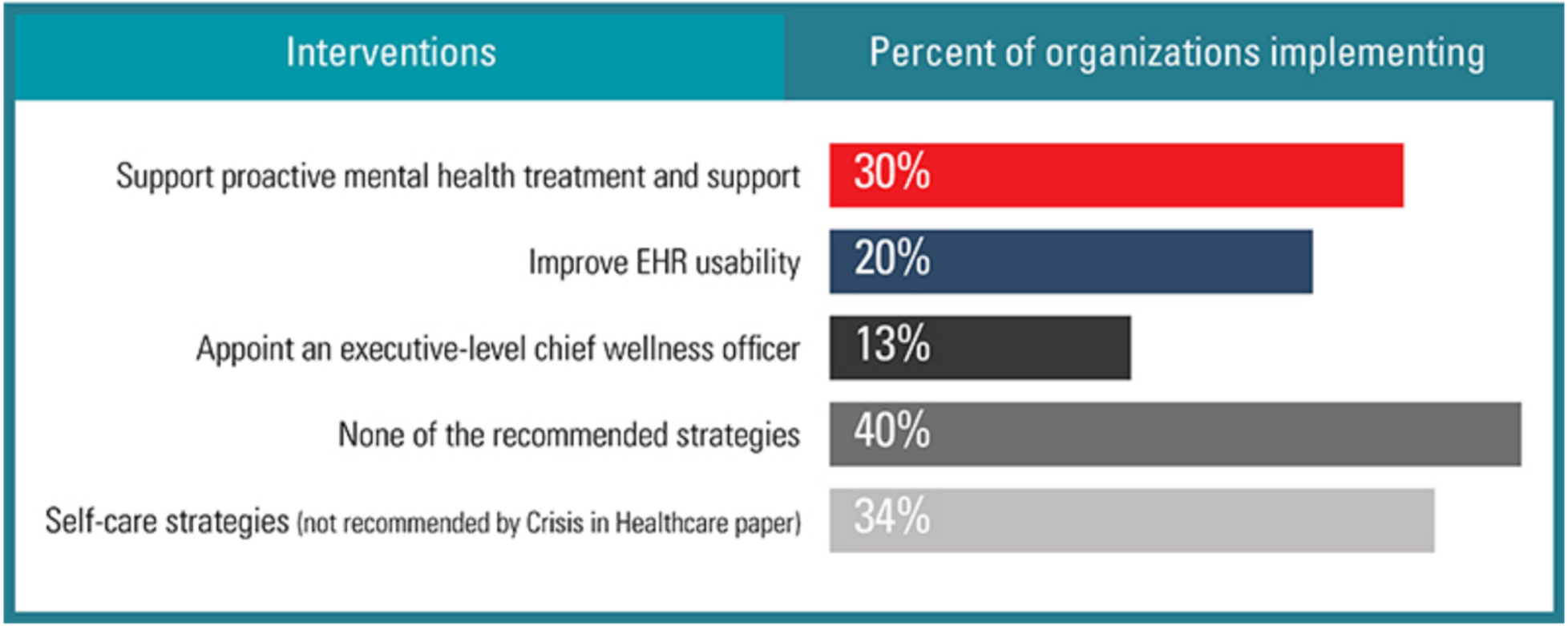
EHR usability and change

95% of clinicians believe improving electronic health record usability will be at least somewhat helpful, with 27% reporting it will be "extremely helpful."

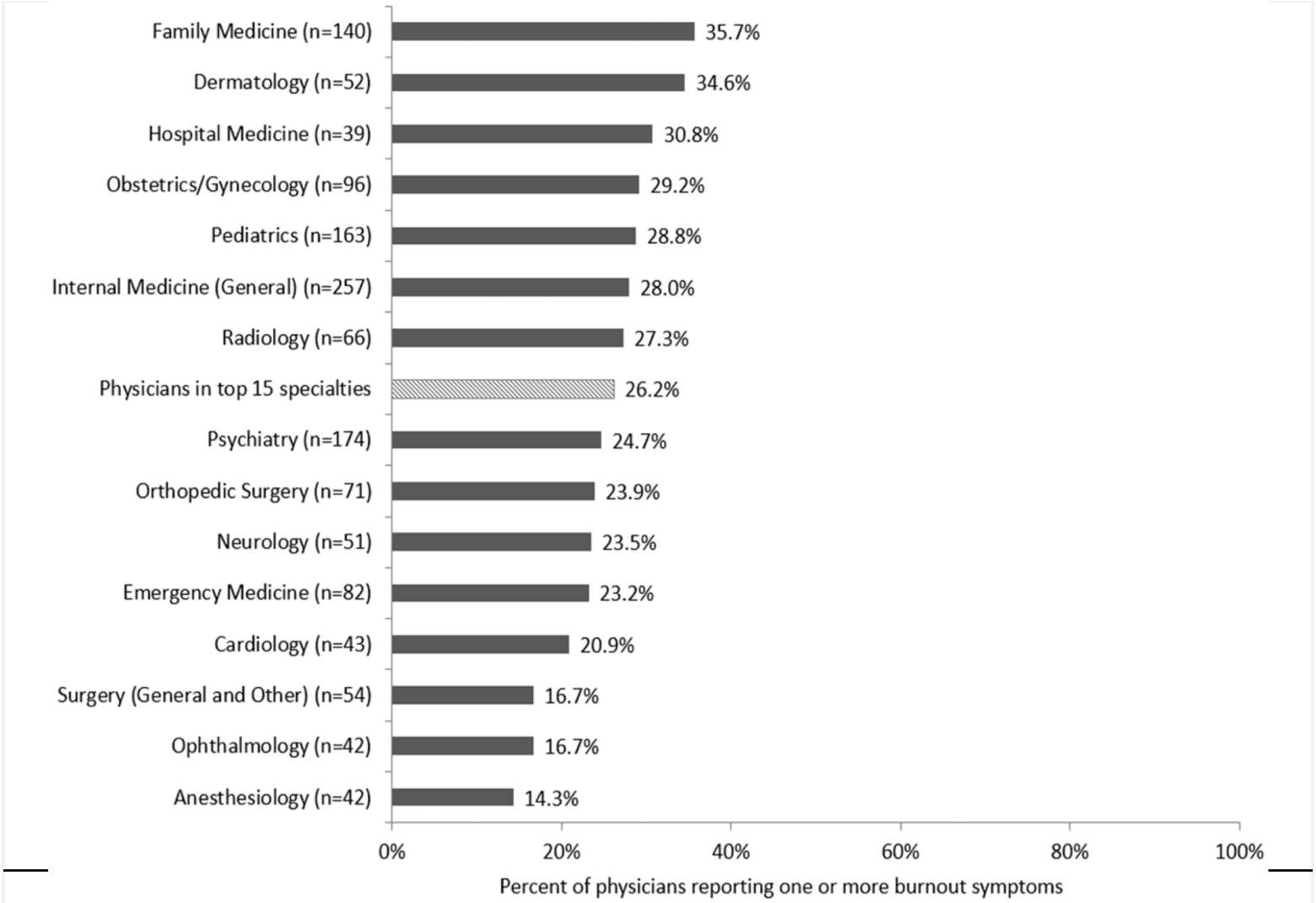
Seeking help

65% of clinicians say they are prevented from seeking help for symptoms of burnout because their organization lacks institutional attention and resources.

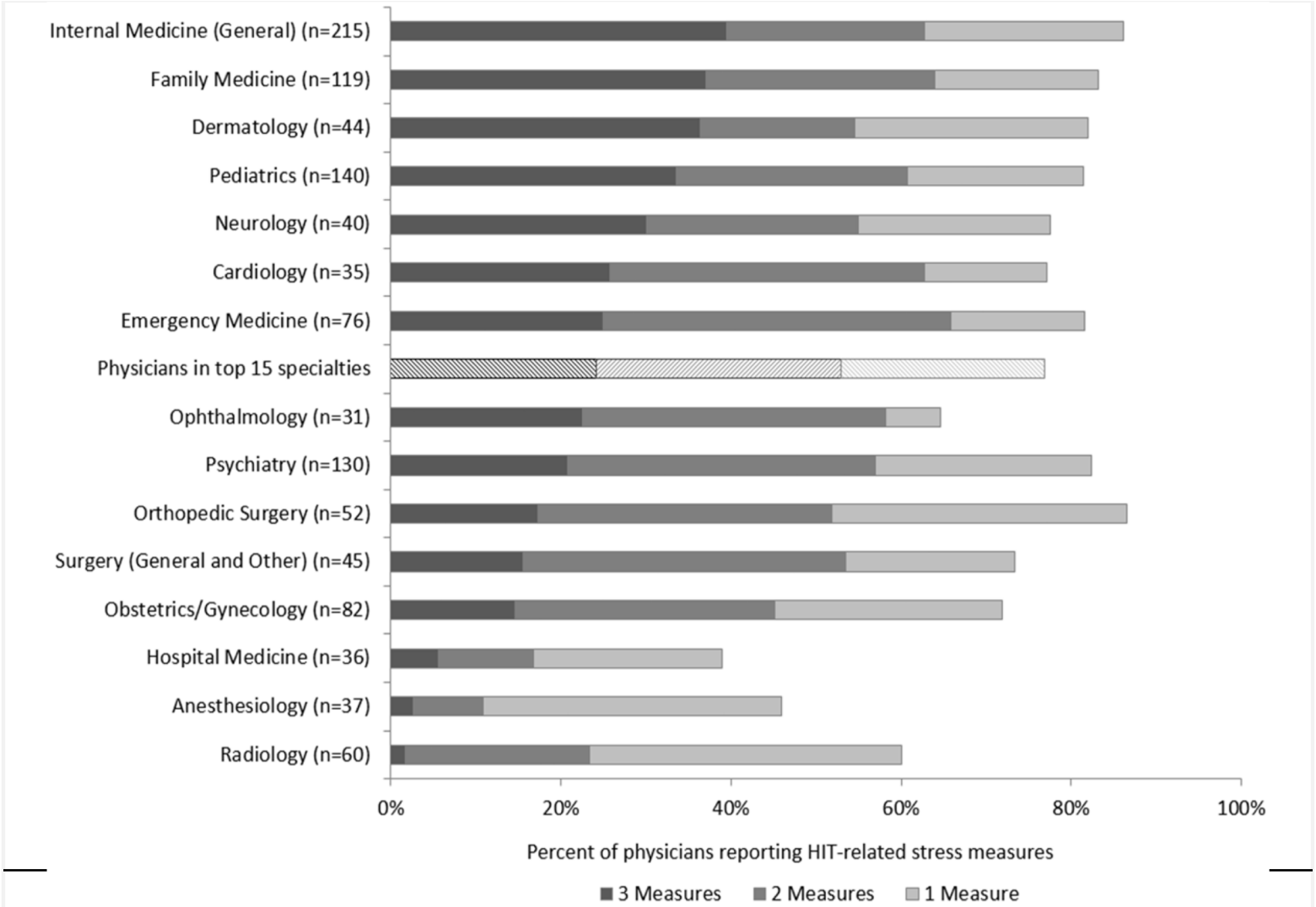
Source: SPOK - Clinician Burnout in Healthcare



Source: SPOK - Clinician Burnout in Healthcare



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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Reducing Clinician Burden Project

Overview

- In 2018, “Reducing Clinician Burden” became a formal project of the HL7 EHR Work Group
- Is open and collaborative – oriented to US and international interests
- Our primary focus is on *clinician burden including time & 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
- Has undertaken an extensive review of reference sources *to document the substance, impact and extent of clinician burden*
  - Trade publications, professional society journals, articles, studies, personal experience

Reducing Clinician Burden Project

Assessing the Burden

- Continues work to identify root causes in each RCB topic area (not limited to EHR system functionality and usability issues - although that is important)
  - 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?
- 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 R3*
- Will influence future directions for HL7 and other standards development efforts
- Our goal is not to boil the ocean, rather to understand the substance and extent of the burden, to recognize root causes and to identify success stories.

Reducing Clinician Burden – Breaking It Down

Topics/Categories

1) Clinician Burden – In General
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) Identity matching and management
35) Data quality and integrity
36) Process integrity
37) List Management (problems, medications, immunizations, allergies, surgeries, interventions and procedures)

Blue = Focus Teams Formed

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)

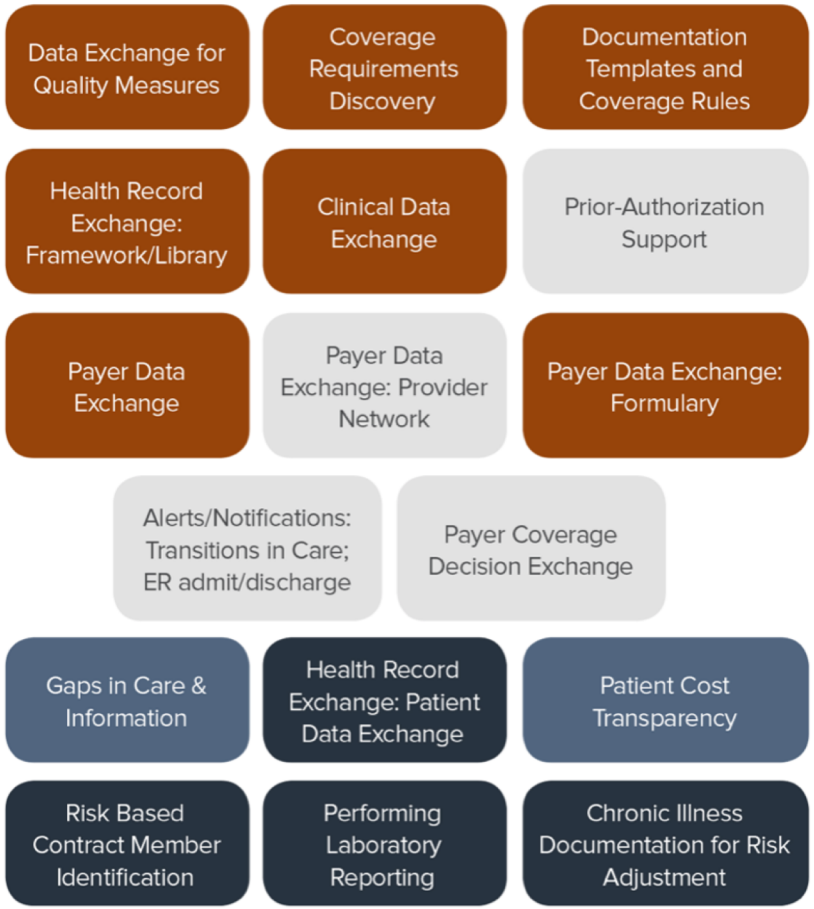
Reducing Clinician Burden

Success Stories

1. Reducing Clinician Burden: Cardiovascular Procedure Reporting at Duke
   James Tcheng MD, Duke University
2. "Home for Dinner" - Reducing After Hours Documentation with Focused Training
   Greta Branford MD, University of Michigan
3. Benefits of SNOMED CT from a clinical perspective, The Rotherham experience
   Monica Jones, NHS Rotherham Foundation Trust (UK)
4. Getting Time Back in Your Day! Implementing a Multi-Faceted Approach to Optimizing Epic in the Ambulatory Setting
   Jeff Tokazewski MD, Carole Rosen, Shane Thomas, University of Pennsylvania
5. Well-Being Playbook, A Guide for Hospital and Health System Leaders
   Elisa Arespacochaga, American Hospital Association
6. Understanding the Impact of the EHR on Physician Burnout and Wellness
   Christopher Sharp MD, Lindsay Stevens MD, Stanford University/Stanford Health Care
7. SPRINT – An Organizational Strategy that Increases Satisfaction, Improves Teamwork and Reduces Burnout
   Amber Sieja MD, University of Colorado School of Medicine, UCHealth

HL7 Da Vinci Project

2019 USE CASE INVENTORY & STATUS



PROJECT PROCESS

Define requirements (technical, business and testing)

- Create Implementation Guide
- Create and test Reference Implementation (prove the guide works)
- Pilot the solution
- Deploy the solution

- In Ballot Process through HL7
- Targeted for September Ballot
- In Discovery targeted for HL7 January Ballot
- Use cases in discovery (some may be balloted in January 2020)

Source: HL7

Reducing Clinician Burden Project

Standards Focused on Burden

- HL7 Da Vinci Project – Provider ←→ Payer Communication
  - Coverage Determination
  - Pre Authorization
- HL7 EHR System Usability Functional Profile
  - Functions and Conformance Criteria to Enhance System Usability
  - Passed ballot, preparing for publication
- ISO/HL7 10781 EHR System Functional Model, Release 3
  - In early design/development stage
- International Patient Summary
  - Joint between HL7, CEN TC251 (Europe) and ISO TC215

Reducing Clinician Burden Project

Materials

- Project Documents – Project Website
  - http://bit.ly/reducing_burden
  - Project Overview, Presentations
  - DRAFT RCB Analysis Worksheet
  - Reference Sources
  - Success Stories

Reducing Clinician Burden Project

Schedule

- Bimonthly teleconferences, Monday at 3PM ET (US/Canada)
  - 1st and 3rd Mondays each month
    6 and 20 January 2020, 17 February 2020
  - https://global.gotomeeting.com/meeting/join/798931918
- Face-to-Face
  - 6 February – Sydney Australia – HL7 Working Group Meeting

Reducing Clinician Burden Project

Contacts

Co-Facilitators:

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  EHR Standards Consulting
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  Arkansas Children's Hospital/University of Arkansas

Reducing Clinician Burden Project

Comments to US Federal Government

- Comments may also be directed to:
  - US Centers for Medicare/Medicaid Services (CMS) reducingproviderburden@cms.hhs.gov

Reducing Clinician Burden Project

Analysis Worksheet – Tabs

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

Reducing Clinician Burden Project

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