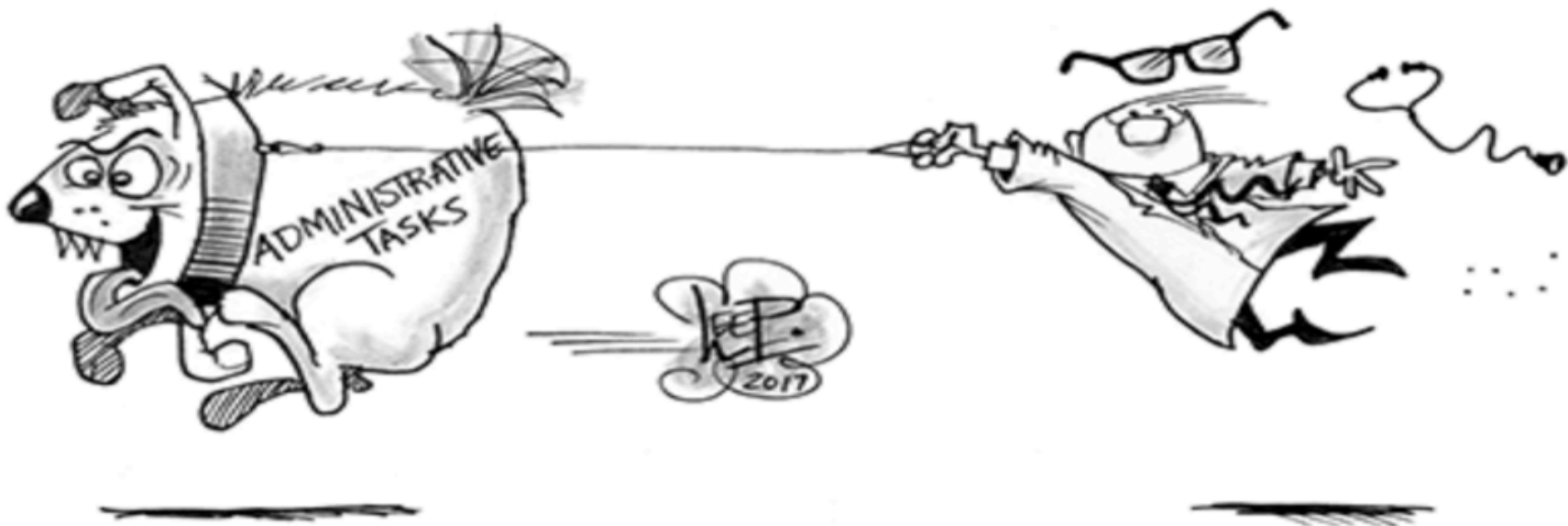


“Reducing Clinician Burden” Project Overview

Health Level Seven (HL7)
Electronic Health Record Work Group (EHR WG)
4 November 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

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

Reducing Clinician Burden

Defining Terms (DRAFT)

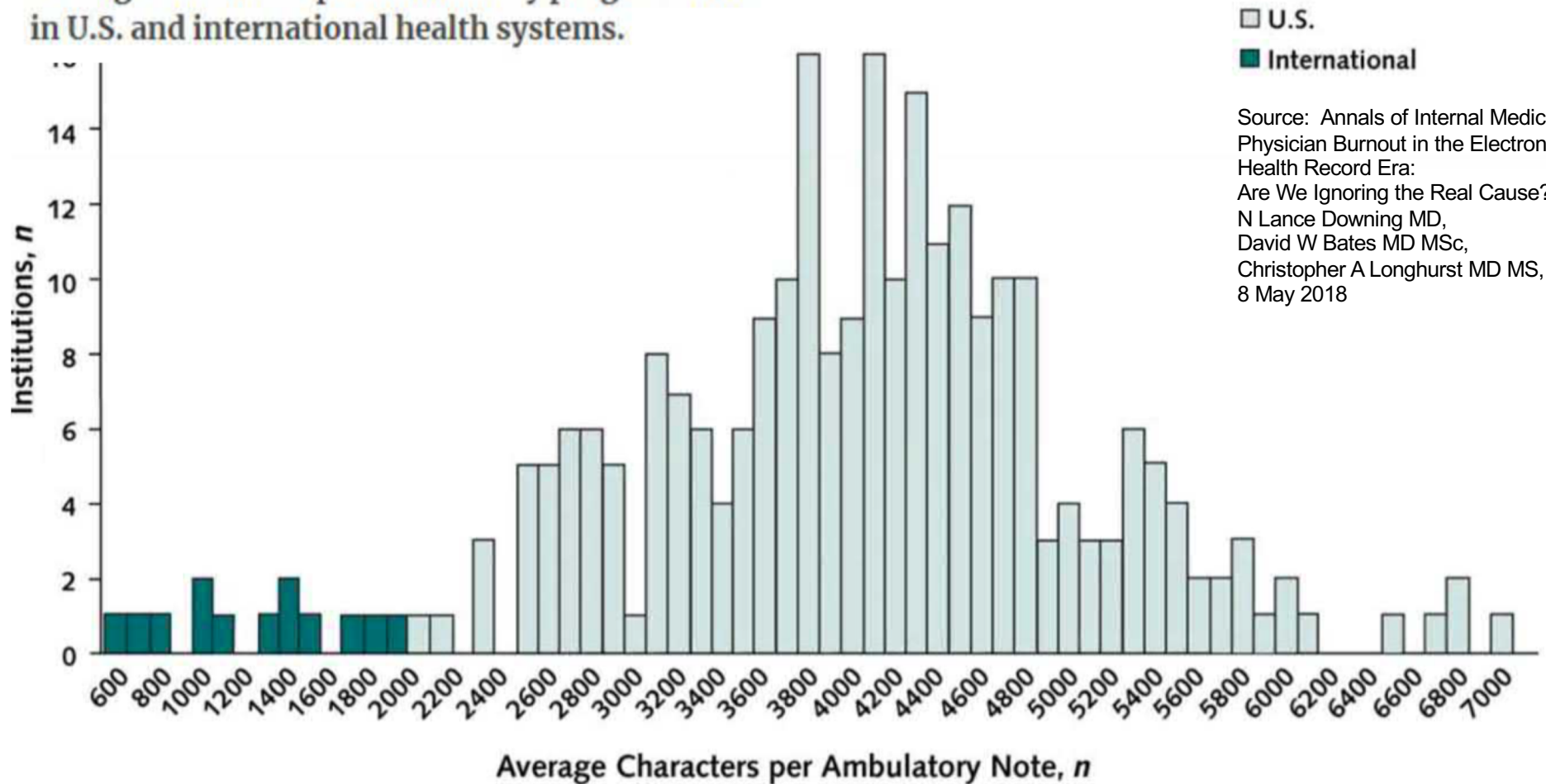
Reducing (reduce)	<ul style="list-style-type: none">• “To bring down, as in extent, amount, or degree; diminish”, and “To gain control of... [to] conquer”, and “To simplify the form of... without changing the value”, also “To restore... to a normal condition or position” – The Free Dictionary• “To lower in... intensity” – Dictionary.com• “To narrow down”, also “To bring to a specified state or condition” – Merriam-Webster
Clinician	<ul style="list-style-type: none">• “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	<ul style="list-style-type: none">• “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	<p>Anything that hinders patient care, either directly or indirectly [such as]:</p> <ol style="list-style-type: none">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. <p>-- Peter Goldschmidt</p>
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Average characters per ambulatory progress note in U.S. and international health systems.





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](#)

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.

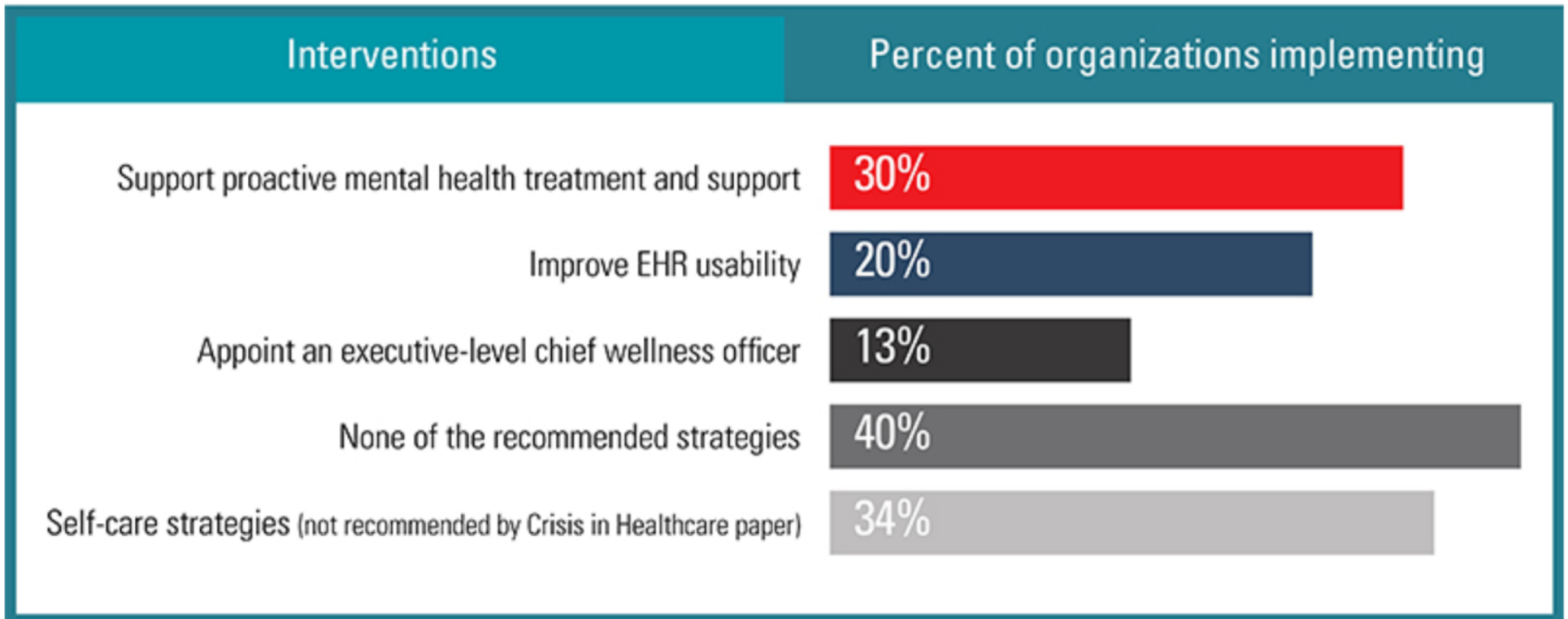


EHR usability and change
95% of clinicians believe improving electronic health record usability will be at least somewhat helpful, with 27% reporting it will be “extremely helpful.”

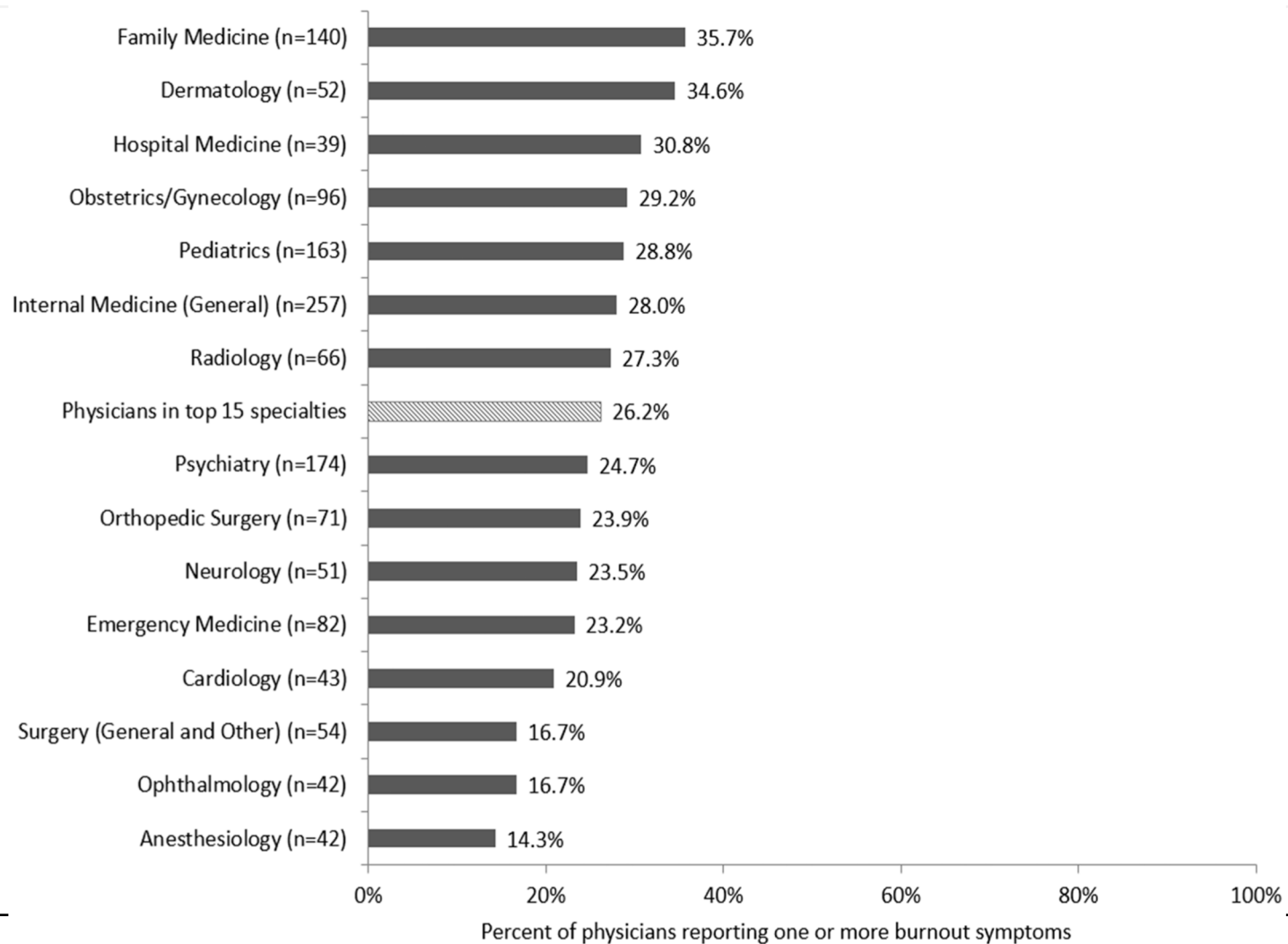


Seeking help
65% of clinicians say they are prevented from seeking help for symptoms of burnout because their organization lacks institutional attention and resources.

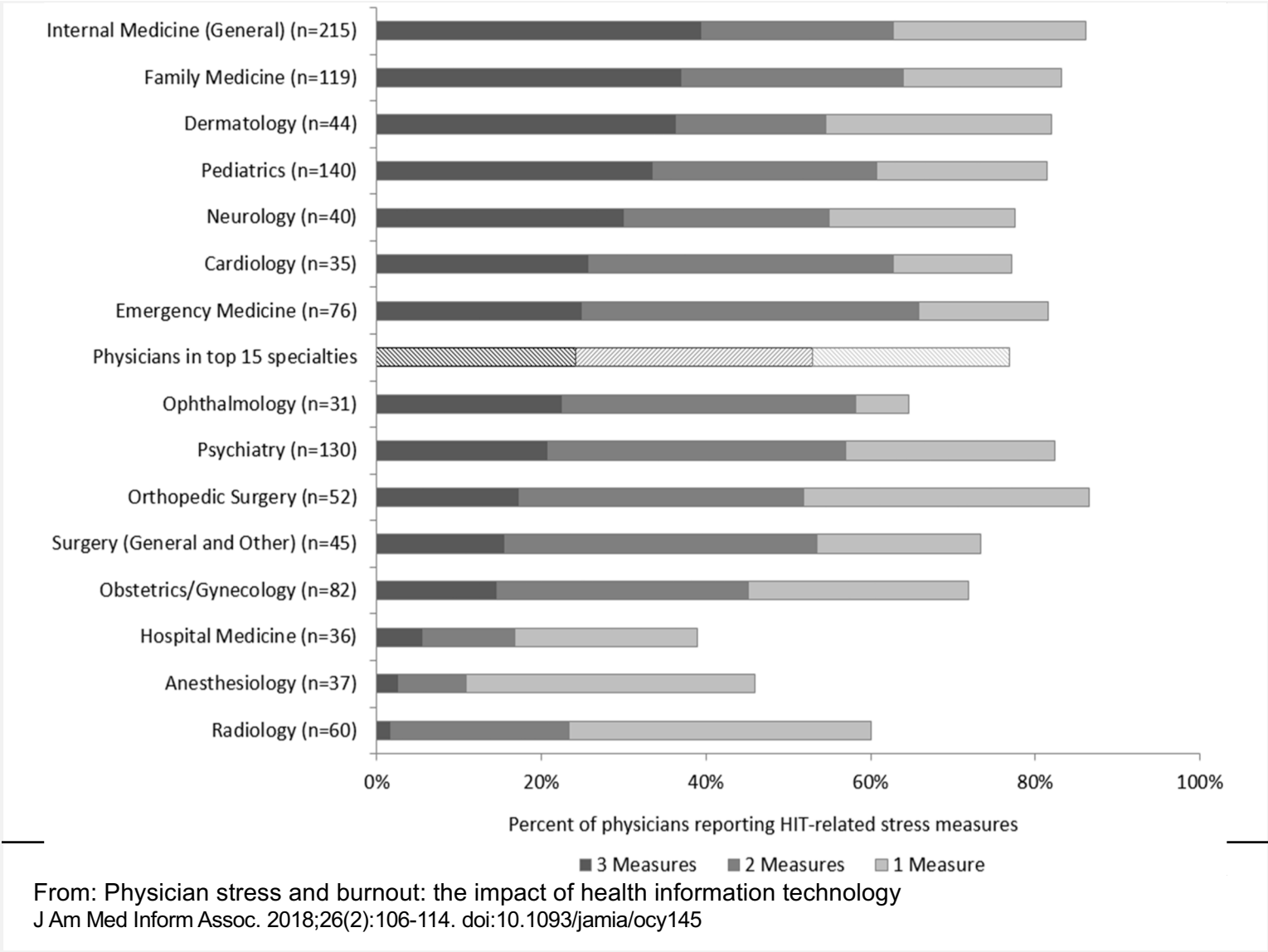
Source: SPOK - Clinician Burnout in Healthcare



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





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 | management | 27) Software development and improvement priorities, end-user feedback |
| 2) Patient Safety (and Clinical Integrity) | 15) Information overload | 28) Product transparency |
| 3) Administrative tasks | 16) Transitions of care | 29) Product modularity |
| 4) Data entry requirements | 17) Health information exchange, claimed “interoperability” | 30) Lock-in, data liquidity, switching costs |
| 5) Data entry scribes and proxies | 18) Medical/personal device integration | 31) Financial burden |
| 6) Clinical documentation: quality and usability | 19) Orders for equipment and supplies | 32) Security |
| 7) Prior authorization, coverage verification, eligibility tasks | 20) Support for payment, claims and reimbursement | 33) Professional credentialing |
| 8) Provider/patient face to face interaction | 21) Support for cost review | 34) Identity matching and management |
| 9) Provider/patient communication | 22) Support for measures: administrative, operations, quality, performance, productivity, cost, utilization | 35) Data quality and integrity |
| 10) Care coordination, team-based care | 23) Support for public and population health | 36) Process integrity |
| 11) Clinical work flow | 24) Legal aspects and risks | 37) List Management (problems, medications, immunizations, allergies, surgeries, interventions and procedures) |
| 12) Disease management, care and treatment plans | 25) User training, user proficiency | |
| 13) Clinical decision support, medical logic, artificial intelligence | 26) Common function, information and process models | |
| 14) Alerts, reminders, notifications, inbox | | |

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 (jmccclay@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)



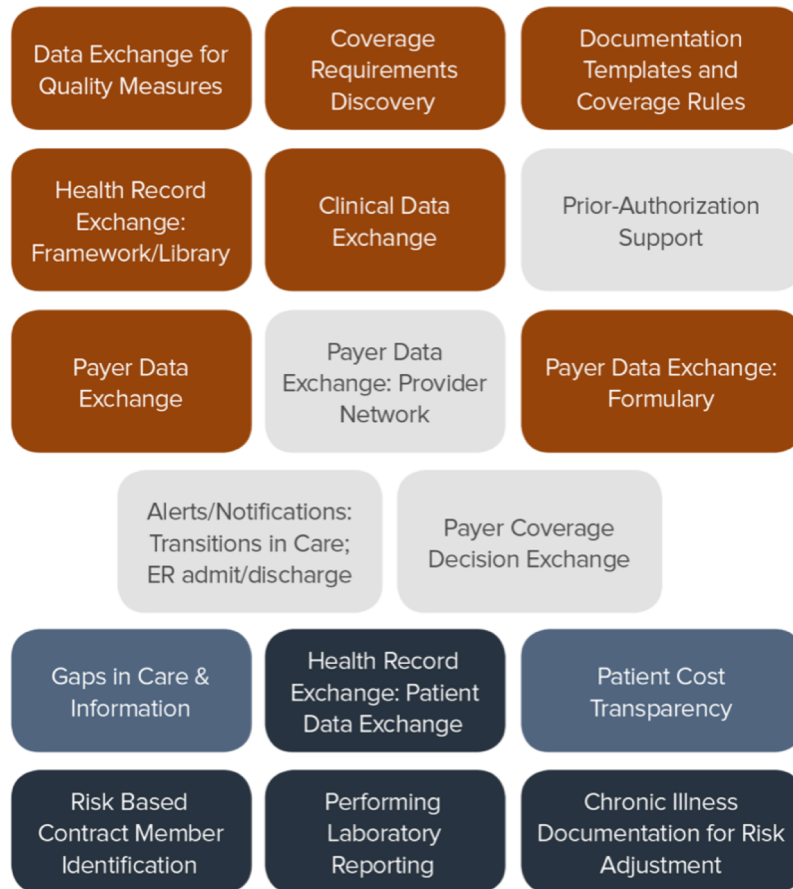
Reducing Clinician Burden

Success Stories

1. [Reducing Clinician Burden: Cardiovascular Procedure Reporting at Duke](#)
James Tchong 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

[more to come...]

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

HL7 Standards Focused on Burden

- Da Vinci Project – Provider \leftrightarrow Payer Communication
 - Pre Authorization
- EHR System Usability Functional Profile
 - Functions and Conformance Criteria to Enhance System Usability
 - Passed ballot, preparing for publication
- EHR System Functional Model, Release 3
 - In early design/development stage

Reducing Clinician Burden Project

Materials

- Project Documents – Project Wiki
 - 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
21 October, 4/18 November, 2/16 December
 - <https://global.gotomeeting.com/meeting/join/798931918>
- Face-to-Face
 - February – Sydney Australia – HL7 Working Group Meeting

Reducing Clinician Burden Project

Contacts

Co-Facilitators:

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- Stephen Hufnagel PhD: stephen.hufnagel.hl7@gmail.com
Apprio Inc
- Mark Janczewski 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

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. 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 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

G) Example Application to Standards

- ISO/HL7 10781 – Electronic Health Record System Functional Model Release 3 – Conformance Criteria