AMIA EHR-2020 Task Force on Status and Future Direction of EHRs

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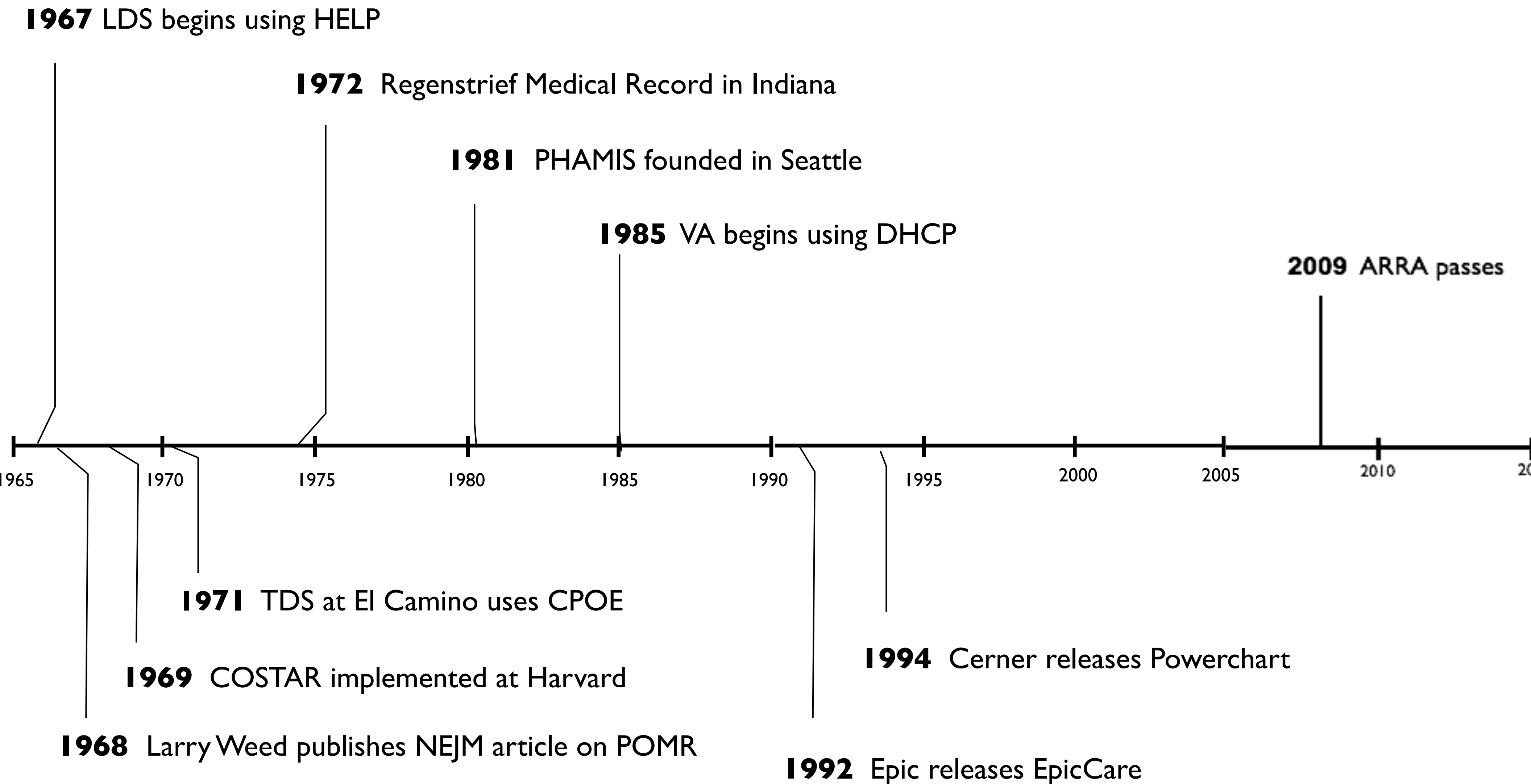
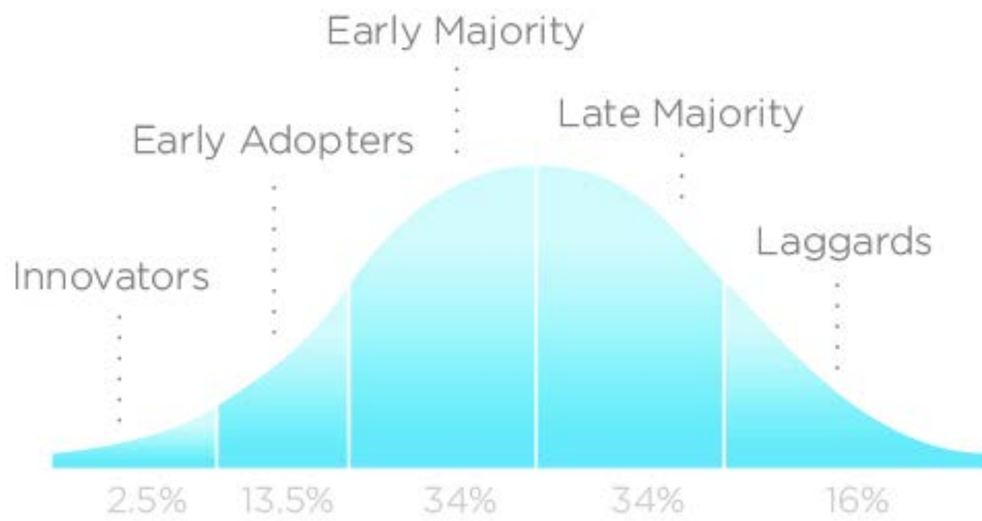
July 31, 2015

A Brief History of EHRs





INNOVATION ADOPTION LIFECYCLE

ON BEING A DOCTOR | Annals of Internal Medicine

The Day the EHR Died

I was sitting at the computer, revie
EHR, when suddenly the software fr
to begin a full day in clinic.

I felt immediate frustration and ar
job as a primary care physician is a rac
to complete as much as I can from a l
messages, results, prescriptions, paperw
and e-mails. For each minute I am un
know I will be working 2 minutes late

The New York Times

With Electronic Medical Records, Doctors Read When They Should Talk

IDEAS AND OPINIONS | Annals of Internal Medicine

Texting While Doctoring: A Patient Safety Hazard

Christine A. Sinsky, MD, and John W. Beasley, MD

Texting while driving is associated with a 23-fold
creased risk for crashing (1) and is illegal in most s
(2). Using a cell phone while driving reduces the am
of brain activity devoted to driving by 37% (3). Multi
ing is dangerous—cognitive scientists have shown tha
gaging in a secondary task disrupts primary task pe
mance (3).

Might physician typing into electronic health rec
pose similar risks? As when driving, physicians also nee
be alert to environmental cues and unexpected turns. M

The New York Times SUBSCRIBE LOG IN

SundayReview | OPINION

Why Health Care Tech Is Still So Bad

By ROBERT M. WACHTER MARCH 21, 2015

Email

LAST year, I saw an ad recruiting
physicians to a Phoenix-area
hospital. It promoted state-of-the-

What does use of scribes say?

VIEWPOINT

The Rise of the Medical Scribe Industry
Implications for the Advancement of Electronic Health Records

George A. Gellert, MD, MPH, MPA
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Supplemental content at jama.com

With federal meaningful-use incentives driving adoption of electronic health records (EHRs), physicians are increasingly concerned about the time spent documenting patient information and managing orders via computerized patient order entry (CPOE). Many perceive that the inefficiencies of EHRs are adversely affecting the quality of care, and because physicians see fewer patients per day, income may decline.[1] Although physicians approve of EHRs in concept and appreciate their future promise, the current state of EHR technology has increased physician dissatisfaction.[1] Poor EHR usability, time-consuming data entry, reduced patient care time, inability to exchange health information, and templated notes are central concerns. Physicians emphasize that EHR technology—especially user interfaces—must improve,[1] and a new industry has emerged nationally to provide physicians with medical scribes.

Use of medical scribes—unlicensed individuals hired to enter information into the EHR under clinician supervision—has increased substantially.[2] Scribes reportedly enable physicians to see more patients; generate more revenue; and improve productivity, efficiency, accuracy of clinical documentation and bill-

enced" medical scribe, and periodic reassessment of the scribe's effectiveness.[4] PhysAssist Scribes emphasizes that "great scribes aren't just born—they're made," so it established a "scribe university...a five-day training program unlike any other in the industry."[5] PhysAssist was recently acquired by TeamHealth, one of the nation's largest providers of hospital-based clinical outsourcing.

Estimates on growth of the medical scribe industry, its constituent companies, or of its principal service are anecdotal. No agency of state or federal government currently monitors—or regulates—the growth or activities of this new health care industry. Many smaller local companies either do not have websites or advertise only as medical staffing agencies. The 22 companies listed in the eTable (in the Supplement), likely an underestimate of the industry's breadth, offer services in 1058 locations. The chief executive officer of ScribeAmerica, the largest US scribe company, estimates that 10 000 scribes are working in hospitals and medical practices around the country.[6] According to the ACMSS, the number of medical scribes has been doubling annually, with about 20 000 expected to be working by the end of 2014.[7] The industry "expects [its] ranks to swell to 100,000 by 2020."[7] If accurate, in 6

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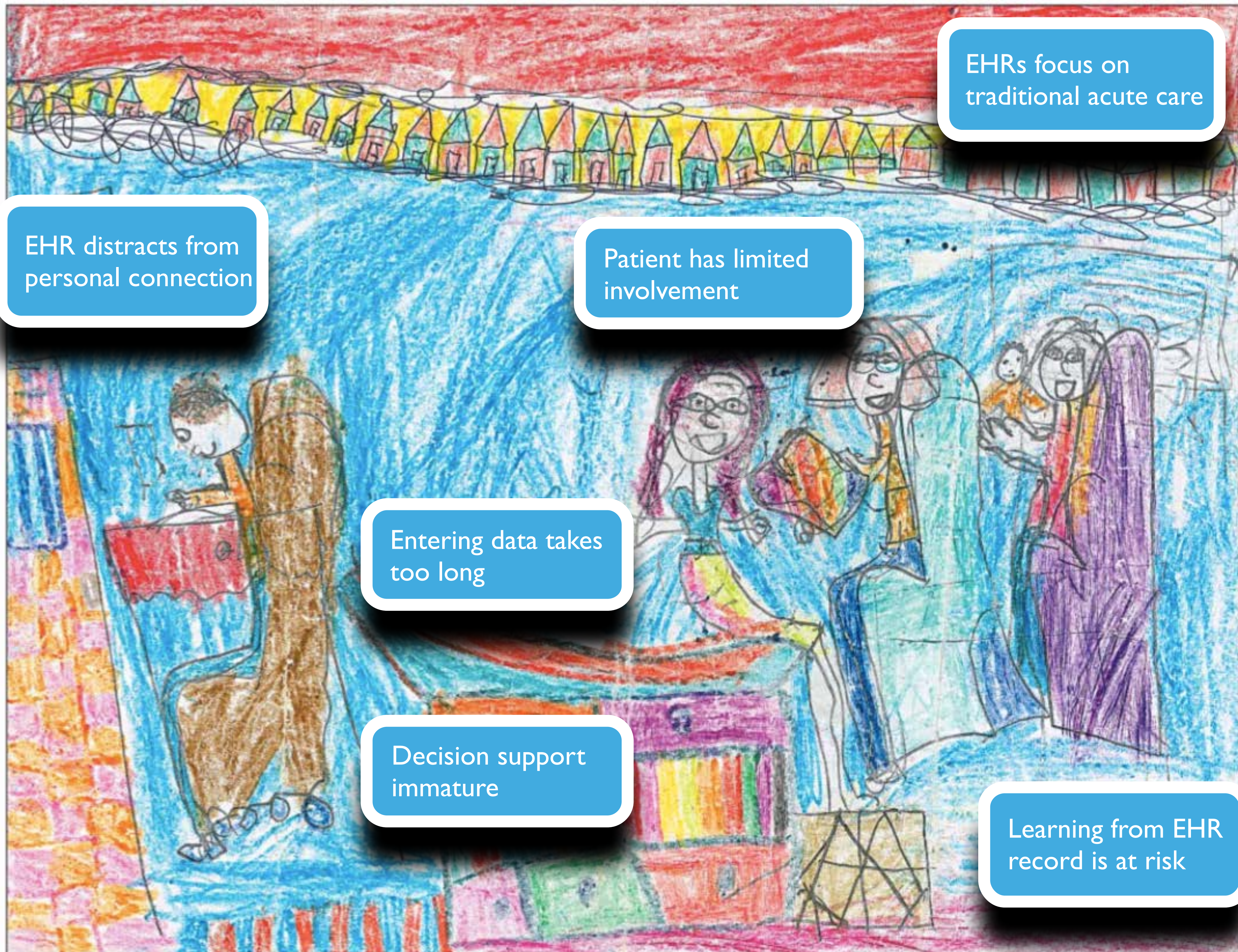

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Task Force Goal

Create recommendations to assure EHRs fit well into evolving workflow of health care delivery, support team-based care, enhance productivity and safety, and are as easy as possible to adopt. Highlight especially roles that AMIA could be playing to advance those recommendations.

Task Force on Status and Future Direction of EHRs: EHR-2020 Task Force

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Vice President & Chief Medical Information Officer, Sparrow Health System

AMIA Staff **Executive** – Karen Greenwood **Operational** – Phyllis Burchman **Communications** – Krista Martin

EHR 2020 Task Force Timeline

Charge by AMIA BOD April 11, 2014

Activities

- Invited task force members
- Four teleconference calls: June 13, July 14, September 30, December 3, 2014
- Two face-to-face meetings Chicago (August 28) Washington, DC (Nov 16, 2014)
- Delphi survey of AMIA membership.
- Annual Session Late Breaking Session: “AMIA Task Force on Status and Future Direction of EHRs: Early Findings and Your Thoughts”

Final work products

- Final report approved by AMIA BOD: April 8, 2015
- Public release: May 29, 2015

EHR 2020 Task Force Recommendations

Full text available at http://jamia.org

Report of the AMIA EHR 2020 Task Force on the Status and Future Direction of EHRs

Thomas H. Payne,[1] Sarah Corley,[2] Theresa A. Cullen,[3] Tejal K. Gandhi,[4] Linda Harrington,[5] Gilad J. Kuperman,[6] John E. Mattison,[7] David P. McCallie,[8] Clement J. McDonald,[9] Paul C. Tang,[10] William M. Tierney,[11] Charlotte Weaver,[12] Charlene R. Weir,[13] Michael H. Zaroukian[14]

Over the last 5 years, stimulated by the changing healthcare environment and the HITECH Meaningful Use (MU) EHR Incentive program, EHR adoption has grown remarkably, and there is early evidence of benefits in safety and quality as a result.[1,2] However, with this broad adoption many clinicians are voicing concerns that EHR use has had unintended clinical consequences, including reduced time for patient-clinician interaction,[3] transferred new and burdensome data entry tasks to front-line clinicians,[4,5] and lengthened workdays.[6,7,8] Interoperability between different EHR systems has languished despite large efforts.[9,10] These frustrations are contributing to a decreased satisfaction with professional work life.[11,12,13] In professional journals,[14] press reports,[15,16,17] on wards and in clinics, we have heard of the difficulties that the transition to EHRs has created.[18] Clinicians ask for help getting through their days, which often extend into evenings devoted to writing

Much of the focus of the last decade, via MU and other incentives, was to encourage providers and other health professionals to implement EHRs and use them to capture and share data important to quality and cost. The work now ahead is to ensure that these systems are designed and implemented in a way that yields promised benefits to efficiency, quality and safety with fewer side effects.[25] While cost, usability, and other considerations are important, patient safety and quality of care need to guide how we optimize these systems.

There can be a tension between efficiency and safety. Medication reconciliation is a good example—medication errors at transitions of care are a significant safety concern and represent a rationale for adding safeguards despite the impact on time and process.[26] EHRs now include detailed processes to reconcile medications that some providers feel add to their workload and slow them down. Informed by careful stud-

AMIA POSITIO

FULL COMMITTEE HEARING

Health Information Exchange: A Path Towards Improving the Quality and Value of Health Care for Patients

Date: Wednesday, June 10, 2015
Time: 10:00 AM
Location: 430 Dirksen Senate Office Building

EHR 2020 Task Force Recommendations

Ten recommendations in five areas

1. Improve documentation requirements and functionality to empower patients
2. Refocus regulations so that patients and their caregivers can derive the most benefit
3. Increase transparency
4. Foster innovation
5. Support person-centered care

Full text available at http://jamia.org

Improve documentation requirements and functionality to empower patients

Recommendations 1, 2, 8, 9

NEED

- Documentation takes up large amount of time and effort.
- Physicians now carry the largest burden for documentation.
- The patient's story needs to be easy to find and easy to understand.
- "Note bloat" has exploded due to writing shortcuts (e.g. copy/paste).

HOW

- Decrease data entry burden for clinicians
- All members of the care team—including patients—can contribute their perspectives and information.

Refocus Regulations

Recommendations 4, 5

NEED

- Clear and simple certification of MU regulations.
- Respond nimbly to new external demands.
- Current emphasis on E/M format optimizes support for billing, but does not result in a note that easily conveys the essence of the visit.

HOW

- Goal is that patients and caregivers derive the most benefit.
- This means some areas will need more oversight and focus from regulations, while other regulations need to be relaxed if they don't provide that value.
- Value to patients should drive these decisions.

Increase Transparency

Recommendations 6, 7

NEED

- Need to empower providers to pick the best system(s) for their practices.
- Researchers need to present analysis and research that involves EHRs.
- Users need to share potential EHR patient safety issues.

HOW

- Provide publicly available information about how each vendor is meets certification requirements, e.g. video recordings or detailed data and information models for APIs.
- Providers and vendors should be fully transparent about unintended consequences and new safety risks introduced by HIT systems, including EHRs, and best practices for mitigating these risks.

Foster Innovation

Recommendations 3, 8, 9, 10

NEED

- Need to imagine and build next generation of EHRs.
- Public standards-based application programming interfaces (APIs) and data standards.
- Permit patients to gain access to their entire medical record.
- Investments in research on how best to capture and integrate data, and to design new interfaces.
- To know how to better use data to change individual behavior and system change.

HOW

- EHR vendors should use pubic standards-based APIs (JASON Task Force recommendations).
- Standards should support ecosystems of innovation to emerge inside and outside traditional health IT communities.
- Research into how to use data to change provider and system behavior.

Support Person-Centered Care

Recommendations 3, 8, 9, 10

NEED

- To integrate the full spectrum of the patient's data – a medical home.
- Public standards-based application programming interfaces (APIs) and data standards.
- Permit patients to gain access to their entire medical record.
- Investments in research on how best to capture and integrate data, and to design new interfaces.
- To know how to better use data to change individual behavior and system change.

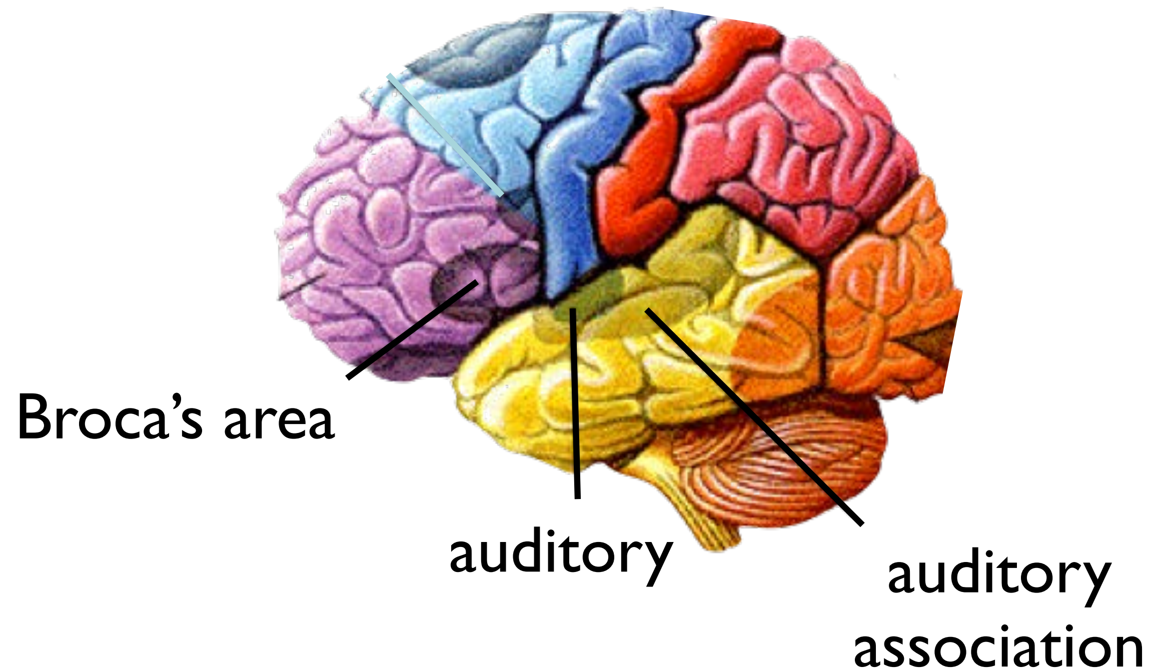
HOW

- EHR vendors should use pubic standards-based APIs (JASON Task Force recommendations).
- Standards should support ecosystems of innovation to emerge inside and outside traditional health IT communities.
- Research into how to use data to change provider and system behavior.

The future has already arrived; it just isn't evenly distributed.

William Gibson

Our brains are designed for speech



Graphic credit: Prof. Genevieve B. Orr
http://www.willamette.edu/~gorr/classes/cs449/brain.html

patients and clinicians on the same page

About | Why Share Notes? | Who Is Sharing Notes? | Getting Started | Research | News

enter search terms

A Patient's View of OpenNotes:
"Greater knowledge about one's medical condition has a strong tendency to level the playing field." ▶

What is OpenNotes?

Sharing clinicians' notes with patients—a simple idea for better health **More >**

Why it Works

Patients become more actively involved in their care **More >**

Get Started

Check out our toolkit
More >

Find Participating Sites >

twinlist ~~compare lists~~ group by: diagnoses show help show options start over?

Intake unique keep rest | reject rest [clear]	Intake similar keep rest | reject rest [clear]	Identical keep rest | reject rest [clear]	Hospital similar keep rest | reject rest [clear]	Hospital unique keep rest | reject rest [clear]
Calciferol 600 IU PO daily		**acetaminophen** 1 g PO q6h prn pain		**cephalexin** 500 mg PO q6h
calcium carbonate 500 mg PO QID		**lorazepam** 1 mg PO q8h prn anxi...		**enoxaparin** 40 mg SC daily
dabigatran 150 mg PO BID		**tramadol** 50 mg PO q6h prn pain		**insulin sliding scale** SC q4h prn
metformin 850 mg PO daily				**Lantus** 20 mg SC qHS
Micronase 5 mg PO daily				
Tirosint 100 mcg PO daily				
vitamin B12 1000 mcg SC qMonth				
	Aricept 10 mg PO daily		**donepezil** 10 mg PO qHS	
	Plavix 75 mg PO daily		**clopidogrel** 75 mg PO daily	
	Prozac 20 mg PO daily		**fluoxetine** 20 mg PO daily	
	Zestoretic 20 / 12.5 mg PO daily		**hydrochlorothiazide** 12.5 mg PO daily **lisinopril** 20 mg PO daily	
	Lipitor 40 mg PO daily		**rosuvastatin** 40 mg PO daily	
	Toprol XL 25 mg PO daily		**metoprolol** 50 mg PO BID	

add

edit

sign off 27 left White

Detail Nothing to display.

[case : pulmonary disease 2 corrected]

SHARPC NCCD

Angela Montgomery sex **female** dob **24Aug2012** age **2y 7m** { **25** Weeker } corrected age **2y 3m**

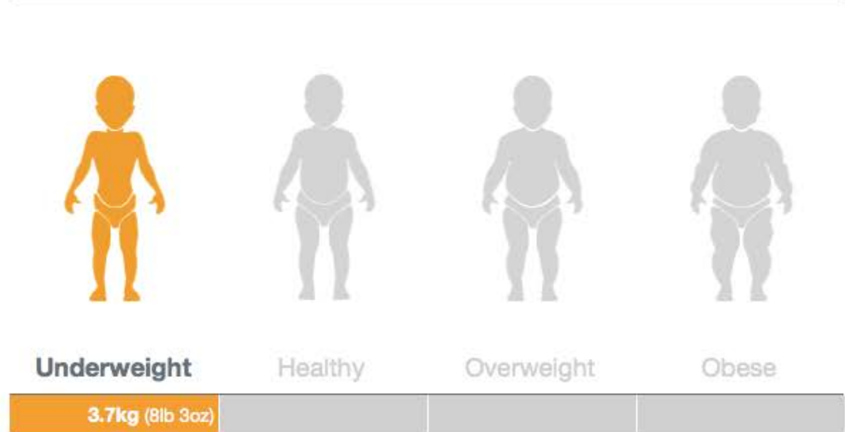
CDC + | App Version: 0.9.9-beta | GRAPHS | TABLE

0 – 13 Weeks | 0 – 6 Months | 0 – 2 Years | 0 – 20 Years | Fit to Age

Last recording **19Feb2013 5m 3w** | NICU OFF | Language: English

Angela Montgomery sex female dob 24Aug2012 age 2y 7m

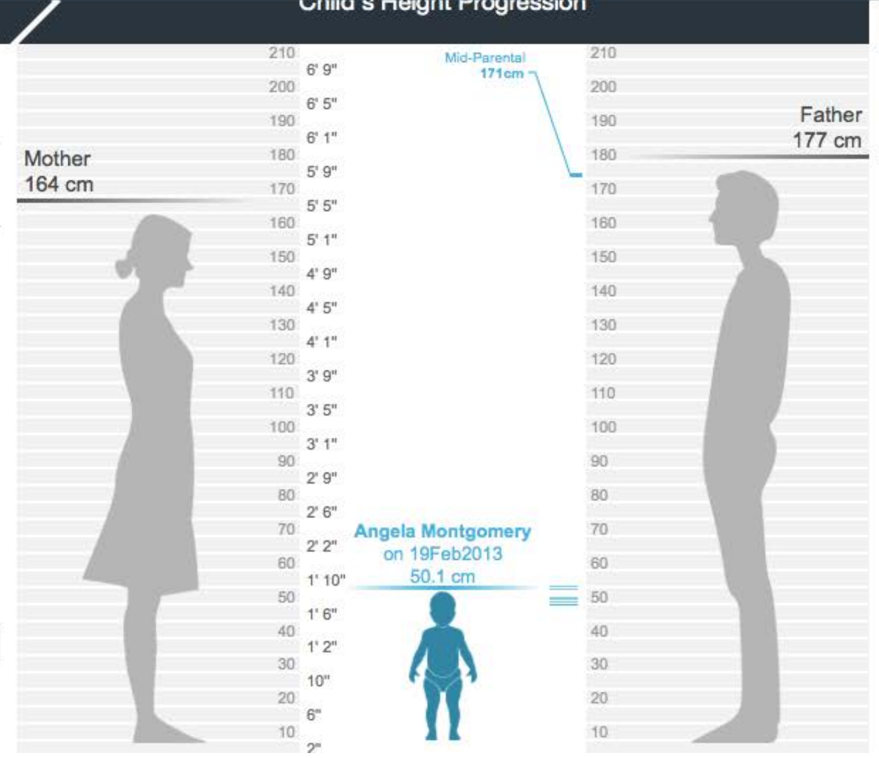
Height	Weight	Head C	BMI
as of 19Feb2013	*as of* 19Feb2013		
50.1cm | 0% 1' 8"	**3.7kg | 0%** 8lb 3oz	**N/A** N/A	**N/A**



Angela Montgomery is **underweight** at **3.7kg** (8lb 3oz).

Compared to her last weight assessment, she is improving (good!).

The healthy weight for her age and height is 5.8kg — 8kg (12lb 14oz — 17lb 11oz).



EHR problems are solvable and the future for EHRs is bright.

Thank you!

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