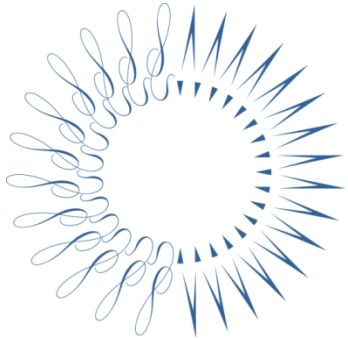


THE PEW CHARITABLE TRUSTS

#HealthITSafetyDay

Health IT Safety Day

December 6, 2016

Washington, DC

The Office of the National Coordinator for Health Information Technology

Welcome & opening remarks

- Allan Coukell, Senior Director, Health Programs, The Pew Charitable Trusts
- Jon White, Deputy National Coordinator for Health Information Technology, ONC
- Andrew Bindman, Director, Agency for Healthcare Research and Quality

HIT safety affects patients & providers

- Peter Basch, Medical Director, Ambulatory EHR and Health IT Policy, MedStar Health
- Bev Johnson, President and Chief Executive Officer, Institute for Patient- and Family-Centered Care
- Patricia Mook, Chief Nursing Information Officer, Inova Health System
- Hardeep Singh, Chief of Health Policy, Quality & Informatics Program, Houston Veterans Affairs Health Services Research Center of Innovation
- *Moderator: Josh Rising, Director, Healthcare Programs, The Pew Charitable Trusts*

IMPROVING HEALTH IT SAFETY AND WHAT NEXT

HARDEEP SINGH, MD, MPH

HOUSTON VA CENTER FOR INNOVATIONS IN QUALITY, EFFECTIVENESS & SAFETY

MICHAEL E. DEBAKEY VA MEDICAL CENTER

BAYLOR COLLEGE OF MEDICINE

Twitter: @HardeepSinghMD

VA HEALTH CARE Defining EXCELLENCE in the 21st Century

Baylor College of Medicine

Laying a Foundation for Improvement

- Measurement of health IT safety essential to improvement efforts
- But we cannot measure what we cannot define!

What is Health IT Safety – 3 domains

- Domain 1: Safe health IT:
  - Events unique/specific to health IT

Sittig & Singh N Engl J Med. 2012 Nov 8;367(19):1854-60

STATE POLITICS

Computer system glitch puts thousands of NT patients at risk

The Australian | 11:34AM August 25, 2016

AMOS AIKMAN
Northern correspondent | Darwin

Thousands of Northern Territory pa
crucial computer system that transr
clinics.

The NT Department of Health has
investigate the glitch, believed to h
pieces of information concerning a
destinations.

Smokers prescribed Viagra to quit

Smokers trying to quit the habit were mistakenly prescribed anti-impotence drug Viagra by doctors.

NHS Greater Glasgow and Clyde said the error was due to a computer glitch at two city GP practices.

When GPs selected anti-smoking pill **Zyban**, computers selected **sildenafil**, the generic name for **Viagra**.

The health board said no-one received Viagra

A health board spokeswoman said: "At no time was patient care affected by this as all prescriptions are subject to stringent double checking."

The e-Formulary computer system used by GPs automatically selects a list of the most popular drugs when doctors fill out prescriptions.

Some patients went to the pharmacy with a prescription for the anti-impotence drug instead of tablets to help them stop smoking.

What is Health IT Safety – 3 domains

- Domain 1: Safe health IT:
  - Events unique/specific to health IT
- Domain 2: Using health IT safely:
  - Unsafe or inappropriate use of technology
  - Unsafe changes in the workflows that emerge from technology use

Sittig & Singh N Engl J Med. 2012 Nov 8;367(19):1854-60

By MICHELLE CASTILLO / CBS NEWS / March 5, 2013, 1:16 PM

Too many electronic health record alerts may be leading doctors to skip them

Your doctor may be more likely to ignore your test results if they come electronically.

A new study published in the JAMA Internal Medicine on Mar. 4 revealed that doctors receive about 63 electronic health record (EHR)-based alerts each day, which are supposed to let them know about abnormal patient results. And, almost one-third of the doctors surveyed -- about 30 percent -- admitted that they had missed some results because of too many alerts.

"If you're getting 100 emails a day, you are bound to miss a few. I study this area and I still sometimes miss emails. We have good intentions, but sometimes getting too many can be a problem," Dr. Hardeep Singh, chief of health policy, quality, and informatics at the Michael E. DeBakey Veterans Affairs Medical Center, in Houston, told TIME.

Opinion Paper Open Access

Divvy K. Upadhyay, Dean F. Sittig and Hardeep Singh*

Ebola US Patient Zero: lessons on misdiagnosis and effective use of electronic health records

Abstract: On September 30th, 2014, the Centers for Disease Control and Prevention (CDC) confirmed the first travel-associated case of US Ebola in Dallas, TX. This case exposed two of the greatest concerns in patient safety in the US outpatient health care system: misdiagnosis and ineffective use of electronic health records (EHRs). The case received widespread media attention highlighting failures in disaster management, infectious disease control, national security, and emergency department (ED) care. In addition, an error in making a correct and timely Ebola diagnosis on initial ED presentation brought diagnostic decision-making vulnerabilities in the EHR era into non-technical factors will be needed. Ebola US Patient Zero reminds us that in certain cases, a single misdiagnosis can have widespread and costly implications for public health.

Keywords: cognition; decision-making; diagnostic error; Ebola; electronic medical records; health information technology; human factors; misdiagnosis; patient safety.

DOI 10.1515/dx-2014-0064
Received October 15, 2014; accepted October 17, 2014

What is Health IT Safety – 3 domains

- Domain 1: Safe health IT :
  - Events unique/specific to EHRs
- Domain 2: Using health IT safely:
  - Unsafe or inappropriate use of technology
  - Unsafe changes in the workflows that emerge from technology use
- Domain 3: Using health IT to improve safety
  - Leveraging health IT to identify unsafe care processes and potential patient safety concerns before harm

Sittig & Singh N Engl J Med. 2012 Nov 8;367(19):1854-60

Radiology

Development and Validation of Electronic Health Record–based Triggers to Detect Delays in Follow-up of Abnormal Lung Imaging Findings[1]

Daniel R. Murphy, MD, MBA
Eric J. Thomas, MD, MPH
Ashley N. D. Meyer, PhD
Hardeep Singh, MD, MPH

ORIGINAL RESEARCH

BMJ Quality & Safety

The international journal of healthcare improvement

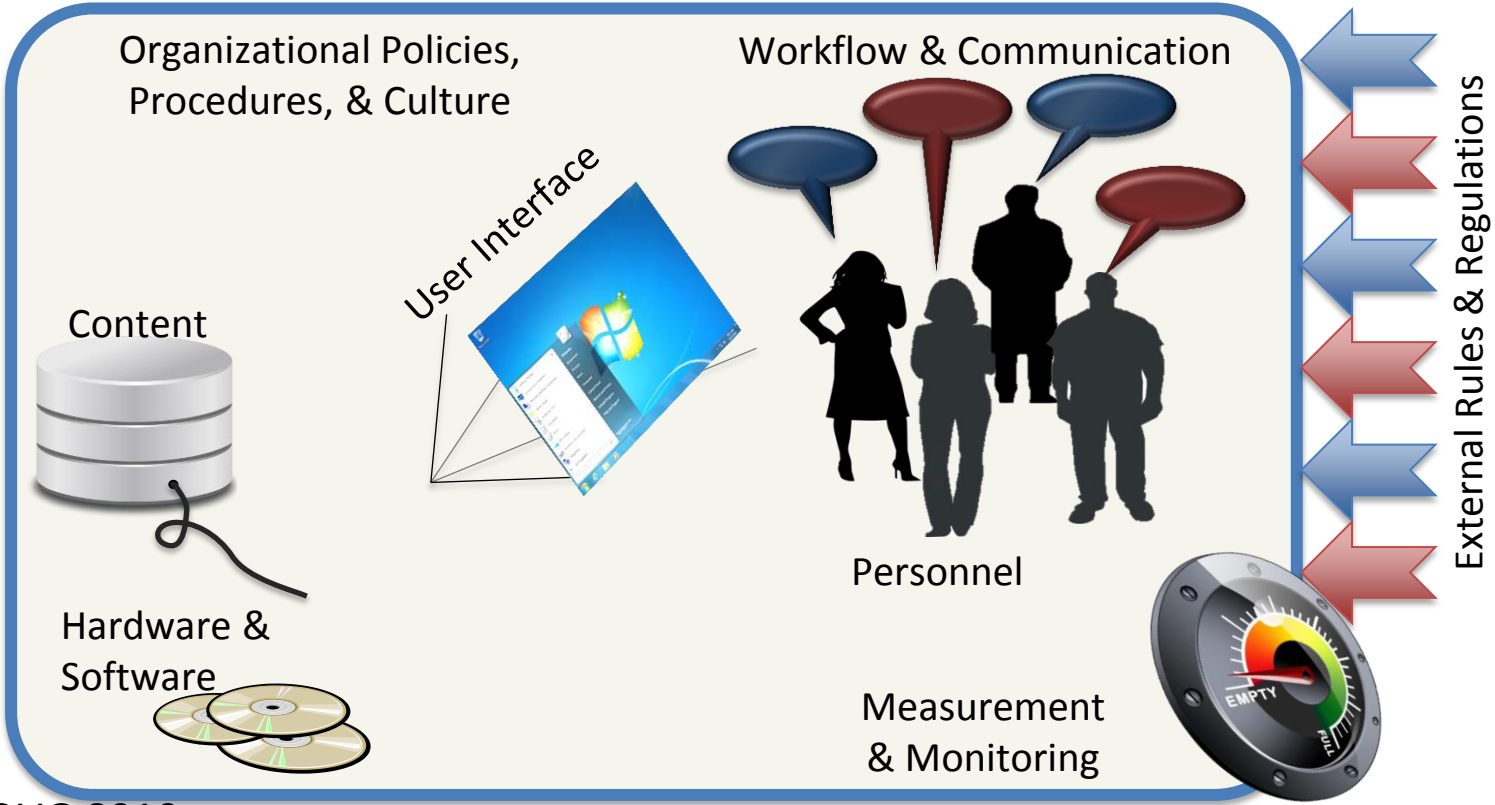
Electronic health record-based triggers to detect potential delays in cancer diagnosis

Daniel R Murphy,[1,2] Archana Laxmisan,[1,2] Brian A Reis,[1,2] Eric J Thomas,[3] Adol Esquivel,[4] Samuel N Forjuoh,[5] Rohan Parikh,[6] Myrna M Khan,[1,2] Hardeep Singh[1,2]

ABSTRACT

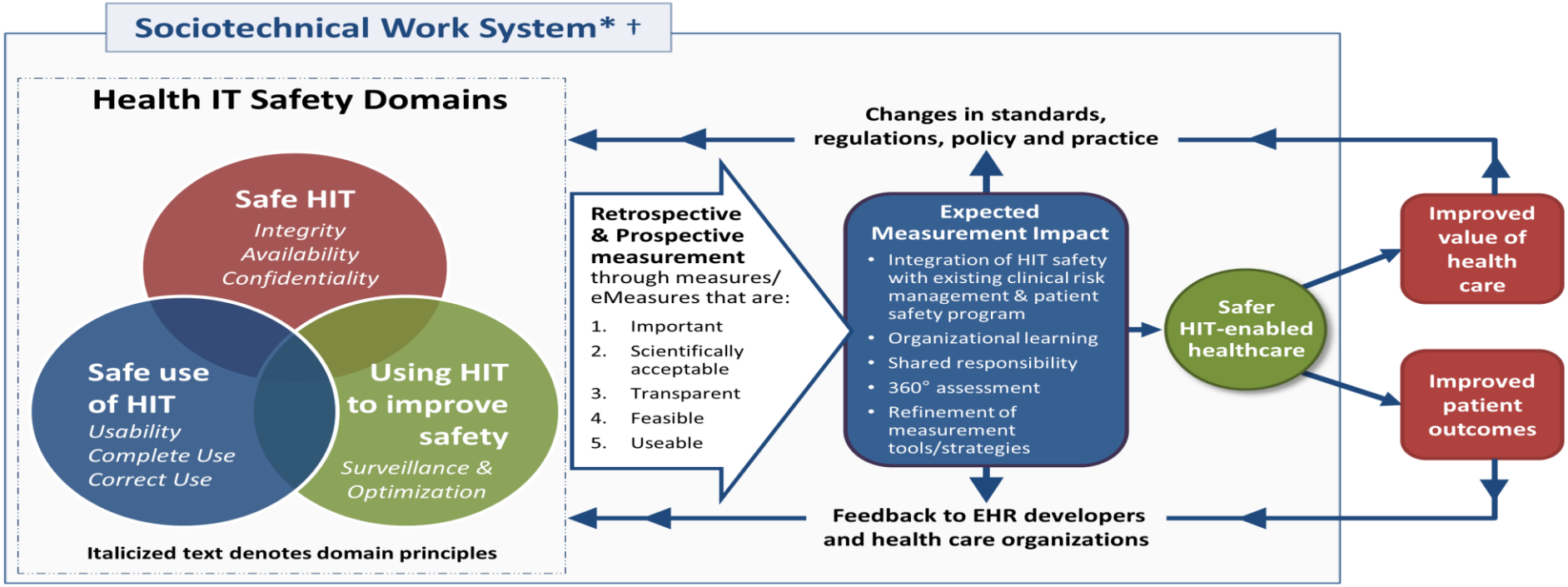
Background Delayed diagnosis of cancer can follow-up of abnormal clinical findings suspicious for cancer.

An 8-dimensional Lens for Improvement



Sittig Singh *QSHC* 2010

Health Information Technology Safety Measurement Framework (HITS Framework)



* Includes 8 technological and non-technological dimensions.

† Includes external factors affecting measurement such as payment systems, legal factors, national quality measurement initiatives, accreditation, and other policy and regulatory requirements.

Singh Sittig BMJ Qual Saf doi:10.1136/bmjqs-2015-004486

What to Focus On?

Type of HIT-related safety concern	Examples
1. Instances in which **HIT fails during use or is otherwise not working** as designed.	Broken hardware or software "bugs"
2. Instances in which HIT is working as designed, but the design **does not meet the user's needs or expectations.**	Usability issues
3. Instances in which HIT is well-designed and working correctly, but was **not configured, implemented, or used in a way anticipated or planned** for by system designers and developers	Duplicate order alerts that fire on alternative PRN pain medications

Sittig Classen Singh J Am Med Inform Assoc. 2014 Oct 20

What to Focus On?

Type of HIT-related safety concern	Examples
4. Instances in which HIT is working as designed, and was configured and used correctly, but **interacts with external systems (e.g., via hardware or software interfaces) so that data is lost or incorrectly transmitted or displayed.**	Order for extended release morphine inadvertently changed to immediate release by error in interface translation table
5. Instances in which specific safety **features or functions were not implemented or not available** (i.e., HIT could have prevented a safety concern).	Inpatient receives 5g acetaminophen in 24 hrs because max daily dose alerting not available

Sittig Classen Singh J Am Med Inform Assoc. 2014 Oct 20

Measurement/Improvement a Shared Responsibility

- Between EHR developers AND those responsible for configuring, implementing, and using them
  - *"vendors [developers], care providers, provider organizations and their health IT departments, and public and private agencies"*
- Party most in control in the best position to address performance
- HIT Safety Collaborative is a Key Next Step to operationalize what's needed

Thank you and Acknowledgements

- Funding Agencies:
  - Department of Veterans Affairs
  - National Institute of Health
  - Agency for Health Care Research & Quality
  - ONC for SAFER Guides

- Multidisciplinary team at VA Health Services Research Center for Innovation

Email: Hardeeps@bcm.edu

Web: http://www.houston.hsrd.research.va.gov/bios/singh.asp

Twitter: @HardeepSinghMD

HIT safety affects patients & providers

Patricia Mook

Chief Nursing Information Officer

Inova Health System

MedStar Health

Knowledge and Compassion
Focused on You

Health IT Safety Day

Peter Basch, MD
December 6, 2016

Knowledge and Compassion **Focused on You**

MedStar Health


12
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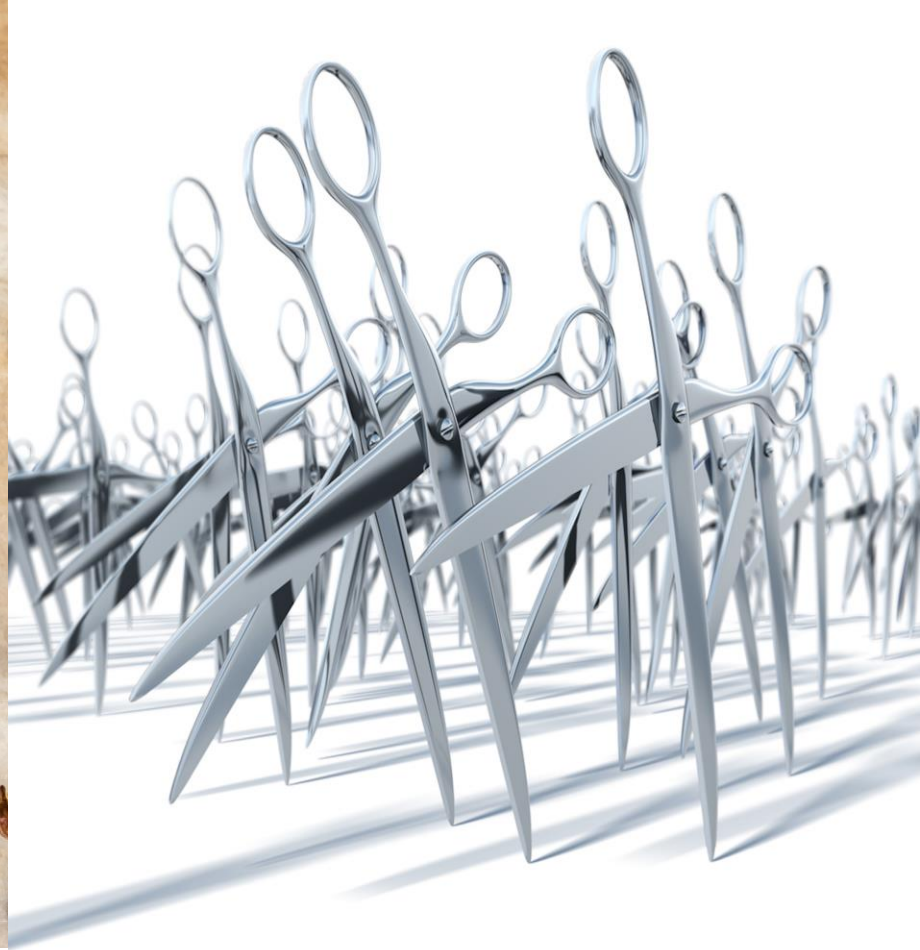
Knowledge and Compassion **Focused on You**

MedStar Health



Knowledge and Compassion **Focused on You**

MedStar Health

HIT safety affects patients & providers

Bev Johnson

President and Chief Executive Officer

Institute for Patient- and Family-Centered Care

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Experiencing EHR Usability

Raj M. Ratwani, PhD

Scientific Director, National Center for Human Factors in Healthcare

Assistant Professor of Emergency Medicine, Georgetown University

Rollin J. (Terry) Fairbanks, MD, MS, FACEP

Director, National Center for Human Factors in Healthcare

Associate Director, MedStar Institute for Innovation, MedStar Health

Attending Emergency Physician, MedStar Washington Hospital Center

Associate Professor of Emergency Medicine, Georgetown University

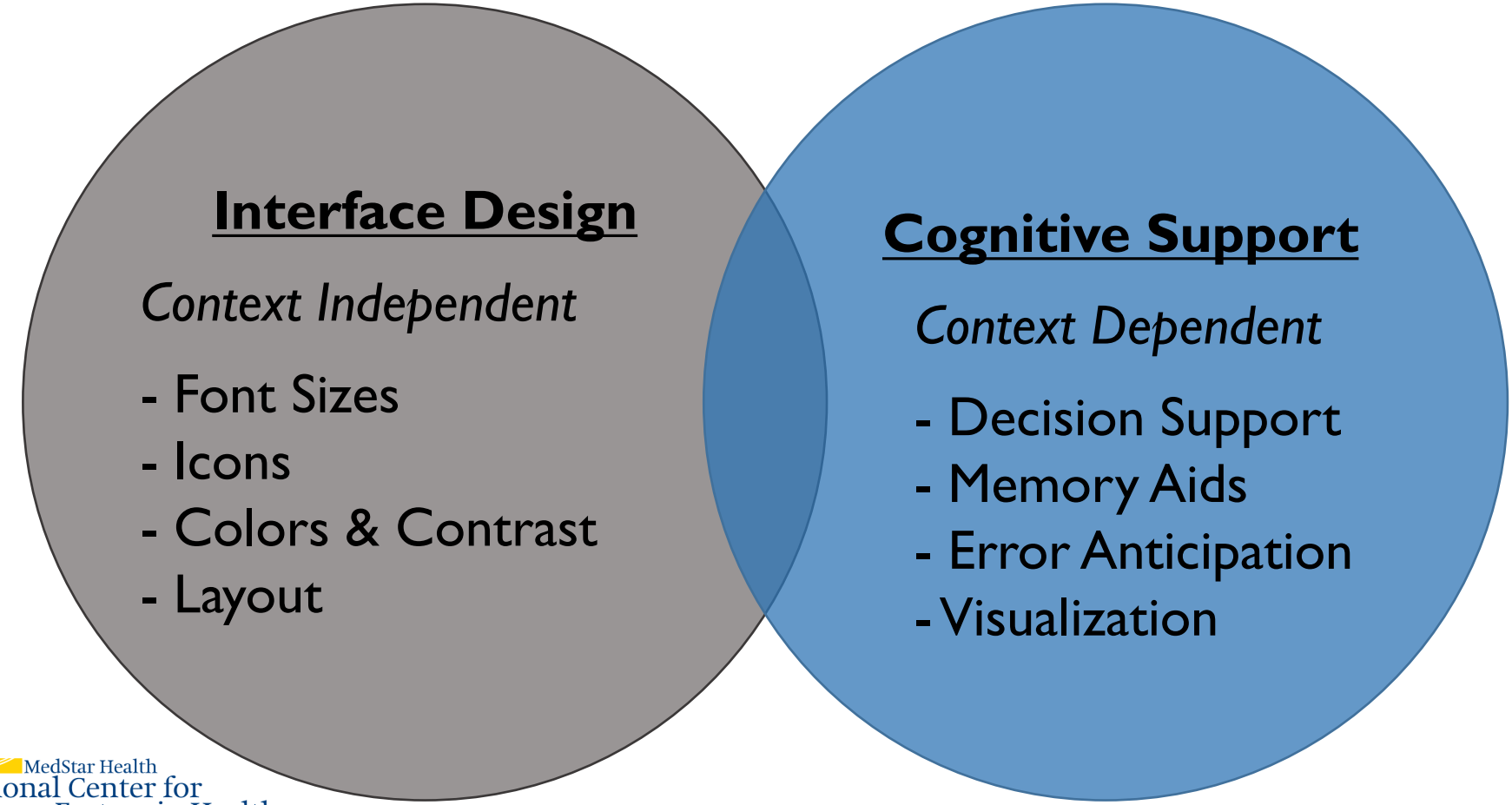
MedStar Health
National Center for
Human Factors in Healthcare

Acknowledgments

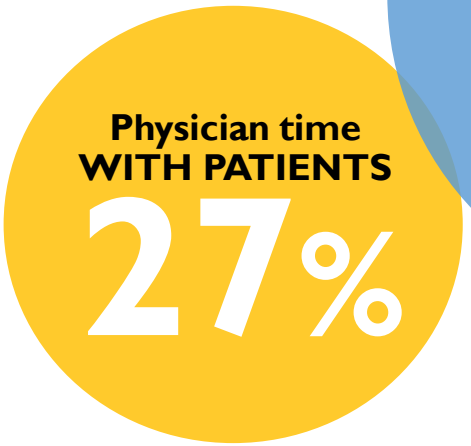
Our research is supported by:

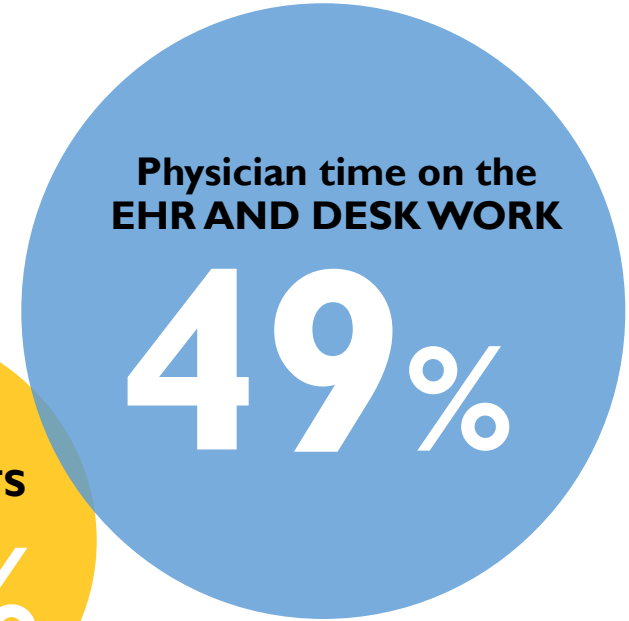
- Agency for Healthcare Research and Quality (AHRQ)
- Office of the National Coordinator of Health Information Technology (ONC)
- National Institutes of Health (NIH)
- American Medical Association (AMA)

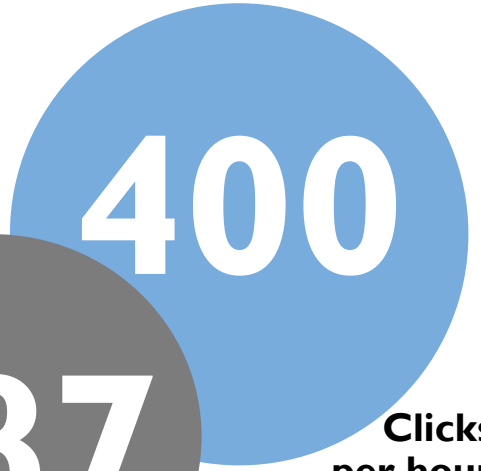
Usability Is…



EHR Usability in Practice







Clicks per hour

Clicks to admit someone with chest pain

Clicks to create discharge instructions

MedStar Health
National Center for Human Factors in Healthcare

Sinsky C, Colligan L, Ling L, et al. Allocation of Physician Time in Ambulatory Practice: A Time and Motion Study in 4 Specialties. Annals of Internal Medicine. Published

Patient Impact

MedStar Health
National Center for
Human Factors in Healthcare

Are you the right patient?

Margaret A. McGiffen

Stock Photo

Name	Bed	Tea	AC	Age	Attending	Reason for Visit	LOS	Rad
Washington, James	3		2	38 y	Matthews, MD	Fever and cough	16:02	☑
Yeater, Sherril	4		2	79 y	Cook, MD	Acute chest pain	1:52	☑
Steinert, Benjamin	5		2	53 y	Cook, MD	Dizziness	0:59	
Starke, Clifton	6		3	54 y	Cook, MD	Acute headache	4:10	
Liang, Miki	7		2	52 y	Smith, MD	Leg pain	17:39	☑
Washington, Susan	8		2	60 y	Matthews, MD	Abdominal pain	2:14	
Wattley, Fredrick	9		2	73 y	Smith, MD	Flank pain	1:49	
Stevens, Elenore	10		2	67 y	Monaharan, MD	Flu-like symptoms	1:18	
Darlinton, Theo	11		3	58 y	Matthews, MD	Chest pain	14:26	
Martin, Josh	12		3	61 y	Monaharan, MD	Altered mental status	2:39	☑
Washington, Sally	13		3	17 y	Matthews, MD	Pelvic pain	1:21	
Adams, Emily	14		2	88 y	Monaharan, MD	Urinary urgency	6:20	☑
Mastin, Carla	15		2	37 y	Chang, MD	Acute chest pain	5:23	
Bennett, James	16		2	35 y	Chang, MD	Arm pain	3:35	

Name	Bed	Tea	AC	Age	Attending	Reason for Visit	LOS	Rad
Adams, Emily	14		2	88 y	Monaharan, MD	Urinary urgency	6:20	☑
Bennett, James	16		2	35 y	Chang, MD	Arm pain	3:35	
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Patient: Starke, Clifton DOB:08/09/1961 :Male :54yrs MRN:00012342	Loc: Hosp Inpatient Admit 10/31/16	Att: Jim Cook, MD	Dosing weight: 50 kg	Allergies: No

View
Orders for signature
Medical
- Potassium Replacement Protocol
- MED Pneumonia Hospital Acquired

Orders
- Non Categorized
- Patient Status
- Vital Signs
- Activity
- Diet
- Patient Care
- Respiratory
- Therapies
- Continuous Infusions

		Order Name	Status	Start	Details
	Hospital ER	MRN:00012342	Admit 10/31/16		
	Medications				

Details for

Details	Order comments	Diagnosis

First Dose Priority

Duration

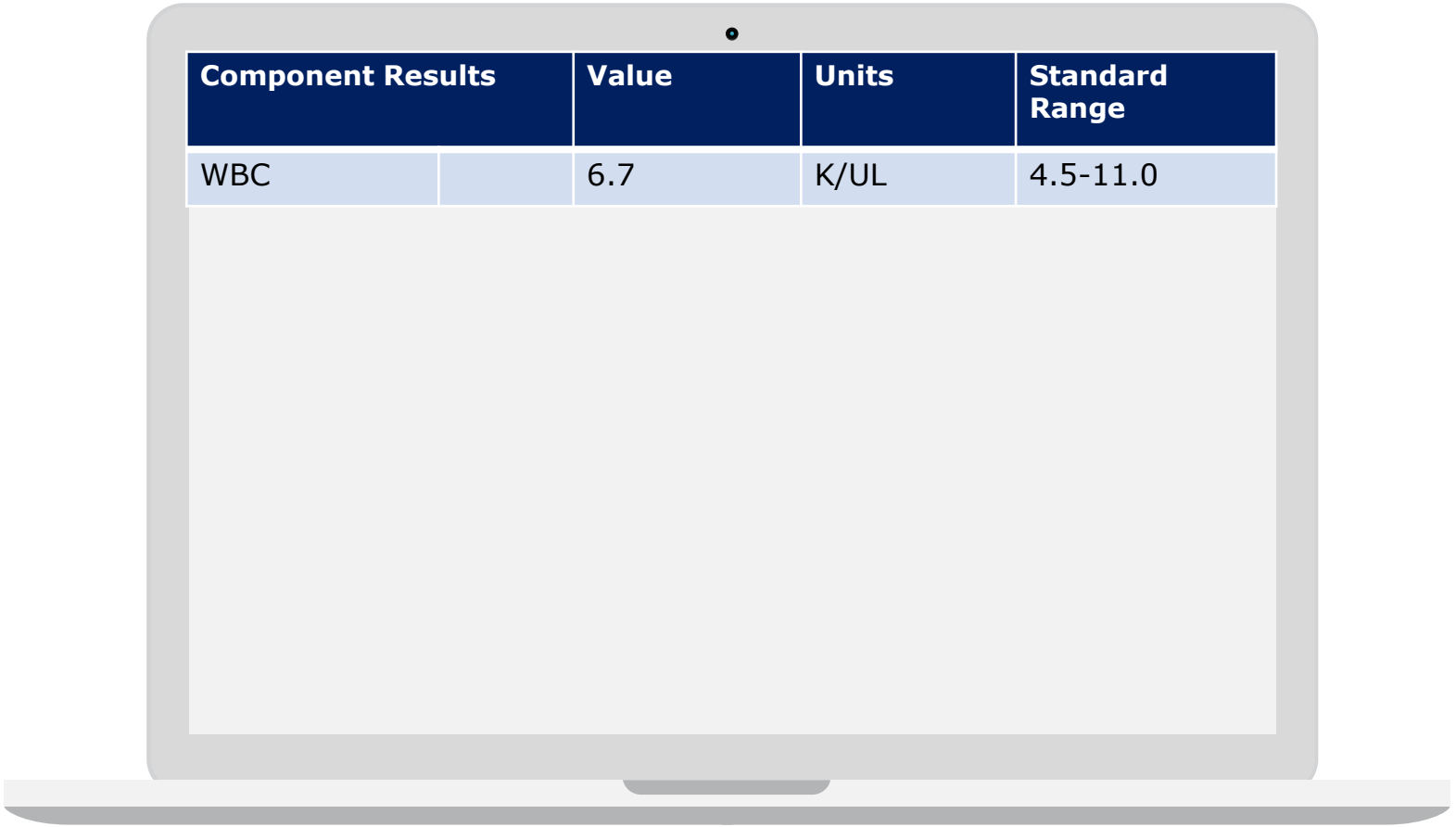
Special Instructions

What are the lab results?

Rory Staunton

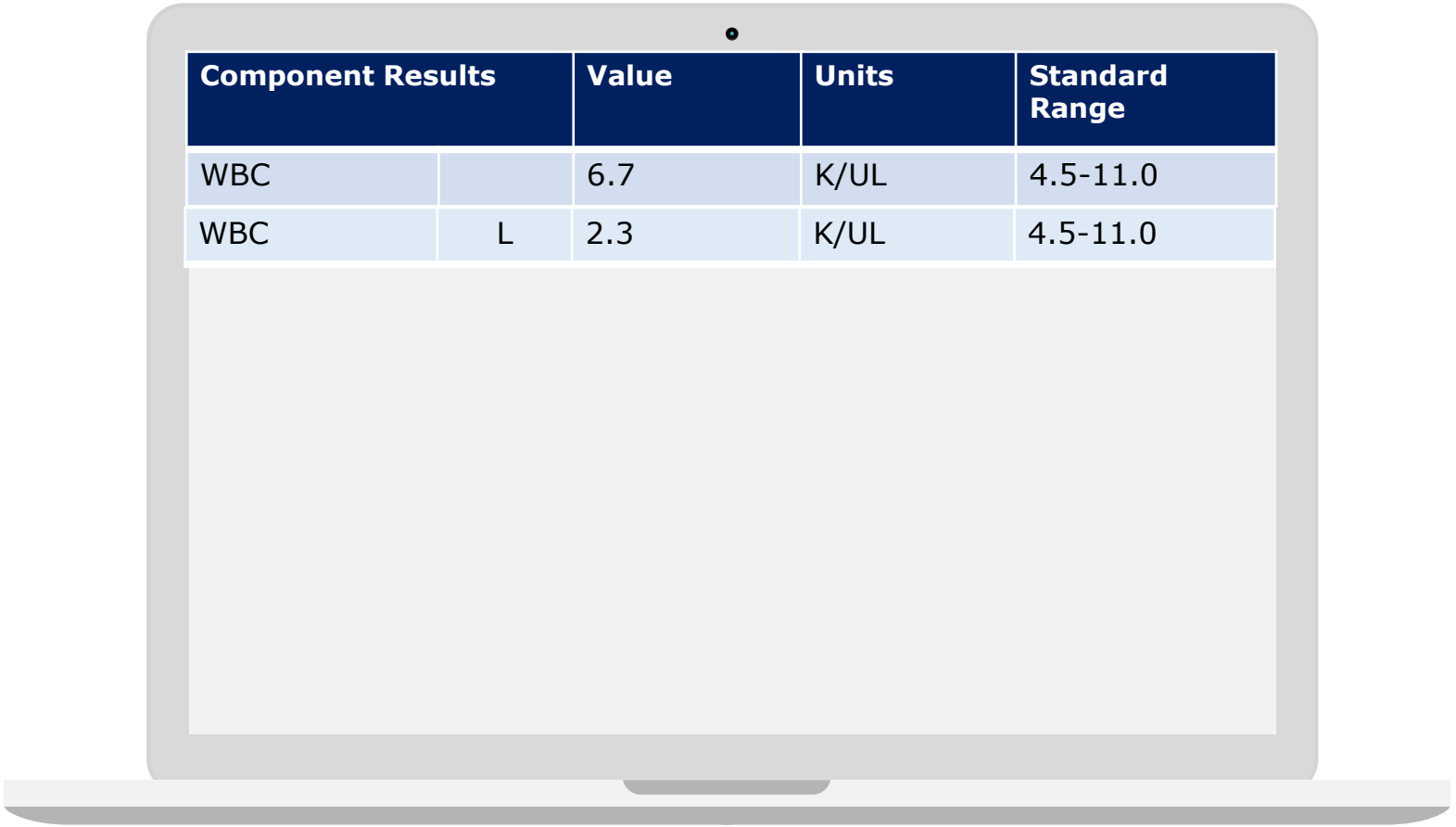
Photos: The New York Times

Reading a Complete Blood Count



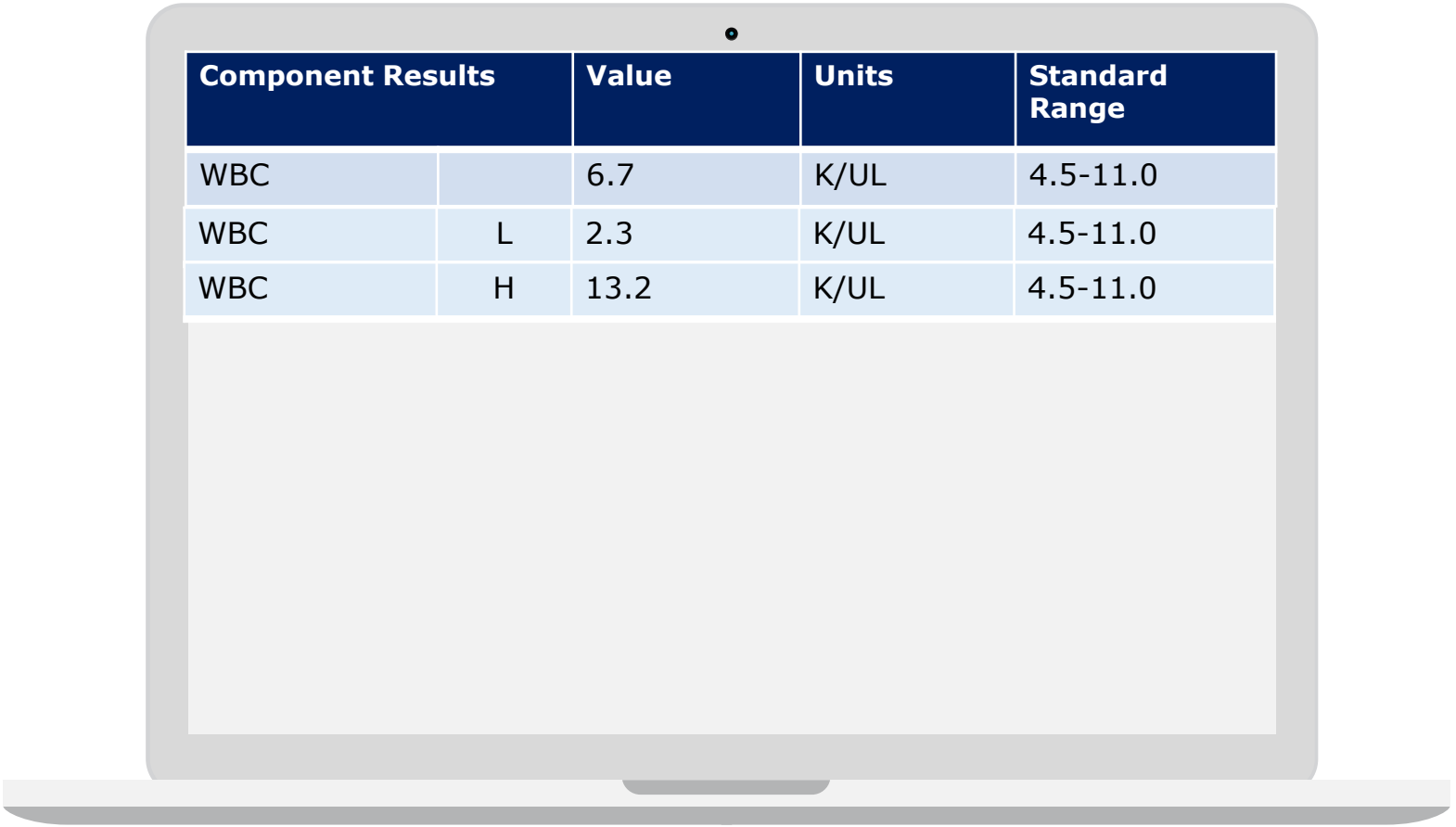
Component Results		Value	Units	Standard Range
WBC		6.7	K/UL	4.5-11.0

Reading a Complete Blood Count



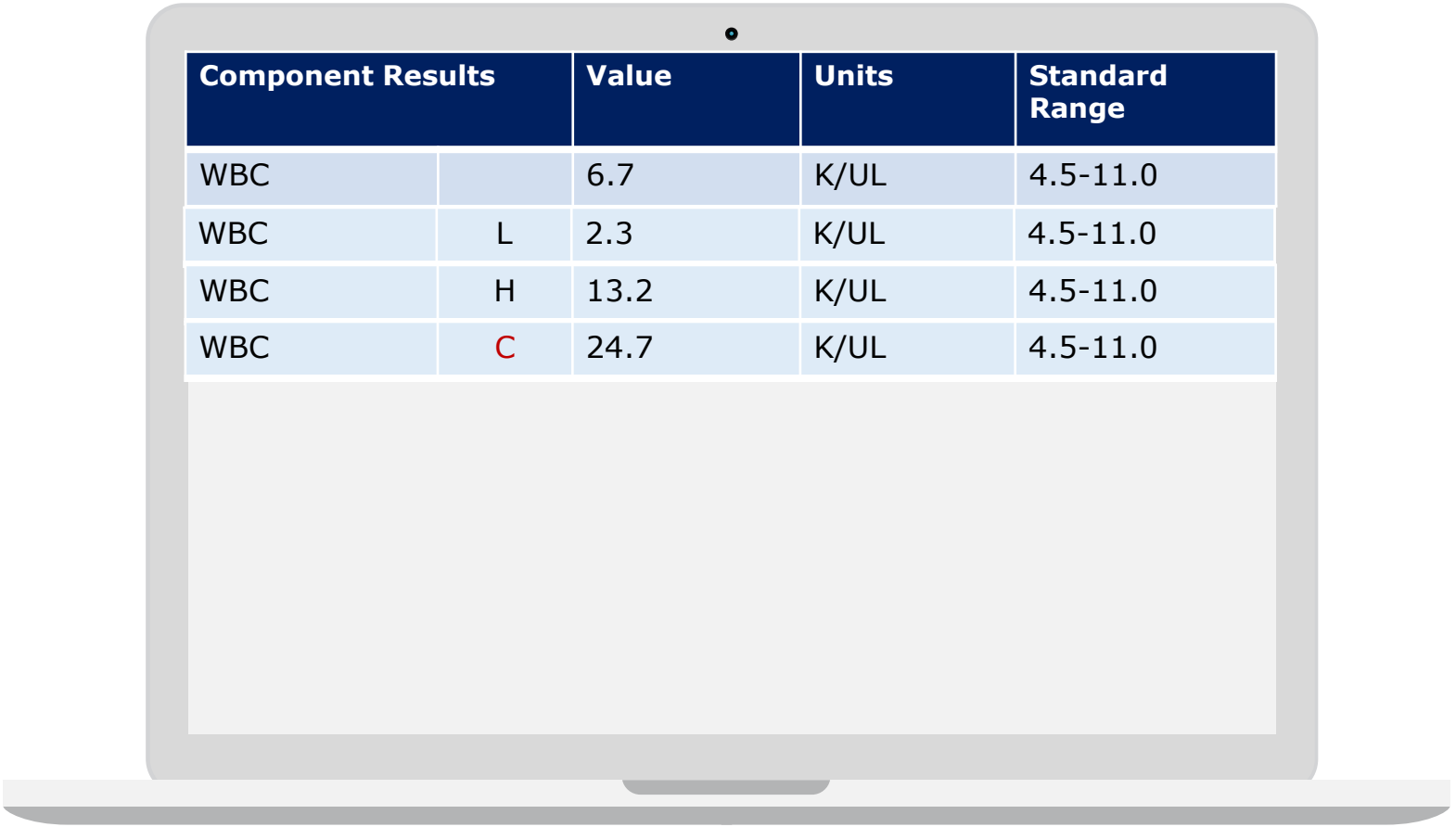
Component Results		Value	Units	Standard Range
WBC		6.7	K/UL	4.5-11.0
WBC	L	2.3	K/UL	4.5-11.0

Reading a Complete Blood Count



Component Results		Value	Units	Standard Range
WBC		6.7	K/UL	4.5-11.0
WBC	L	2.3	K/UL	4.5-11.0
WBC	H	13.2	K/UL	4.5-11.0

Reading a Complete Blood Count



Component Results		Value	Units	Standard Range
WBC		6.7	K/UL	4.5-11.0
WBC	L	2.3	K/UL	4.5-11.0
WBC	H	13.2	K/UL	4.5-11.0
WBC	C	24.7	K/UL	4.5-11.0

Complete Blood Count Test Results

Component Results		Value	Units	Standard Range
WBC	C	24.7	K/UL	4.5-11.0
RBC		4.51	MIL/UL	3.5-5.0
Hgb	L	11.1	G/DL	12.0-15.0
Hct		42.3	%	36.0-48.0
MCV		93.7	FL	79.0-101.0
MCH		31.2	PG	25.0-35.0
MCHC		33.3	%	31.0-37.0
RDW-CV		12.4	FL	11.0-16.0
Platelet Count		221	K/UL	150-420
MPV		9.8	FL	7-10
Bands		1	%	0-1

Quiz 1: Complete Blood Count

Component Results	Value	Units	Standard Range
WBC	10.7	K/UL	4.5-11.0
RBC	4.51	MIL/UL	3.5-5.0
Hgb	14.1	G/DL	12.0-15.0
Hct	42.3	%	36.0-48.0
MCV	93.7	FL	79.0-101.0
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RDW-CV	12.4	FL	11.0-16.0
Platelet Count	221	K/UL	150-420
MPV	9.8	FL	7-10
Bands	1	%	0-1

1. **Normal**
2. **Abnormal**
3. **Need More Info**

Quiz 2: Complete Blood Count

Component Results		Value	Units	Standard Range
WBC	C	24.7	K/UL	4.5-11.0
RBC		4.51	MIL/UL	3.5-5.0
Hgb	L	11.1	G/DL	12.0-15.0
Hct		42.3	%	36.0-48.0
MCV		93.7	FL	79.0-101.0
MCH		31.2	PG	25.0-35.0
MCHC		33.3	%	31.0-37.0
RDW-CV		12.4	FL	11.0-16.0
Platelet Count		221	K/UL	150-420
MPV		9.8	FL	7-10
Bands		1	%	0-1

1. **Normal**
2. **Abnormal**
3. **Need More Info**

Quiz 3: Complete Blood Count

Component Results	Value	Units	Standard Range
WBC	6.7	K/UL	4.5-11.0
RBC	4.51	MIL/UL	3.5-5.0
Hgb	14.1	G/DL	12.0-15.0
Hct	44.3	%	36.0-48.0
MCV	93.7	FL	79.0-101.0
MCH	30.2	PG	25.0-35.0
MCHC	33.3	%	31.0-37.0
RDW-CV	12.4	FL	11.0-16.0
Platelet Count	221	K/UL	150-420
MPV	9.2	FL	7-10

1. **Normal**
2. **Abnormal**
3. **Need More Info**

How **Should** It Be?

Component Results		Value	Units	Standard Range
WBC	L	2.7	K/UL	4.5-11.0
RBC		4.51	MIL/UL	3.5-5.0
Hgb	L	11.1	G/DL	12.0-15.0
Hct		42.3	%	36.0-48.0
MCV		93.7	FL	79.0-101.0
MCH		31.2	PG	25.0-35.0
MCHC		33.3	%	31.0-37.0
RDW-CV		12.4	FL	11.0-16.0
Platelet Count		221	K/UL	150-420
MPV		9.8	FL	7-10
Bands	P	*Pending*	%	0-1

I don’t see what you see

Thomas Duncan

Photo: Washington Post

Nurse Triage Screen

Test Patient **DOB:08/09/1978 :Male :38yrs** **MRN:00012342**	Loc: Hosp ED Admit 09/25/16	Att: Kim Martin, MD	Dosing weight: 85 kg	Allergies: No

Chief Complaint

Fever, abdominal pain, headache

Onset date and time

11/24/2016 XX:XX

Demonstrates signs and symptoms of the following

- (●) None
- ( ) Acute coronary syndrome
- ( ) Asthma
- ( ) Heart failure
- ( ) Infection
- ( ) Stroke

History of Present Illness

fever for 2 days with onsent abdominal pain and headache yesterday, worse today, no vomiting.

Have you traveled Internationally in the past 21

- (●) Yes
- ( ) No
- ( ) Unable to obtain

Location of recent travel

- (●) Africa
- ( ) China
- ( ) Iran
- ( ) Jordan
- ( ) Korea
- ( ) Kuwait
- ( ) Lebanon
- ( ) Middle East
- ( ) Qatar
- ( ) Saudi Arabia
- ( ) UAE
- ( ) Yemen

African countries visited:

- (●) None of the below
- ( ) Guinea
- ( ) Sierra Leone

U.S. Date returned

11/20/2016

Have you had close contact with a person that traveled to?

- ( ) None
- ( ) Africa
- ( ) China
- ( ) Middle East
- ( ) Unknown
- ( ) Unable to obtain

African countries traveled to:

- ( ) None of the below
- ( ) Guinea
- ( ) Sierra Leone

When did this person Return?

- ( ) No recent travel
- ( ) Within 21 days
- ( ) Within 14 days
- ( ) Within 7 days

When did you have close contact with this person?

- ( ) Not since return
- ( ) Within 21 days
- ( ) Within 14 days
- ( ) Within 7 days

Physician View Screen

Test Patient **DOB:08/09/1978 :Male :38yrs** **MRN:00012342**	Loc: Hosp ED Admit 09/25/16	Att: Kim Martin, MD	Dosing weight: 85 kg	Allergies: No

Patient Information ^

Chief Complaint	Fever, abdominal pain, headache

History of Present Illness ^

Fever for 2 days with onset abdominal pain and headache yesterday, worse today, no vomiting.

Vitals ^

Temp	**37**
HR	**62**
BP	**108/122**
Respiratory Rate	**16**

Allergies v

Home Medications v

Immunizations v

Past Surgery/Procedures v

Labs v

Add Order v



The New York Times

Monday, October 31, 2016 | Today's Paper | Video

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N.Y. / REGION | An Infection, Unnoticed, Turns Unstoppable

What Would New York Police Body Cameras Record?

Ex-Christie Aide Says He Was Duped About Bridge Lane Closings

As Crime on the Subway Comes Down, Signs From an Earlier Era Do Too

An Infection, Unnoticed, Turns Unstoppable

About New York

By JIM DWYER | JULY 11, 2012

Rory Staunton taking his first flying lesson in 2011.

Bloomberg the Company & Its Products | Bloomberg Anywhere Remote Login | Bloomberg Terminal Demo Request

Bloomberg Technology

Markets Tech Pursuits Politics Opinion Businessweek

Electronic-Record Gap Allowed Ebola Man to Leave Hospital

by Kelly Gilblom and Caroline Chen

October 3, 2014 — 6:09 PM EDT *Updated on* October 4, 2014 — 12:01 AM EDT

Dallas doctors never saw a nurse's note that an emergency room patient with fever and pains had recently been in Africa, and he was released into the community with Ebola.

The electronic records system at Texas Health Presbyterian Hospital didn't flag the

USA TODAY

Debate heats up over safety of electronic health records

Jayne O'Donnell and Laura Ungar , USA Today 6:19 p.m. EST February 3, 2015

THE WALL STREET JOURNAL.

Turn Off the Computer and Listen to the Patient

The practice of medicine is a subtle art. Doctors need to give patients their undivided attention.

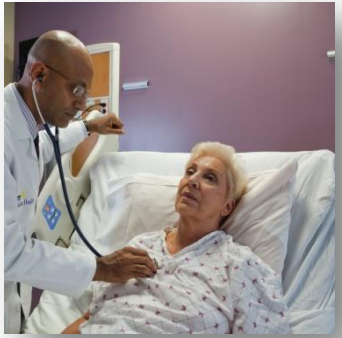
HealthITAnalytics

News and Resources for Healthcare Analytics Pros

EHRs Contribute to Patient Safety Risks, Communication Errors

Electronic Health Records

Frustrations linger around electronic health records and user-centered design



The Need for a Health IT Safety Collaborative

- Basic standards to prevent harm from occurring
- Sharing of usability and safety information
- Optimal policies to meet the needs of stakeholders

Thank You

Raj Ratwani, PhD
Raj.Ratwani@MedicalHFE.org
@RajRatwani

Rollin (Terry) Fairbanks, MD, MS
Terry.Fairbanks@MedicalHFE.org
@TerryFairbanks

Our Health IT Research Team:


Erica Savage


Zach Hettinger, MD, MS


Nat Benda, MS


Katie Adams

MedStar Health
National Center for
Human Factors in Healthcare

www.MedicalHumanFactors.net
www.HealthITUsability.org

Break

Visions for a multi-stakeholder partnership to improve health IT

- Doug Johnston, Director, Health IT Policy, RTI International
- Jeff Lerner, President and CEO, ECRI Institute
- Michael McGinnis, Executive Officer, National Academy of Medicine
- Jim Russell, Chief Patient Safety Officer, Epic
- Joy Tobin, Chief of Health Informatics, The MITRE Corporation
- *Moderator: Andrew Gettinger, Chief Medical Information Officer, Office of Clinical Quality and Safety, ONC*

Health IT and Patient Safety

Building Safer Systems for Better Care

INSTITUTE OF MEDICINE

OF THE NATIONAL ACADEMIES

Committee Members

Gail L. Warden (*Chair*), *Henry Ford Health System*
James P. Bagian, *University of Michigan*
Richard Baron, *Greenhouse Internists*
David W. Bates, *Brigham and Women's Hospital*
Dedra Cantrell, *Emory Healthcare, Inc.*
David C. Classen, *University of Utah*
Richard I. Cook, *University of Chicago*
Don E. Detmer, *American College of Surgeons and University of Virginia School of Medicine*
Meghan Dierks, *Harvard Medical School and Beth Israel Deaconess Medical Center*
Terhilda Garrido, *Kaiser Permanente*
Ashish Jha, *Harvard School of Public Health*
Michael Lesk, *Rutgers University*
Arthur A. Levin, *Center for Medical Consumers*
John R. Lumpkin, *Robert Wood Johnson Foundation*
Vimla L. Patel, *New York Academy of Medicine and Columbia University*
Philip Schneider, *University of Arizona College of Pharmacy*
Christine A. Sinsky, *Medical Associates Clinic and Health Plans*
Paul C. Tang, *Palo Alto Medical Foundation and Stanford University*

IOM Study Staff
Samantha M. Chao
Pamela Cipriano
Herbert S. Lin
Jensen S. Jose
Joi D. Washington
Roger C. Herdman

HIT and Patient Safety 2011

TABLE OF CONTENTS

HIT and Patient Safety Recommendations

1.	Impact Assessment Plan	HHS
2.	Vendor Transparency	HHS
3.	User Experience Sharing	HHS/ONC
4.	HIT Safety Council	HHS
5.	HIT Product Registry	HHS/ONC
6.	HIT Vendor Requirements	HHS
7.	Sentinel Event Reporting	HHS
8.	Sentinel Event Assessment	HHS/Entity
9.	Annual Report	HHS
10.	HIT Work Flow Research	HHS

A Roadmap for a National Health IT Safety Collaborative

Doug Johnston
RTI International

Disclosure

- Speaker discloses that he has no relationships with commercial interests.

- The views expressed herein do not necessarily represent the views of the Department of Health & Human Services or the United States Government (5 CFR §2635.807).

Access the roadmap: www.healthitsafety.org

Roadmap Task Force

Bridge Street Medical Group

MedStar Health

TEXAS TECH UNIVERSITY
HEALTH SCIENCES CENTER
School of Nursing

Collaborative Vision and Objectives

Safer systems, better care using health IT

- **Shared learning, shared responsibility**
- **Solutions-focused**
- **Built upon private sector initiatives**
- **Committed to clinicians and patients**

- **Public-private partnership**
- **Trusted, learning, nonpunitive environment**
- **Transparent**

Core Functions Focus on Solutions

Convening

- Assemble stakeholders to identify critical health IT safety issues and identify needed solutions

Researching

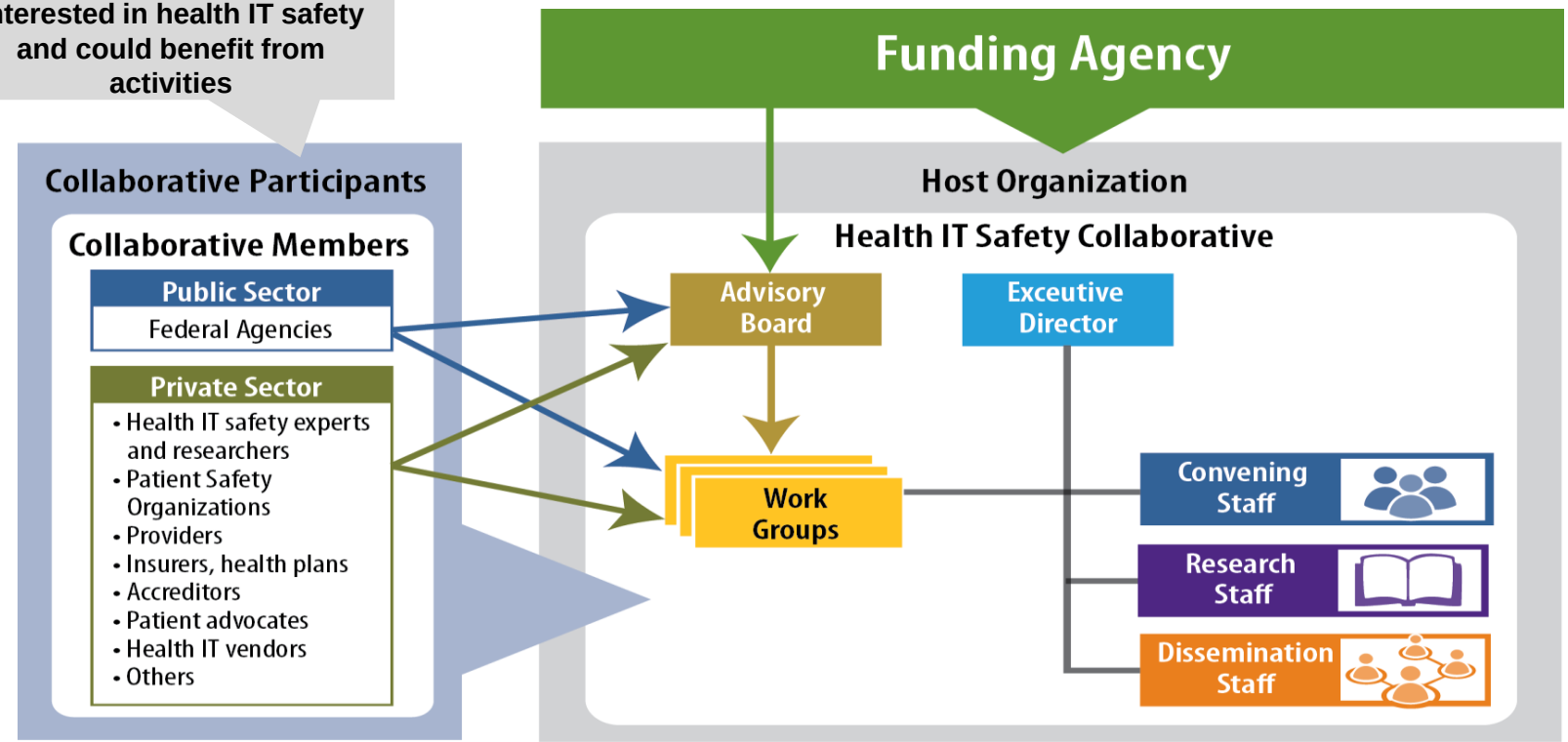
- Collect and assess existing analysis of health IT safety event data
- Identify existing solutions (best practices, tools, etc.)

Disseminating

- Promote and distribute Collaborative work products

Organization Model

Collaborative would be inclusive – open to anyone interested in health IT safety and could benefit from activities



Funding Source and Approach

Proposed Funding Source

- 5 year Cooperative Agreement to host organization
- Awarded through open competition
- Rapid launch to existing organization
- Mix of direct funding agency involvement and host organization flexibility to work towards sustainability and autonomy

Funding Scenarios (5 Year Ranges)

- 100% (optimal): $17.8 – $20.6M
- 75%: $12.9 – $14.9M
- 50%: $9.1 – $10.5M

Phased Approach

- Phase 1: Year 1 – Start-Up
- Phase 2: Years 2-3 – Establishment
- Phase 3: Years 4-5 – Sustainability

Thank You

djohnston@rti.org

Visions for a multi-stakeholder partnership to improve health IT

Jim Russell

Chief Patient Safety Officer

Epic

National Patient Safety Partnership

A MITRE Pilot Program

December, 2016

MITRE

Purpose

Create a partnership to facilitate the collection, analysis, and sharing of data to better understand precursors to safety events

Reduce Errors

Improve Care

Reduce Costs

Translate Best Practice from Aviation to Healthcare

Reactive analysis

Proactive analysis

- ***"What went wrong?"***

"What COULD go wrong?"

MITRE

Public Private Partnership for Aviation Safety is the Model

A *collaborative* Government and Industry initiative on *data sharing & analysis* to proactively discover safety concerns *before accidents* or incidents occur, leading to *timely mitigation* and prevention.

Success Characteristics of the Aviation Safety Model

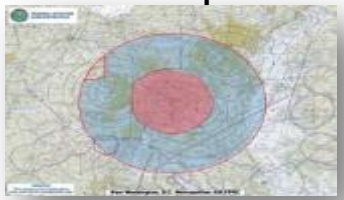
- Fuse diverse data
- Engage all stakeholders
- Use advanced analytics
- Aviation experts and data scientists work side by side
- Focus on pattern recognition, not individual accidents

Leverage Diverse Data Sets

Aviation

De-identified User Reports

De-identified Digital Flight Data



ATC Information

Weather

Healthcare

EHR Data

Safety Event Reports

Physiologic Data

Administrative Data

MITRE

At a Glance

Goals

Create a public-private partnership to discover new insights and interventions in health safety

Boston Children's Hospital
Until every child

MITRE

Children's National

Cincinnati Children's Hospital Medical Center

Approach

Shared data: The whole is greater than the sum of the parts

Expertise: Partner clinicians with data scientists

Data science: Apply advanced analytics to foster new discoveries

Expected Outcomes

Improved Care, Cost, and Quality

- Reduce adverse events in health care
- Save lives, avoid injuries, and save health care costs
- Reduce waste and inefficiency

Initial Projects Covered Diverse Range of Topics

Safety Event Analysis

Alarm Fatigue

Patient Deterioration

Medication Safety

PARTNERSHIP for HEALTH IT PATIENT SAFETY

Making healthcare safer together

Jeffrey Lerner, PhD
President and CEO
ECRI Institute

ECRI Institute

The Discipline of Science. The Integrity of Independence.

Partnership Goals

Making health IT safer together by:

- Establishing a nonpunitive environment for sharing and learning
- Testing a collaborative model for collecting and analyzing safety issues
- Achieving robust stakeholder engagement
- Sharing best practices and lessons learned
- Informing the national safety strategy for health IT

Multi-Stakeholder Collaboration

PARTNERSHIP for HEALTH IT PATIENT SAFETY
Making healthcare safer together

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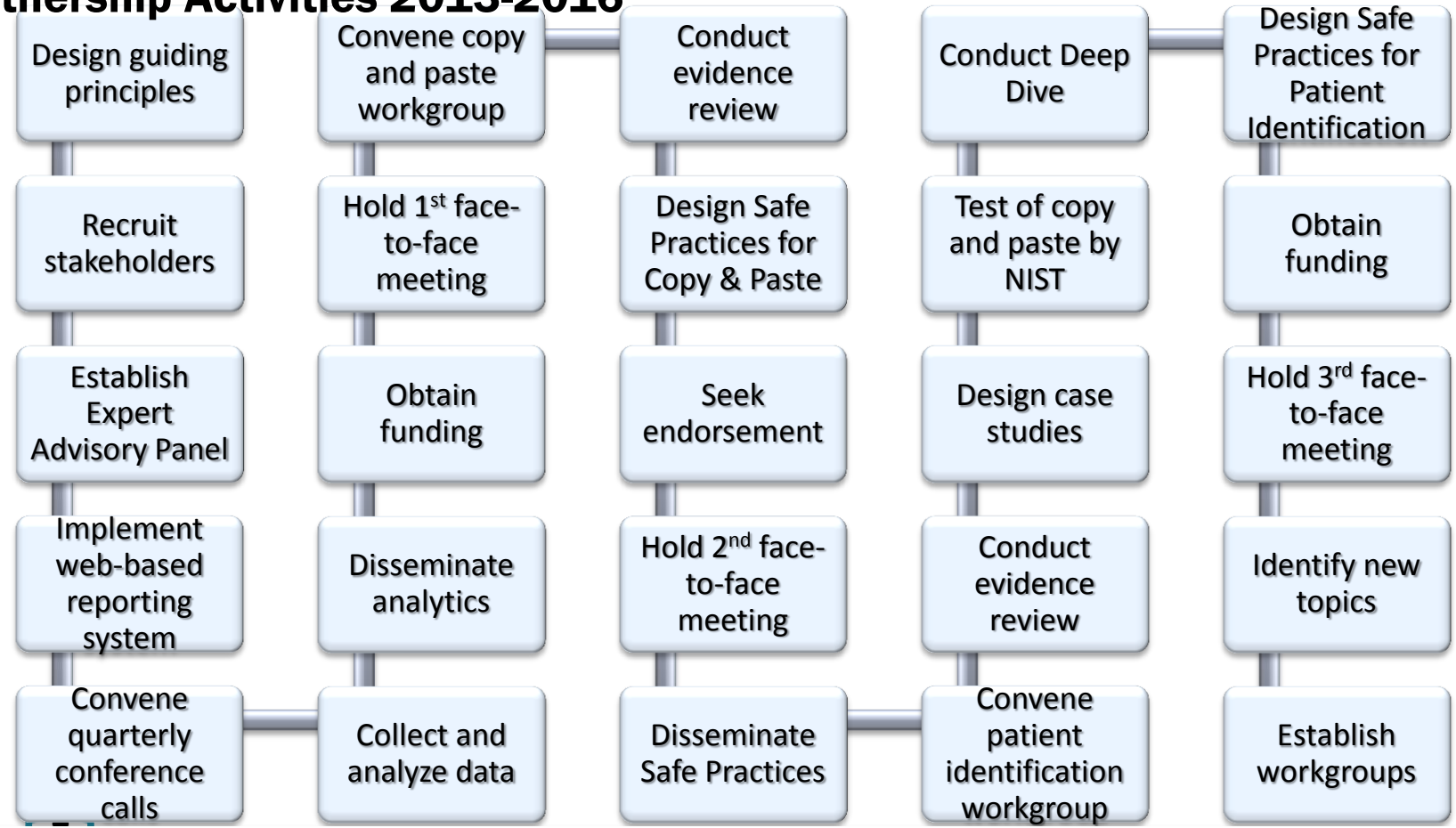
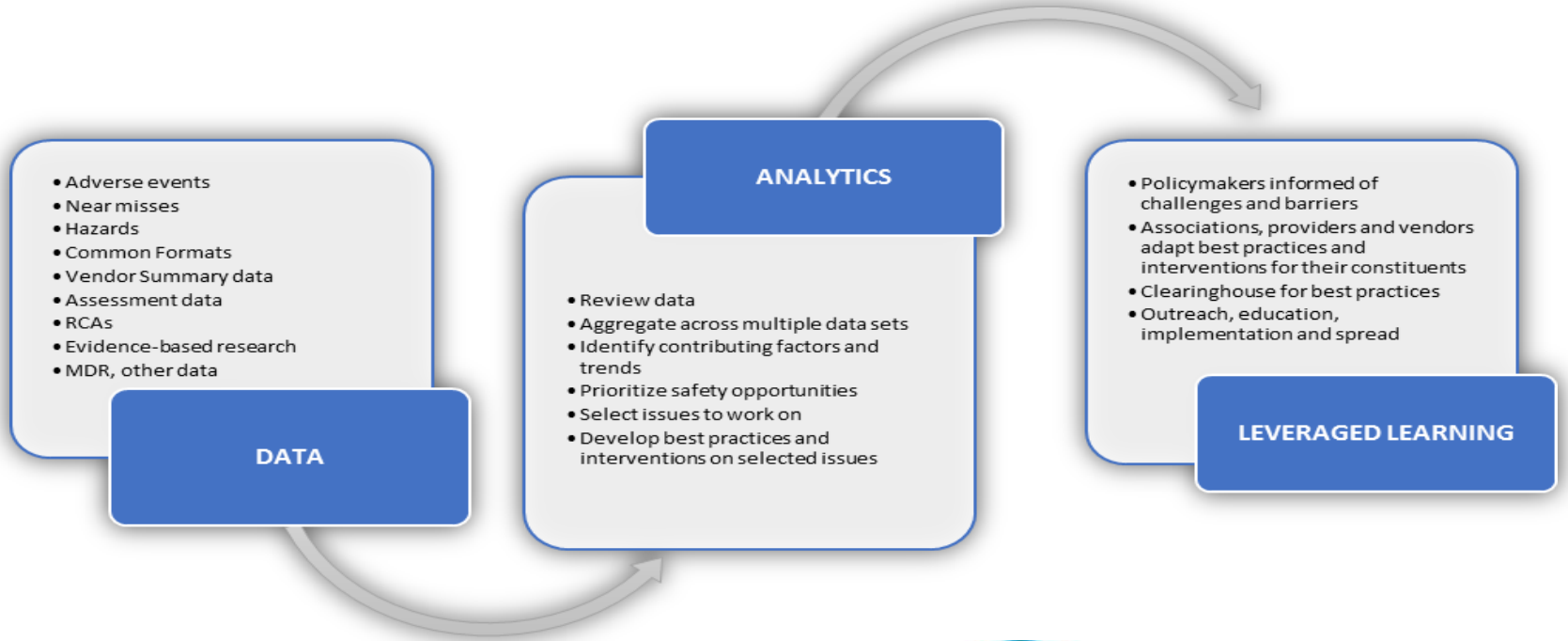
Partnership Activities 2013-2016



Engage, Analyze, Develop, Disseminate, Implement

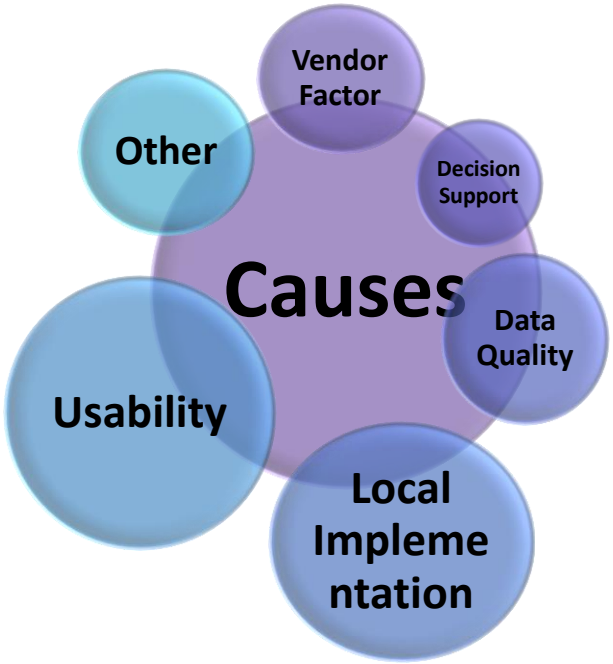
Data, Analytics, Leveraged Learning



PARTNERSHIP *for*
HEALTH IT PATIENT SAFETY
Making healthcare safer together

Usability Issues

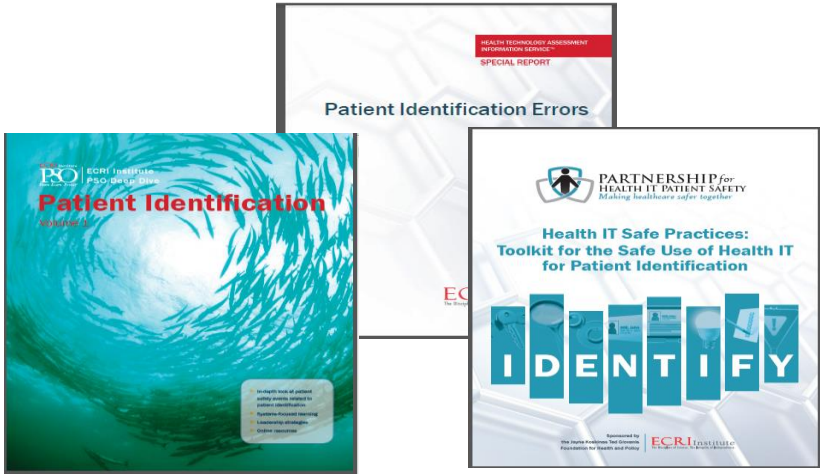
- ✓ Confusing information display
- ✓ Mismatch between workflows and HIT
- ✓ Mismatch with user expectations
- ✓ Difficult data entry
- ✓ Inadequate user feedback
- ✓ Information hard to find
- ✓ Sub-optimal support of teamwork
- ✓ Excessive demand on human memory



Safe Practices Development

Copy and Paste Patient Identification

- Analyzed 7,613 Events Reported to ECRI Institute PSO



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Thank You

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Visions for a multi-stakeholder partnership to improve health IT

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- *Moderator: Andrew Gettinger, Chief Medical Information Officer, Office of Clinical Quality and Safety, ONC*

Perspectives from the aviation industry on a safety collaborative

- Peggy Gilligan, Associate Administrator for Aviation Safety, Federal Aviation Administration
- Paul Morell, Vice President – Safety, Regulatory Compliance and Environmental, American Airlines
- Michael Quiello, Vice President – Corporate Safety, United Airlines
- *Moderator: Teresa Zayas Caban, Senior Advisor to the Deputy National Coordinator, ONC*

Lunch & breakout sessions

Pick up box lunches and proceed to breakout sessions:

- *Red: Data collection (European Union Room—2nd floor)*
- *Yellow: Information dissemination (Arctic Room—3rd floor)*
- *Orange: Stakeholder roles (Oklahoma Room—3rd floor)*
- *Green: Business models (Hawaii Room—3rd floor)*
- *Blue: Governance structure (Alaska Room—4th floor)*
- *Black: Culture of safety (New Mexico Room—3rd floor)*

Readout of breakout sessions on a health IT safety collaborative

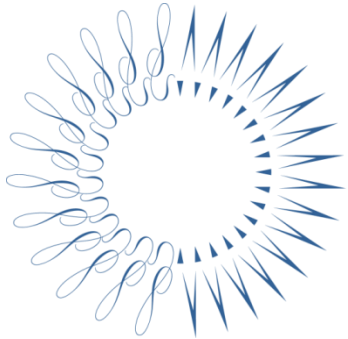
- Breakout 1: Dean Sittig, Professor, UTHealth School of Biomedical Informatics
- Breakout 2: Allen Vaida, Executive Vice President, Institute for Safe Medication Practices
- Breakout 3: David Classen, Chief Medical Information Officer, Pascal Metrics
- Breakout 4: Doug Johnston, Director, Health IT Policy, RTI International
- Breakout 5: Elisabeth Belmont, Corporate Counsel, MaineHealth
- Breakout 6: Jeanie Scott, Director, Informatics Patient Safety, Department of Veterans Affairs
- *Moderator: Josh Rising, Director, Healthcare Programs, The Pew Charitable Trusts*

Stakeholder perspectives on an EHR safety collaborative

- Peggy Binzer, Executive Director, Alliance for Quality Improvement and Patient Safety
- Pam Cipriano, President, American Nurses Association
- Jesse Ehrenfeld, Board of Trustees, American Medical Association
- Richard Landen, Director of Regulatory Affairs, QuadraMed Corp.
- Chantal Worzala, Vice President, Health Information and Policy Operations, American Hospital Association
- *Moderator: David Hunt, Medical Director, Office of Clinical Quality and Safety, ONC*

Conclusion and next steps

- Andrew Gettinger, Chief Medical Information Officer, Office of Clinical Quality and Safety, ONC
- Josh Rising, Director, Healthcare Programs, The Pew Charitable Trusts



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#HealthITSafetyDay

Thank you for attending *Health IT Safety Day*

The Office of the National Coordinator for Health Information Technology