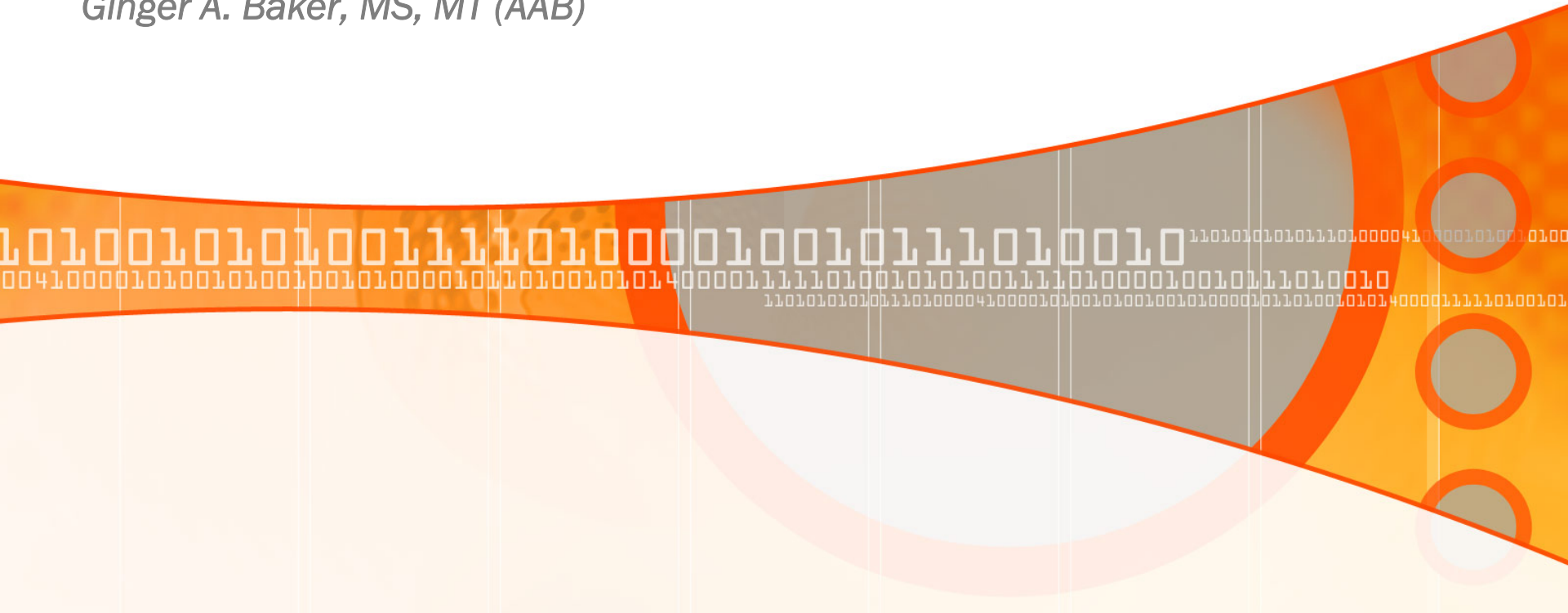


Preparing for a New Era in Health Care

The Integrated Electronic Health Records System

Presented by

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Objectives

Build a foundation of understanding:

- *The ARRA and HITECH Act and it's Federal parts*
- *The definition of "Meaningful"*
- *What this change means for the Laboratory and Point of Care Testing Programs*
- *Where to begin*

Why is this the focus of the Federal government?

To ensure quality, safety and improved patient outcomes

- *70% reduction in errors*
- *Improved patient outcomes through use of evidence based care*
- *Reduced patient stay by 2.5 days*
- *16% savings in patient care delivery in outpatient settings*

What is the ARRA?

*American
Reinvestment and
Recovery
Act*

Otherwise known as the Stimulus Plan.



What is the HITECH Act?

Health

Information

Technology for

Economic and

Clinical

Health

The portion of ARRA focused on setting a standard for electronic health records systems.



What is the role and function of the ONC?

*Office of the
National
Coordinator for Health Information*

*The US Department of Health and Human Services official
charged with guiding the nation through HITECH.*



What is “Meaningful”?

A “Meaningful” system will

1. Use CPOE
2. Implement drug-drug and drug-allergy interaction checks
3. Generate and transmit permissible prescriptions electronically (eRx)
4. Record demographics (race, gender, date of birth, ethnicity, language preference, etc)
5. Maintain problem list of current and active diagnoses
6. Maintain an active medication list
7. Maintain and active allergy list
8. Record and chart changes in vital signs (height, weight, BMI, Blood pressure, growth charts for those 2-20 yrs)
9. Record smoking status for patients 13 years old or older
10. Implement one clinical decision support rule relevant to specialty with the ability to track compliance to that rule
11. Report ambulatory care quality measures to CMS or the States
12. Engage patients and families in their health care by
 1. Record advance directives for patients 65 years old or older
 2. Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, medication allergies), upon request
 3. Provide patients with an electronic copy of their discharge instructions at time of discharge, upon request
 4. Provide clinical summaries for patients for each office visit
 5. Send reminders to patients per patient preference for preventive/follow-up care
 6. Provide summary care record for each transition of care and referral
13. Exchange key clinical care information
14. Protect electronic health information
15. Perform medication reconciliation at relevant encounters and each transition of care
16. **Incorporate clinical lab-test results into certified EHR technology as structured data**
17. Generate lists of patient by specific condition for quality improvement, reduction of disparities, research and outreach
18. Improve care coordination between providers and care facilities
19. Submit electronic data to immunization registries to improve public health
20. Submit electronic data for syndromic surveillance to public health agencies

Remember: the Phase 2 and 3 rules have not been ratified or published.

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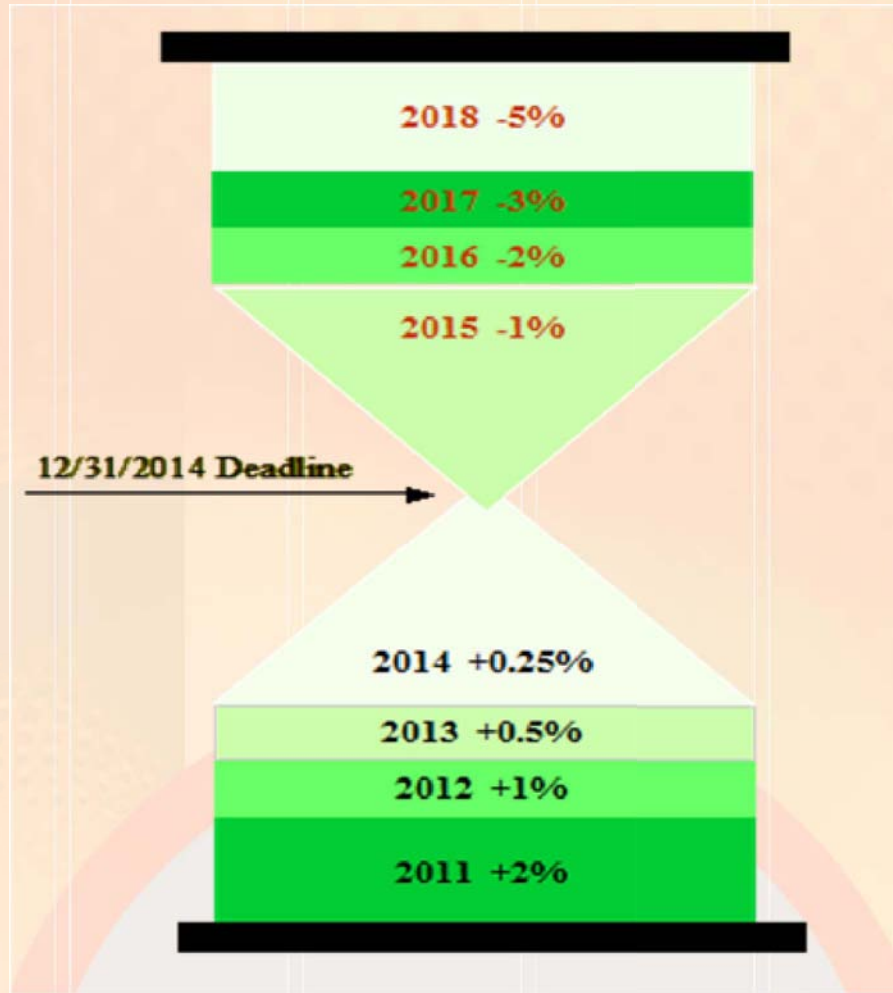
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Why is utilizing a meaningful system critical?

Reimbursement for services from Medicare will depend on it.



What does this mean for Point of Care Testing Programs?

Patient Flow Comparison in Minutes			
Milestone	Current Practices	With EHR	With EHR and POCT ¹
Ambulance transport	15	15	15
ED assessment	10	10	15
Order transcription	7	1	1
Call to action ²	10	5	5
Lab test turnaround	35	35	(NA for initial diagnosis)
Check back for results to determine treatment	15 (check back for paper or e-copies)	5 (with PDA notification)	(NA – POCT results available during assessment and charting)
TOTAL TIME FROM ONSET	102	81	46
Average length of stay	6 days	4 days	3 days

1. POCT for potential cardiac event = cardiac enzymes, UA dipstick . With breathing issues = add blood gases and BNP.
2. Period between notification and activity: lab specimen collection, X-ray, etc.

What does this mean for Point of Care Testing Programs?

- *Connectivity of all devices is critical*
- *Entry of all manual POCT at the time of performance is critical*
- *LEAN, six sigma patient identification processes are vital*
- *Making POCT chart on the EMR in real-time will be key to meaningful certification*
- *The Point of Care department will become as large and complex as the Chemistry department*

How do you ensure your POCT Programs will be meaningful?

Ask

- 1. Where do POCT results appear in the patient's electronic medical record?*
- 2. Is it clear that they are POCT results?*
- 3. Do normal or reference ranges appear with the results?*
- 4. Would this make sense to someone outside my organization?*

The answers should be the same for POCT and Lab results.

What does this mean for the Lab?

Information must be freed from its paper prison.

- *“See Report” must become a thing of the past.*
- *Histograms, graphs, photos and other paper reports must become electronic even if it means scanning and attaching to the result.*
- *Computerized Provider Order Entry, CPOE, will drive the Lab to actively educate and communicate with providers to be successful.*

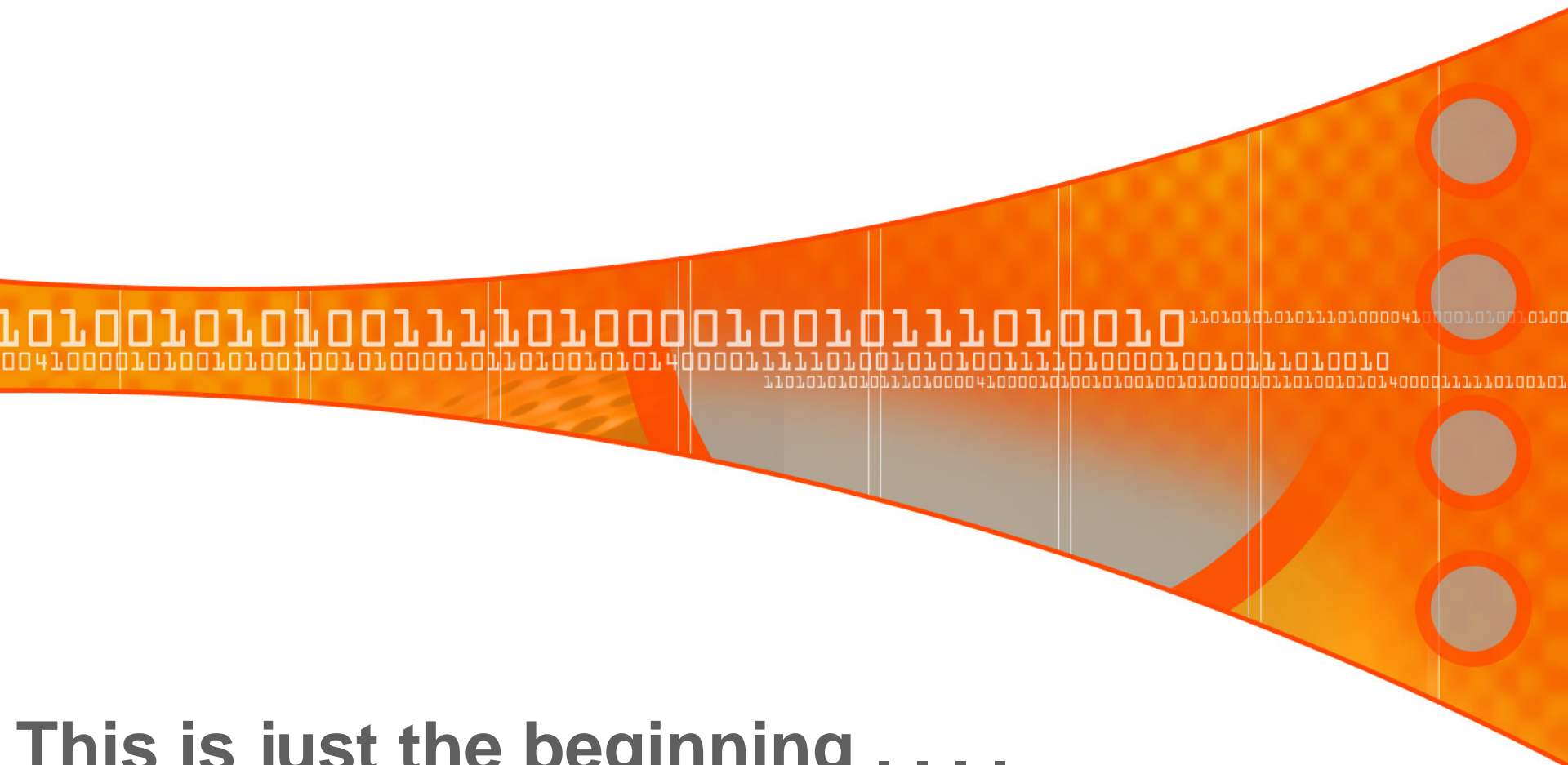
What does this mean for our health care organizations?

Total process re-engineering

- *A thorough examination of every aspect of how we provide health care, from the provider to housekeeping needs to be reviewed and revised.*
- *Algorithms will need to be developed to facilitate those steps people did in their minds while passing pieces of paper.*

Where do we start this transition?

1. *Become an active and vocal advocate for the patient and the lab.*
2. *Keep a very open mind.*
3. *Invite others into the Lab to review your processes, question your reasoning and offer a fresh perspective.*
4. *Take every opportunity to share what we do and build understanding. The Lab is second only to nursing services in its importance in patient care.*



This is just the beginning

From Patient to Caregiver

At the bedside

- Patient are identified,
- Testing is performed,
- And results upload to the electronic record,



Caregiver to Hospital

Information travels from the patient's bedside, to the hospital system.
Every member of the health care team can see results in real time.



Hospital to Community

Regional HIEs
receive,
transmit
and safeguard PHI



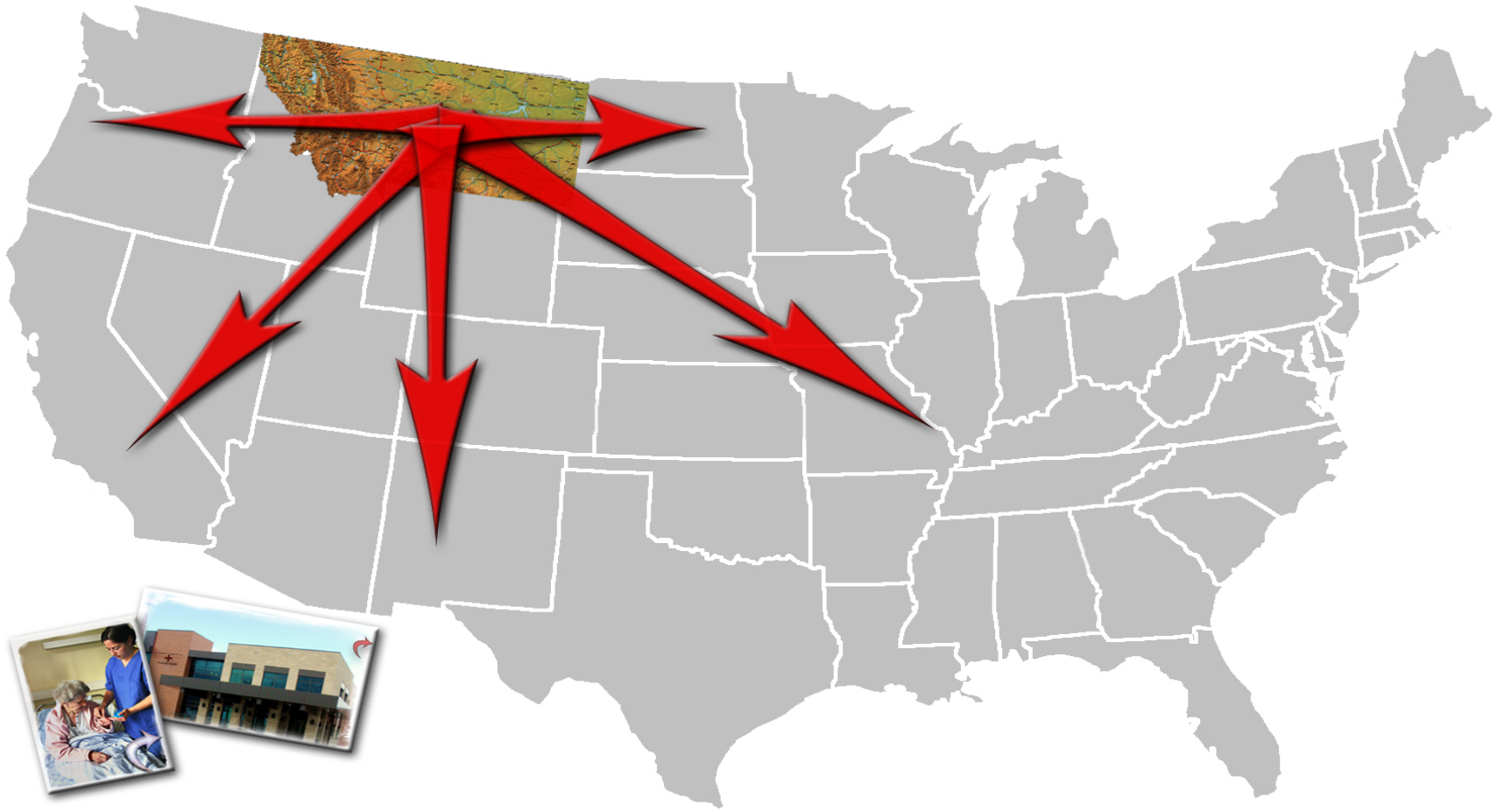
Regional Center to National Database



*Health care facilities
large and small, urban and rural,
can share and access patient information.*



A New Era in Health Care: the Integrated Electronic Health Record



Connecting the Pieces and Making Care Safer



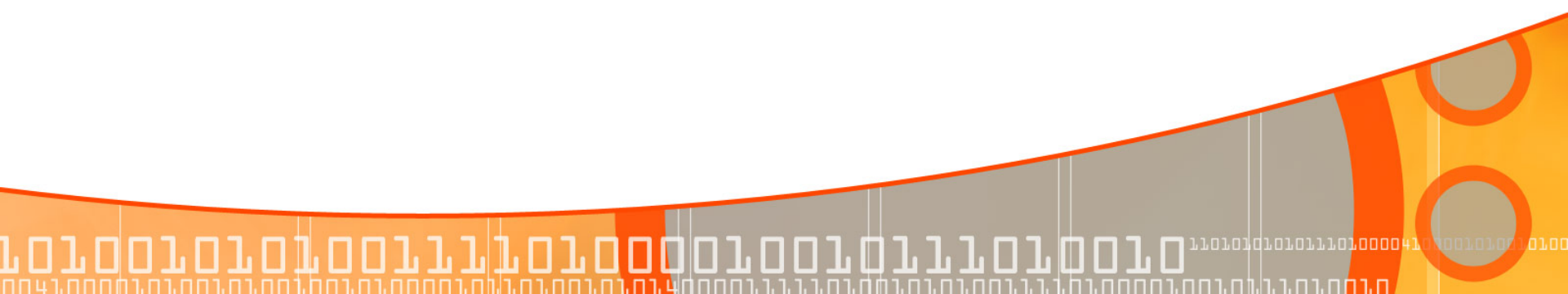


Thank you

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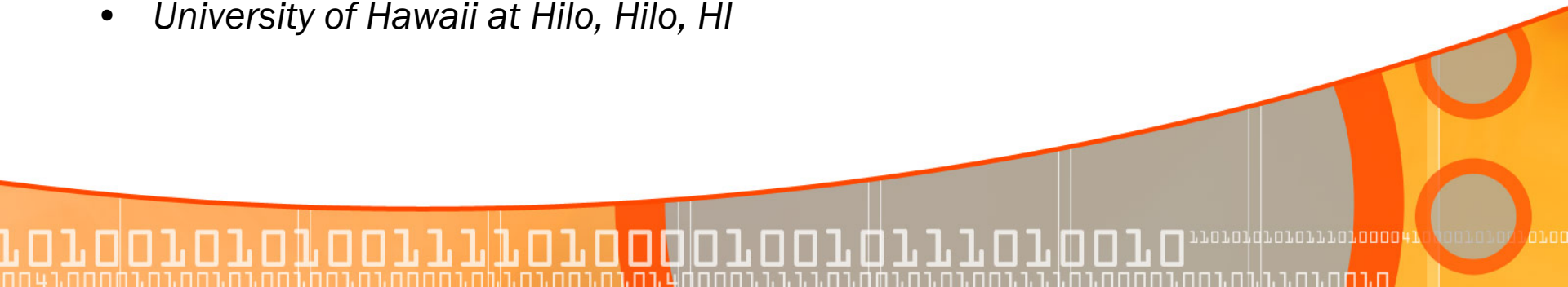
Terms and Definitions

- *EMR – electronic medical record; a portion of the total electronic record; from a single location*
- *EHR – electronic health record; the compiled complete electronic record; from multiple locations*
- *LIS – lab information system, electronic records processing system focused on laboratory function only*
- *HIE – health information exchange; a nexus of multiple EHR systems where information is shared securely*
- *RHIE – regional health information exchange; a nexus of multiple HIE systems where information is shared securely*
- *PHI – Patient Health Information; all information associated with the patient health services*
- *ICE – integrated clinical electronics; a complex system designed to pull information from multiple sources and apply an algorithm to determine further steps in patient care*
- *ARRA – American Reinvestment and Recovery Act of 2009; the Stimulus Plan*
- *HITECH – Health Information Technology for Economic and Clinical Health Act*
- *ONC – Office of National Coordinator for Health Information Technology; the person with the US Department of Health and Human Services who provides the vision and direction to fulfill HITECH*
- *CPOE – Computerized Provider Order Entry, also called CPOM (Computerized Provider Order Management) is the process where the provider directly enters and manages patient care order electronically*



ONC Beacon Community Awardees List

- *Eastern Maine Healthcare Systems, Brewer, ME*
- *Rhode Island Quality Institute, Providence, RI*
- *Geisinger Clinic, Danville, PA*
- *Western New York Clinical Information Exchange, Inc., Buffalo, NY*
- *Southern Piedmont Community Care Plan, Inc., Concord, NC*
- *Indiana Health Information Exchange, INC., Indianapolis, IN*
- *Delta Health Alliance, Inc., Stoneville, MS*
- *Mayo Clinic Rochester, d/b/a Mayo Clinic College of Medicine, Rochester, MN*
- *Louisiana Public Health Institute, New Orleans, LA*
- *Community Services Council of Tulsa, Tulsa, OK*
- *Rocky Mountain Health Maintenance Organization, Grand Junction, CO*
- *HealthInsight, Salt Lake City, UT*
- *Inland Northwest Health Services, Spokane, WA*
- *The Regents of the University of California at San Diego, San Diego, CA*
- *University of Hawaii at Hilo, Hilo, HI*



References

1. *Healthcare IT Standards* <http://www.hitsp.org/default.aspx>
2. *National Care Quality Awards* <http://www.ncqa.org/>
3. *HITECH* <http://hitechanswers.net/category/blog>
4. *HIMSS* <http://www.himss.org/EconomicStimulus/>
5. *ARRA* http://www.recovery.gov/About/Pages/The_Act.aspx
6. *Emerging HIT* <http://www.emerginghealthit.com/body.cfm?id=97>
7. *CMS Pay for Performance*
<http://www.cms.hhs.gov/apps/media/press/release.asp?Counter=1343>
8. *Lab Quality Confab* <http://www.labqualityconfab.com/>
9. *ALPERT AND THYGESEN, ET AL., MYOCARDIAL INFARCTION REDEFINED*
JACC Vol. 36, No. 3, September 2000:959–69
10. *Myocardial Infarction Redefined—A Consensus Document of The Joint European Society of Cardiology/American College of Cardiology Committee for the Redefinition of Myocardial Infarction*
11. *Health Information Technology for the Future of Health and Care found at*
<http://healthit.hhs.gov/portal/server.pt?open=512&mode=2&cached=true&objID=1200>
12. *HITECH Act Enforcement Interim Final Rule found at*
<http://www.hhs.gov/ocr/privacy/hipaa/administrative/enforcementrule/hitechenforcementiffr.html>