

Standards and Clinical Operations Technology

Achieving Value Using HIT Standards For Patient-Centered Care

Jamie Ferguson, Fellow of Institute for Health Policy and VP of Health IT, Kaiser Permanente



Agenda

US Standards For EHR Certification And Meaningful Use of EHRs

Current US Standards For Health Information Exchange

Learning From Worldwide Use Of Health IT Standards

Choices For Resource-Constrained Patients, Clinicians And Hospitals

US Health IT Standards For EHRs and HIE

US Health IT – Key Standards Used In EHRs

MU Stage 1 Timing Final	MU Stage 2 Timing Recommendations	MU Stage 3 Timing Under Discussion
<ul style="list-style-type: none">■ Most EHR messaging to use HL7 v2.5.1■ Care summary documents use HL7 CCD , or ASTM CCR■ Problem List uses SNOMED or ICD-9	<ul style="list-style-type: none">■ Quality measures to use SNOMED, LOINC and RxNorm■ Care plans may be represented in CCD■ Problem List to use SNOMED or ICD-10■ HIE to use IHE Health Provider Directory (HPD)	<ul style="list-style-type: none">■ E-Prescribing must use RxNorm semantic drug and package names■ Claim attachments??■ Problem List to use SNOMED CT

US Health IT – Key Mechanisms Used In HIE

PHR, Web, & Blue Button

- Unstructured free text
- Variety of standards and mechanisms employed
- Limited content/vocab standards

Direct Project eMail

- MIME, s/MIME, SMTP
- Unstructured free text
- IHE XDM is optional
- Limited content/vocab standards

Vendor Proprietary

- Vendor-specific content specs tied to vendor EHR data model
- No vocab standards

NwHIN Exchange

- IHE XCA, SOAP
- HL7 CDAR2 content specs
- SNOMED and LOINC vocab standards

Learning From Worldwide Health IT Standards

HIT Standards In Other Developed Countries

Learning from national models elsewhere

- HL7 standards–based national models
 - Canada, Australia and EU countries creating integrated, patient-centered data
- ISO CEN 13606 standards–based models
 - EU requires a certain level of national compliance with CEN 13606
 - Sweden is building the first 13606-based national EHR system
- UK Logical Record Architecture (LRA)
 - Ability to implement HL7 CDA templates based on national information model while maintaining EU compliance with ISO CEN 13606 archetypes
 - Successful LRA pilot last year with hospital discharge records

HIT Standards In Less Developed Countries

Learning from resource-constrained countries

■ Kenya

- Integrated systems/measures for HIV/AIDS screening and care, using SMS
- Extensive use of mobile technologies, SIM card + password = patient ID
- National integration of health financing with micro-credit on mobile applications
- Drug and vaccine supply chain integrated but not highly automated

■ Rwanda

- Rapid adoption of HIT, leveraging the Canadian national e-health architecture
- High adoption of EHRs with standard coding and analytics for HIV and Malaria
- Integrated maternal & child health national programs using SMS texting
- National mobile banking infrastructure integrates government health payments, private insurance health payments and micro-credit

Results From Clinical Operations HIT Experience

- Results of integrated care with HIT in Africa
 - Rwanda national life expectancy increased from 36 years to 54 years
 - Maternal mortality in pregnancy and childbirth reduced by over 90%
- Results of integrated care with computable HIT in Northern California
 - About 25% fewer deaths from heart attacks than NCal as a whole
 - About 65% fewer serious heart attacks that do permanent damage
- Results of integrated care with computable HIT across the US
 - Highest screening rates for breast cancer, HIV/AIDS
 - Progressive results with diabetic nephropathy

HIT Implementation Experience Worldwide

- HIT can improve health and healthcare, a lot.
- HIT alone is not enough
- HIT with standards can get significant health improvement results when implemented in a vertically integrated care delivery system

Making Choices To Obtain Value

Using Standards To Achieve Health

- The results are in:
Using patient-centered, standardized computable HIT data in vertically integrated delivery systems can improve health
- Some HIT standards enable computable data to be used across organizational and jurisdictional boundaries
- Other standards do not
- We are all resource-constrained. Where will you apply your resources?