

The Role of Health Information Technology in Improving Health Care

The HIT Symposium
Massachusetts Institute of Technology
July 1, 2009

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Overview

- High recent emphasis on quality measures to improve healthcare quality
- Medicare Quality Measurement Programs
- Claims, Charts, Registries, Assessment Instruments with preparation for EHR reporting
- EHR's opportunities and challenges
- CMS status in moving to E H R for Quality Measurement Reporting

IMPORTANCE OF HIT

- Improves patient safety and healthcare quality
- Reduces costs
- Increase in Quality Improvement and measurement

Patient Safety

- Error avoidance
 - Warning/alert systems
- Disease and high-risk management
 - Risk profile patients
- Wellness and primary prevention
- Complete patient information
- Legible records
- Following guidelines
- Special population management

Cost Reduction

- Estimated \$40-80 billion potential savings through reduction in:
 - Transcription
 - Nursing care time
 - Chart pulls (increase efficiency)
 - Drug utilization
 - LOS
 - Duplicate tests (rads/labs)

Cost Reduction

- eRx (alone)
 - 2 million adverse drug events/yr
 - 130k life-threatening
 - 9.7% of pts suffer a permanent disability
 - Estimates up to \$27 billion/yr
 - Can increase LOS by 4.6 days
 - Reduces calls and faxing to/from pharmacy
 - Automates renewal and authorization process

Quality Improvement/Measurement

- Reminders to provider for tests/recall
- Lab tracking
- Easier to compile and analyze outcomes data
- Increase utilization of appropriate care
- Improve assessment of patient compliance
- Improvement in communication between caregivers
- Possible assist in move to Medical Home model
- Ease of reporting quality information

HIT PROJECTS IN CMS

- EHR Demo
- ERx Incentive program
- PQRI
 - Registry use to collect quality data
 - EHR structural measure
 - EHR testing and qualification process
 - Possible future EHR use in PQRI
 - 10+ measures with electronic specifications
- 9 SOW
 - 4 measures to be collected electronically

CCHIT and CMS

- Working to certify stand-alone eRx systems
- CCHIT certification required for EHR demo
 - Programs must be certified to be used in this demo
- Preferred in CMS' PQRI HIT measure
 - (allows phase-in period)

Uses of Quality Measures

- Quality Improvement Projects
- Public Reporting
- Basis for Financial Incentives
- One of HITECH Act Meaningful Use criteria for Medicare Incentives

HITECH Act

- Encompasses Titles XIII and IV (Medicare and Medicaid) of the American Recovery and Reinvestment Act (Recovery Act).
- **Title IV**
 - Medicare and Medicaid Incentives Programs
- **Title XIII**
 - Mainly deals with the responsibilities of the Office of the National Coordinator
 - Has a number of grant and loan programs that have state implications

Title IV

- **Medicare**

- Section 4101-Provides financial incentives beginning with CY2011 for Medicare eligible professionals (EPs) who are meaningful EHR users, followed by financial penalties beginning with 2015 for EPs who are not meaningful EHR users.
- Section 4102-Provides financial incentives beginning with FY2011 for eligible subsection (d) hospitals and critical access hospitals (CAHs) that are meaningful EHR users, followed by financial penalties beginning in 2015 for eligible hospitals who are not meaningful EHR users.

- **Medicaid**

- Section 4201-Establishes 100 percent Federal Financial Participation (FFP) to States for eligible Medicaid providers to purchase, implement, and operate (including support services and training for staff) certified electronic health record (EHR) technology (certified as defined by section 4101 the Public Health Service Act, as amended by the Recovery Act of 2009).
 - Certain classes of Medicaid professionals and hospitals are eligible for incentive payments to encourage their adoption and use of certified EHR technology.

Federal HIT Funding Opportunities Incentives Programs

- **Section 4101 Medicare FFS Eligible Professionals**
 - Payments can begin in 2011
 - Physicians – not hospital based
 - Last year to join the program-2014
 - Last year of payments 2016
 - Maximum of 5 years of payments and \$44K
 - Penalties begin in 2015
 - Caps increased by 10% in a Health Professional Shortage Area
 - Also incentives for Medicare Advantage professionals
 - Criteria to be defined for meaningful EHR User

Federal HIT Funding Opportunities Incentives Programs

- **Section 4102 Hospitals**

- Payments can begin in fiscal year 2011
- Apply to inpatient services
- Last year to join the program-2015
- Last year of payments 2016
- Maximum of 4 years of payments
- Penalties begin in 2015
- Also incentives for Medicare Advantage hospitals
- Criteria to be defined for meaningful EHR User

Federal HIT Funding Opportunities Incentives Programs

- **Section 4201-Medicaid Incentives**

- Incentive payments for certified EHR technology (and support services including maintenance and training that is for, or is necessary for the adoption and operation of, such technology) by Medicaid providers.
- No start date specified for Medicaid, probably 2011 similar to Medicare.
- The definition of “meaningful use” must be established through a means that is approved by the State and acceptable to the Secretary.
- The definition must be in alignment with the one used for Medicare.

Relationship Between Medicaid and Medicare EHR Incentives?

- Eligible Professionals can only receive either the Medicare or Medicaid Incentive, not both
- Hospitals that qualify for the Medicare and Medicaid incentive can receive both.
- The legislation instructs the Secretary to ensure the coordination of incentive payments to providers through Medicare and Medicaid.
- Such coordination shall include, to the extent practicable, a data matching process between State Medicaid agencies and the Centers for Medicare & Medicaid Services using national provider identifiers.

Statutory Requirements for Medicare HITECH Incentives

- Demonstration of being a “meaningful user”
 - Basic requirements:
 - Electronic prescribing for physicians
 - Being connected in a manner that provides... for the exchange of health information to improve the quality of health care, such as promoting care coordination
 - Quality measures submission when Secretary can accept
 - Additional requirements: Policy question as to what additional uses required to be considered “meaningful” for a particular year
- Mechanism for determination: Attestation, Survey, Claim, or other could serve to document “meaningful use” for individual or group representative

Statutory Payment Limitations

- Statutory Maximum
 - \$18,000 Year One
 - A 10% increase to an eligible professional who predominantly furnishes services under this part in an area that is designated by the Secretary ... as a health professional shortage area
- Coordination of incentive limitations among practices
 - Secretary shall establish rules for cases where an eligible professional furnishes covered professional services in more than one practice ...including the application of the limitation on [maximum] amounts of such incentive payments among such practices
- No incentive for hospital based eligible professional
 - an eligible professional, such as a pathologist, anesthesiologist, or emergency physician, who furnishes substantially all of such services in a hospital setting (whether inpatient or outpatient) and through the use of the facilities and equipment, including qualified electronic health records, of the hospital

Medicare Quality Data Reporting Programs – Multiple Sources of Data

- Hospital
 - Chart Abstraction
 - Claims
 - Survey
 - Structural - web based submission tool
- Nursing Home
 - MDS 2.0 assessment
- Home Health
 - Oasis assessment
- ESRD
 - Claims
 - CROWN Web – web based submission tool
- Physician
 - Claims
 - Registries
 - E H R (test)
- Medicare Advantage Plans (Part C)
 - Claims
- Medicare Pharmacy Benefit Plans (Part D)
 - Claims

Medicare Quality Data Reporting Focused Patient Population

- Patients – limited to payment setting
 - Claims
 - Hospitals – inpatient/outpatient
 - Health Plans
 - Augmented Claims (Quality Data Codes included on Claims)
 - Physician Quality Reporting Initiative
 - E-Rx Incentive Program
- Requires data aggregation to get overall view of quality of care by professionals and providers

Medicare Quality Data Reporting

All Patient Population

- All Patient
 - Chart Abstraction
 - Hospital
 - Registry
 - Physician
 - MDS 2.0
 - Nursing Home
 - Oasis B
 - Home Health
 - Claims
 - ESRD

Data Validation Issues

- Secondary Source
 - Claims
 - Registries
 - Oasis
 - Chart Abstract
- Primary Source
 - MDS 2.0
 - Medical Record (chart)

EHR Data Source Opportunities

- Primary Source Data
 - Validation not required
- Not reliant on billing codes
 - Clinical data
- Comprehensive view care of care rendered (by provider/professional)
 - All patient data from provider/professional (contrast claims)
- Comprehensive view care received by patient
 - Data from multiple providers/professionals
 - Care over time
 - Episodes of care

EHR Data Source Opportunities

- More timely data
- Audit output files
- Improved Relationship between Population level measures and Accountability level Measures
- Potential to aggregate clinical and claims information to assess value (efficiency)
- Potential to use clinical data as an element to consider in revised payment system

EHR promotion of quality aims through quality measurement

- Effective
- Safe
- Timely
- Patient Centered
- Efficient
- Equitable

Physician Quality Reporting Initiative

- System of Physician Quality Measure Reporting
 - Voluntary
 - Form and Manner determined by HHS Secretary
 - Not solely a claims based system
- 2007
 - Individual Measures
 - Claims Based Reporting
 - 74 quality measures
- 2008
 - Individual Measures and measures groups
 - Claims based reporting
 - Registry based reporting (31 registries)
 - EHR vendor testing (limited)
 - 119 quality measures
 - 4 measures groups

Physician Quality Reporting

- Physician Quality Reporting Initiative
 - 2009
 - Individual Measures and measures groups
 - 153 individual measures
 - 7 measures groups (Diabetes, Chronic Kidney Disease, Prevention, Coronary Artery Bypass Graft, Rheumatoid Arthritis, Back Pain)
 - Claims based reporting
 - Registry based reporting (74 registries)
 - EHR vendor testing (expanded)

Physician Quality Reporting

- Physician Quality Reporting Initiative
 - 2010 (proposed PFS rule in comment period)
 - Individual Measures and measures groups
 - Form and manner
 - Registry based reporting
 - Group reporting

ERX Incentive Program

2009 – 2 % incentive

2010 – 2 % incentive

2011 - 1 % incentive

2012 - 1 % incentive

2012 - (1) % penalty

2013 - ½% incentive

2013 – (1 ½% penalty)

2014 – 2 % penalty

Registry Lessons Learned

- Testing is key
- Not all vendors can meet the data submission requirements or calculate the measures
- More testing is better

2009 PQRI EHR Testing

- Limited testing of EHRs in 2008
- Expanded testing in 2009
 - 10 Vendors
 - 10 measures
 - New messaging standard
 - QRDA/CDA

“Qualified” EHRs

- The need for EHRs to be “qualified” in order to submit PQRI data to CMS (if CMS ever allows quality data to be submitted from an EHR for PQRI reporting)
 - Demonstrates that data elements can be obtained from particular EHR product
 - Demonstrates data elements can be transmitted
- Expect to post a list of “qualified” EHRs for PQRI submission by the end of 2009

2009 PQRI EHR testing

- 10 measures
 - Broad Medicare applicability of measures
 - Performance information available from claims based reporting

CMS EHR Measures for Physicians Quality Reporting Program (PQRI)

Measure Number Crosswalk for 2009 EHR		
<u>PQRI Measure</u>	<u>QIO 9th SoW EHR Measure</u>	<u>Former DOQ-IT Measure</u>
#1	n/a	DM-2
#2	n/a	DM-5
#3	n/a	DM-3
#5	n/a	HF-7
#7	n/a	CAD-3
#110	#110	PC-7
#111	#111	PC-8
#112	#112	PC-5
#113	#113	PC-6
#124	n/a	n/a

CMS EHR Measures for Physicians Quality Reporting Program (PQRI)

Measure #1: Diabetes Mellitus: Hemoglobin A1c Poor Control in Diabetes Mellitus (> 9.0)

Measure #2: Diabetes Mellitus: Low Density Lipoprotein (LDL-C) Control in Diabetes Mellitus

Measure #3: Diabetes Mellitus: High Blood Pressure Control in Diabetes Mellitus

Measure #5: Heart Failure: Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Measure #7: Coronary Artery Disease (CAD): Beta-Blocker Therapy for CAD Patients with Prior Myocardial Infarction (MI)

Measure #110: Preventive Care and Screening: Influenza Immunization for Patients \geq 50 Years

Measure #111: Preventive Care and Screening: Pneumonia Vaccination for Patients 65 Years and Older

Measure #112: Preventive Care and Screening: Screening Mammography

Measure #113: Preventive Care and Screening: Colorectal Cancer Screening

Measure #124: Health Information Technology (HIT): Adoption/Use of Electronic Health Records (EHR)

EHR Functionalities related to 10 PQRI EHR measures

Lab Value

Measure #1: Diabetes Mellitus: Hemoglobin A1c Poor Control in Diabetes Mellitus (> 9.0)

Measure #2: Diabetes Mellitus: Low Density Lipoprotein (LDL-C) Control in Diabetes Mellitus

Vital Sign Value

Measure #3: Diabetes Mellitus: High Blood Pressure Control in Diabetes Mellitus

Medication Prescribed

Measure #5: Heart Failure: Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction (LVSD)

Measure #7: Coronary Artery Disease (CAD): Beta-Blocker Therapy for CAD Patients with Prior Myocardial Infarction (MI)

Prevention Vaccination Received

Measure #110: Preventive Care and Screening: Influenza Immunization for Patients \geq 50 Years

Measure #111: Preventive Care and Screening: Pneumonia Vaccination for Patients 65 Years and Older

Prevention Imaging Received

Measure #112: Preventive Care and Screening: Screening Mammography

Prevention Screening Received (Procedure/Lab/Exam)

Measure #113: Preventive Care and Screening: Colorectal Cancer Screening

Documentation of Clinical Encounter

Measure #124: Health Information Technology (HIT): Adoption/Use of Electronic Health Records (EHR)

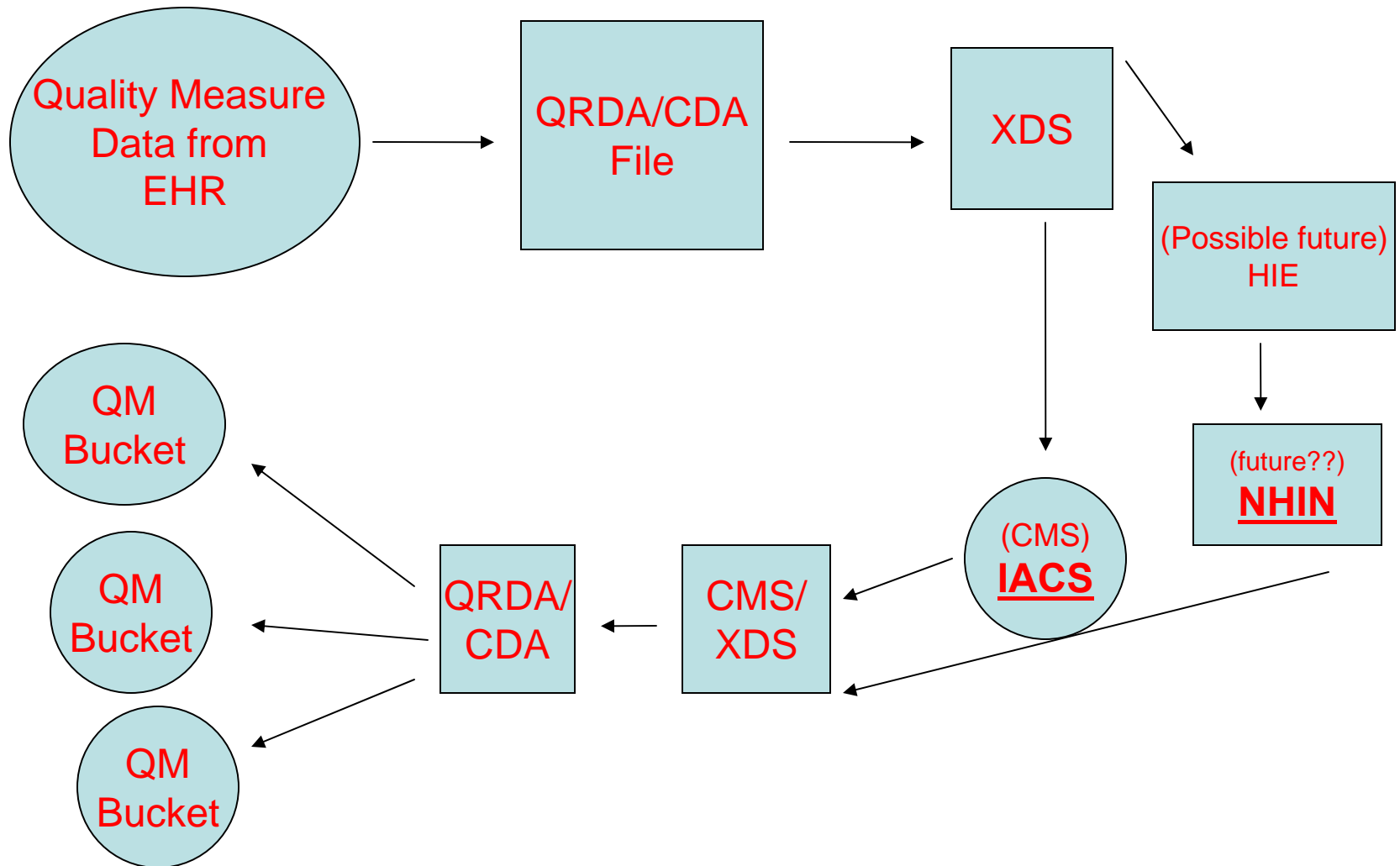
Quality Measure Reporting Component Stages

- Data elements necessary to calculate measures obtained from EHR
 - Vendor incorporates requirements for data elements into EHR
 - “Certified” EHR may require data elements
- Data elements placed in specified format
 - Tab delimited file (CMS EHR demo)
 - Data submission tool (Hospital Reporting Program)
 - Template standards and transmission wrappers (eg., QRDA)
- Data transmitted (pushed) in specific form and manner to CMS
 - Encrypted CD
 - Submission of file into CMS portal
 - Submission of data elements through Health Information Exchange (HIE) using standards for communication within and between HIE
- Data queried (pulled) by CMS
 - Using standards for communication within and between HIE

CMS EHR Testing Using Health Information Exchange Standards

- Anticipate testing submission using template standards for quality measures that can be transported using standards for communication within and between health information exchanges.
- Other aspects of testing involving portal based testing
- Goal is to have information pulled from the health information exchanges through the NHIN based on vendors utilizing the NHIN standard

Possible 2009 Testing Process



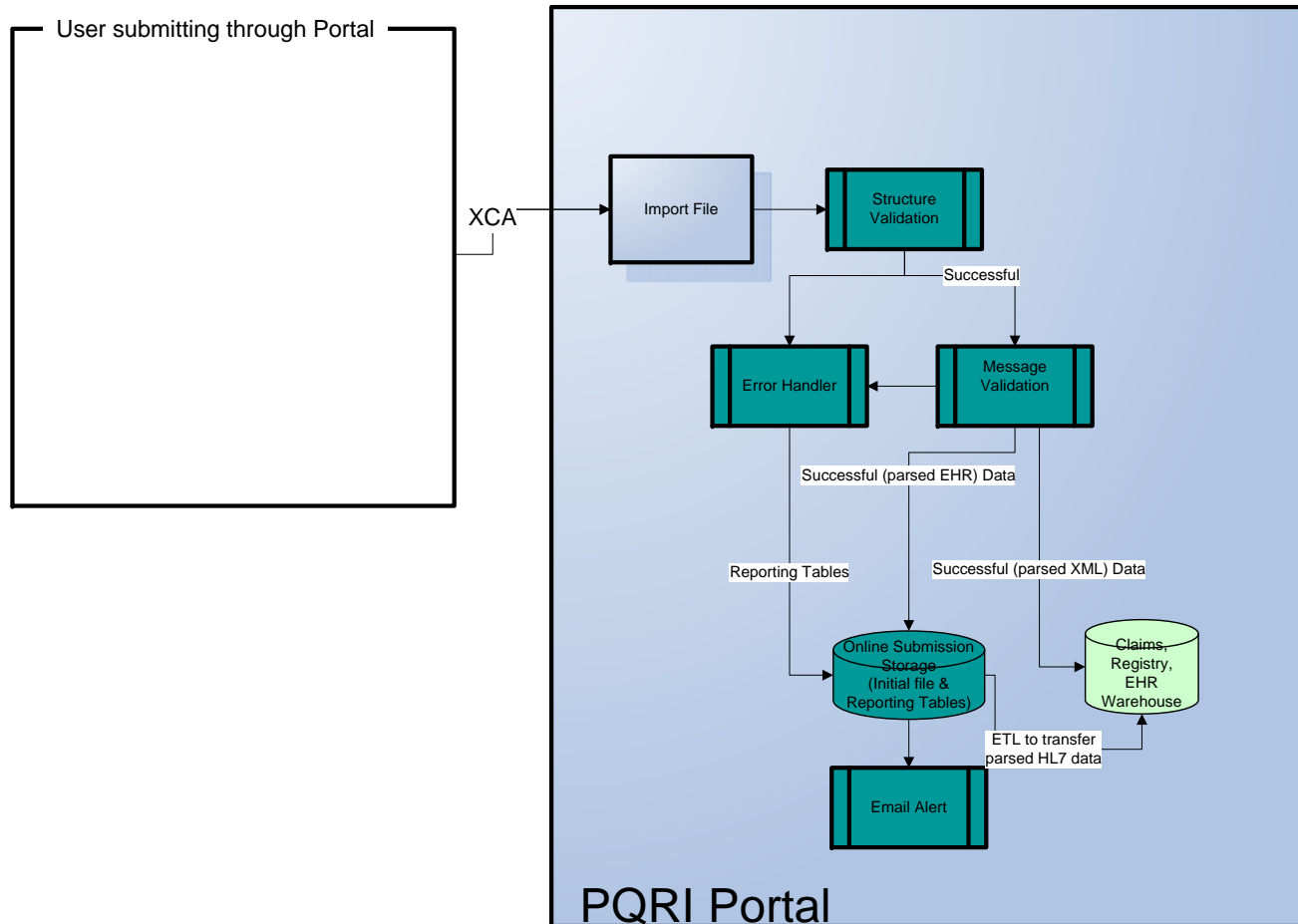
EHR test Objectives

Quality Reporting (CDA/QRDA) through Portal

- Vendors demonstrate QRDA readiness. Can Vendors submit quality reporting on 10 EHR measures based on the specs or is clarification or technical approach modification needed?
- Vendors submit via CD/DVD (encrypted if containing PHI content), QRDA message xml file with sample of 10 EHR measures (with or without XDS profile wrapper depending on vendor product configuration readiness). Can vendors submit all 10 EHR measures?
- CMS demonstrates QRDA processing capability. Can CMS process (parse) the 10 EHR measures submitted in the described QRDA format?
- Can CMS process for PQRI participation and incentive eligibility? (process data submitted, store in warehouse and provide management report on incentive eligible processing quality of the data; make decisions on validation processes.)
- Produce success or error submission report
- Determine whether the Message Specifications as posted are technically, clinically, and operationally stable
- Determine whether XDS wrapping or other message modification should be added?

IACS/Portal Quality Reporting Architecture

PQRI Submission Integration



Clinical Quality Measures

- HITECH requires for meaningful use submission from EHR's of clinical quality measures only if Secretary has capability of accepting information, which may be on a pilot basis

EHR testing for hospitals

- 16 quality measures – not currently being collected through chart abstraction
 - Emergency Department Throughput
 - Median ED time for admitted patients
 - Median time from decision to admit to departure from ED
 - VTE measures
 - Stroke measures

Hospital Quality Reporting

- Reporting Quality Data for Annual Payment Update (RHQDAPU)
- 2005 reporting year
 - 10 chart abstracted measures
- 2006 reporting year
 - 10 chart abstracted measures
- 2007 reporting year
 - 21 chart abstracted measures
- 2008 reporting year
 - 24 chart abstracted measures
 - 2 measures calculated from claims data
 - 1 patient experience of care survey
- 2009 reporting year
 - 26 chart abstracted measures
 - 3 measures calculated from claims data
 - 1 patient experience of care survey
- 2010 reporting year (current IPPS proposed rule open for public comment)
 - 25 chart abstracted measures
 - 16 measures calculated from claims data
 - 1 patient experience of care survey
 - 1 structural measure submitted by web submission interface
 - EHR testing process described similar to PQRI testing

CMS: Status of EHR reporting clinical quality measures for Hospitals

- Stated interest in moving to EHR reporting in IPPS rules for Hospital Reporting Incentive Program
- Standards identification by HITSP for three Measures Sets
 - Hospital Emergency Department Throughput
 - Stroke
 - Venous Thromboembolism
 - Submission to CCHIT for inclusion in certification requirements

CMS Regulatory Schedule

- FY 2010 Inpatient Prospective Payment System (IPPS) Hospital Rule posted May 1, 2009. 60 day comment period ends June 30. I
- CY 2010 Physician Fee Schedule Rule not yet posted 60 day comment period. Final Rule required by statute by Nov 1
- HITECH proposed rule anticipated by end 2009
- HITECH final rule anticipated by mid-2010

Where to get further PQRI and E-RX incentive information

<http://www.cms.hhs.gov/PQRI>

<http://www.cms.hhs.gov/erxincentive>

Where to get further HITECH Act information

- Information will be coming out over the next several months. The best Federal sources are:
 - Overall information on the programs
 - www.hhs.gov/recovery
 - Medicare information
 - <http://www.cms.hhs.gov/home/medicare.asp>
 - Medicaid information
 - <http://www.cms.hhs.gov/home/medicaid.asp>
 - ONC information
 - <http://healthit.hhs.gov/portal/server.pt>

- Thank You
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