



*Integrating the Healthcare Enterprise (IHE) Profiles  
Supporting Meaningful Use*

*John Donnelly President, IntePro Solutions Inc*

*[Recognition to: Dr. Michael Brody DPM , Podiatry Private Practice]*



# Learning Objectives

- Identify key IHE Profiles supporting Meaningful Use
- Describe how to associate profiles with the Meaningful Use objectives they meet
- Identify HIT integration requirements using IHE profiles
- Explain how to locate IHE profile documentation
- Interpret IHE profiles and the relationships between them

# Agenda

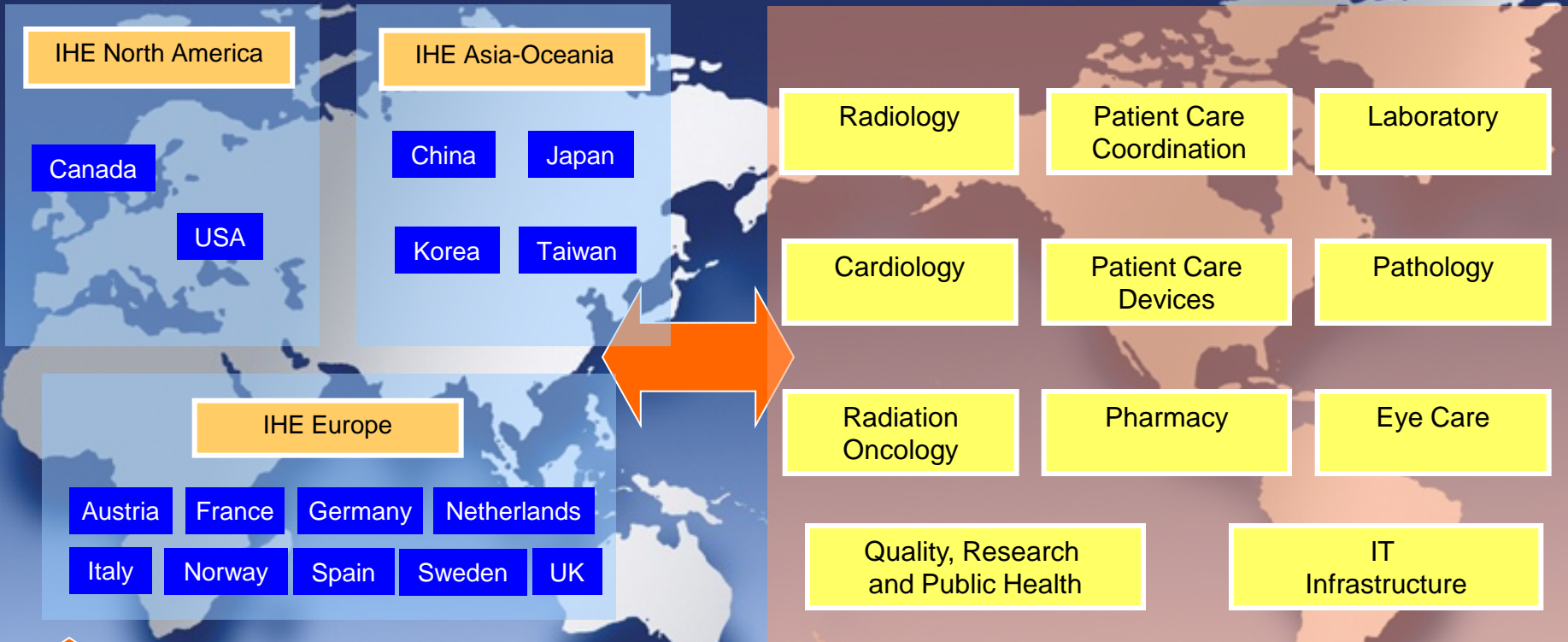
- IHE Organization, Focus and Relevance to Meaningful Use Stages
- Meaningful Use Objectives and How IHE Supports Their Attainment Clinically
- IHE's Support for Health Info Exchange Core Services for MU
- Questions/Wrap-up

Please use the Q&A Box at the bottom right hand of your screen to submit questions. We will answer all questions during the Q&A Session.

# IHE International Board

## Regional Deployment

## Global Development

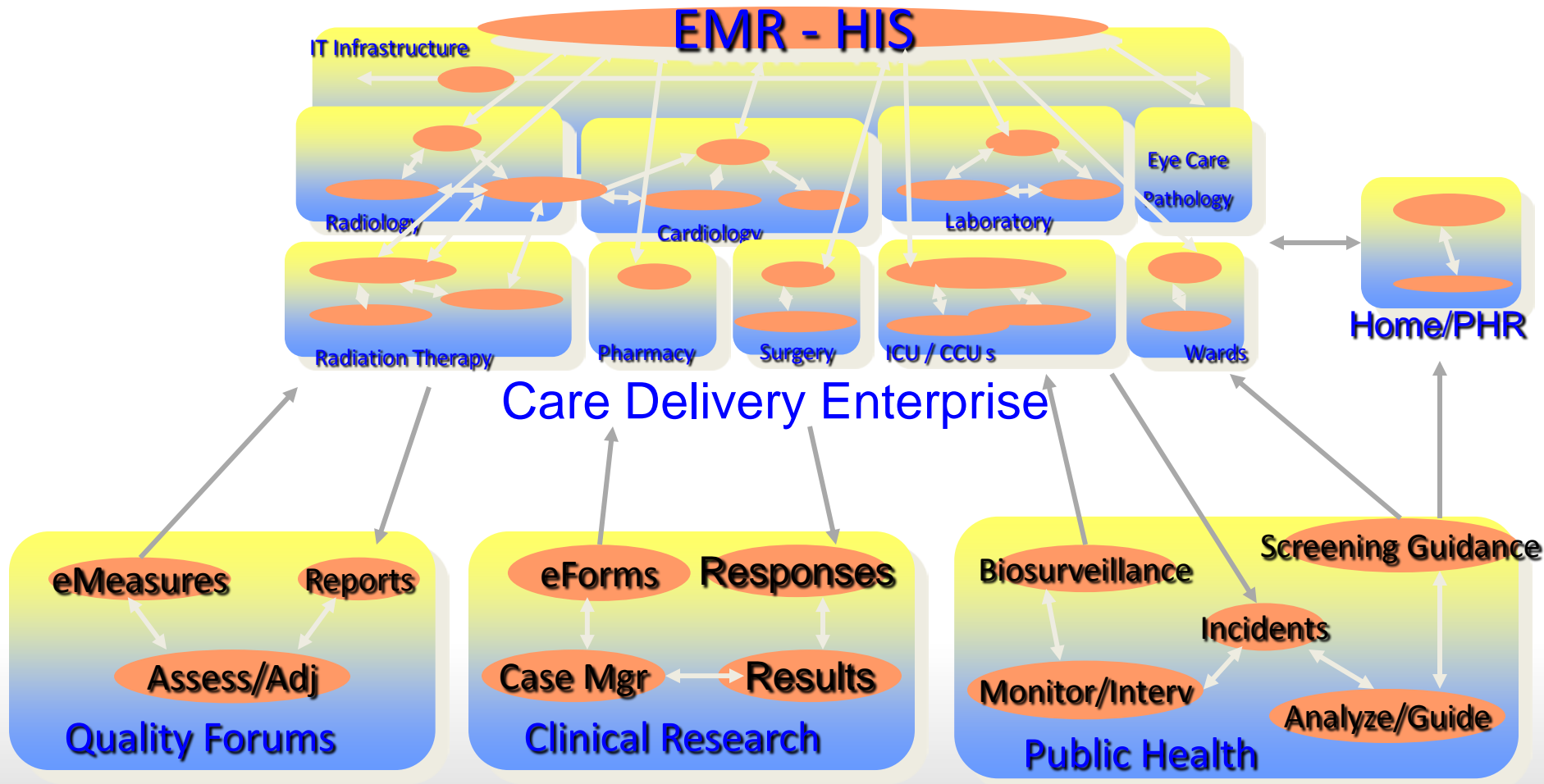


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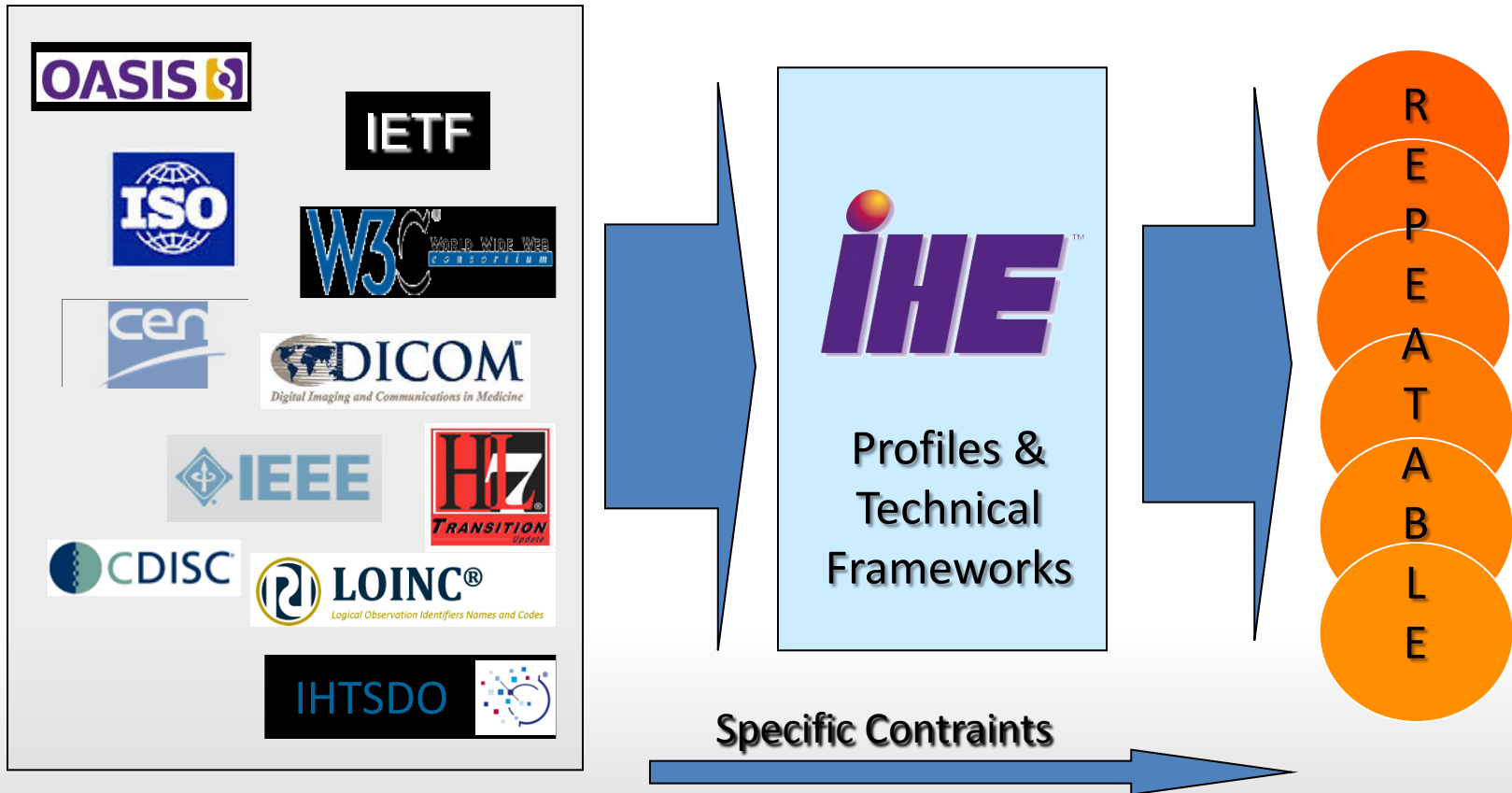
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ACCE	ACOG	SFR	EAR-ECR	BIR		JIRA	MEDIS-DC
ACEP	HIMSS	SFIL	DRG	EuroRec		JRS	JAMI

Contributing & Participating Vendors

# IHE is About Interoperability



# IHE Helps Standards Deployment



# IHE USA

- A not for profit organization founded in 2010 that operates as a deployment committee of IHE International®
- The mission of is to drive adoption of standards-based interoperability to improve patient care through innovation, standards profiling, testing, education and collaboration.
- IHE USA facilitates the exchange of health information both within the enterprise and across care settings, and enables local, regional and nationwide health information networks in the United States
- Consistent with activities of IHE International, Inc. but constrained and prioritized by the USA national health care delivery objectives and ONC S&I framework

# What is Meaningful Use?

“Meaningful use” is a term defined by CMS and describes the use of HIT that furthers the goals of information exchange among health care professionals

# Meaningful Use Stages

- Stage 1 – EHR Adoption
  - Implementation in all size MD Practices, hospitals
  - Preparations for interoperability, eRX deployment
- Stage 2 – New Care Delivery Algorithms
  - Extensive interoperability (Provider, Patient, Public Health)
  - Cross-discipline, Integrated Care Protocols
- Stage 3 – New Health Care Quality Metrics

# Interoperability Preparation in MU Stage 1

- System Certification Pre-Requisite
  - Ensures necessary data element collection
  - Establishes encoded minimum data set
  - Actual exchange “models” in NwHIN, Direct Project, Beacon Communities
- IHE International<sup>®</sup> Technical Frameworks Reviewed and Honed to USA Deployment Opportunities

# The Ultimate Goal

“The ultimate vision is one in which all patients are fully engaged in their health care, providers have real time access to ALL medical information and tools to ensure the quality and safety of the care provided while also affording improved access and elimination of health care disparities”

*Dr Michael Brody DPM*

# But the Near-term Priorities are:

- Patient Engagement
- Reduction of Racial Disparities
- Improved Safety
- Increased Efficacy
- Coordination of Care
- Improved Population Health

# Patient Engagement

- What is a patient's role in his or her own health care?
- What is the best method for engaging patients in their health care?

# Patient Engagement

- Electronic Communication between the physician and the patient is easily accomplished utilizing a CCD file with style sheets to allow the CCD's to be viewed in a human (patient) readable format. This can be via PHR, Patient Portals, or via media that can be provided to the patient.

# Patient Engagement Stage 1

- The Stage 1 Measures that relate to Patient Engagement are
  - Maintain an Up to Date Problem List
  - Maintain an Up to Date Active Medication List
  - Maintain an Up to Date Medication Allergy List
  - Record and Chart Vital Signs
  - Provide Patients with an electronic copy of their health information
  - Provide Clinical Summaries for each office visit
  - Incorporate Lab Results as Structured Data (m)
  - Generate a list of patients for outreach (m)
  - Send Patients reminders for preventative / Follow Up Care (m)
  - Provide Patients with timely access to their health information (m)
  - Use EHR to identify patient specific educational materials (m)

# IHE Profiles

- The IHE Profiles that support Patient Engagement are:
  - **Summary Profiles based on HL7 CCD, e.g. Medical Summary (MS), Provider-Patient Exchange (XPHR)**
  - **Immunization Content (IC) profile**
  - **Integration Profiles for different information exchange approaches, including media-based**
  - **New in Dec 2010...initial IHE Pharmacy Technical Framework for eRx (USA de facto standard review/consideration, Surescripts)**

# Racial Disparities

- We all wish they did not exist.
- We all know they do exist.
- With data collection collation and analysis the public health system will be in a better position to address these disparities and develop solutions to reduce and may even eventually eliminate these disparities by providing everybody with the greatest common denominator

# Reduction of Racial Disparities

- The Stage 1 Measures that relate to Reduction of Racial Disparities are:
  - Maintain an Up to Date Problem List
  - Maintain an Up to Date Active Medication List
  - Record Patient Demographics
  - Record Vital Signs
  - Record Smoking Status
  - Report Ambulatory Quality Measures to CMS
  - Generate Patient Lists for Outreach
  - Submit Data to Immunization Registries
  - Submit Data to Syndromic Surveillance Registries

# IHE Profiles

- The IHE Profiles that support Reduction of Racial Disparities are:
  - **Summary Profiles based on HL7 CCD, e.g. Medical Summary (MS), Provider-Patient Exchange (XPHR)...specifically the patient demographic data sections**
  - **Immunization Content (IC) profile**
  - **Electronic Nursing Summary (eNS), Patient Plan of Care (PPOC) nursing documentation profiles**

# Improved Safety

“Having more information available at the point of care will result in improved safety. For medication errors this is as simple as being presented with alerts when there are potential drug/drug interactions. For complex clinical decisions having a patients complete medical and medication history available immediately can result in quicker treatment and decreased morbidity and mortality.”

*Dr Michael Brody DPM*

# Improved Safety

- The Stage 1 Measures that relate to Improved Safety are:
  - Use of CPOE for medication orders
  - Implement Drug/Drug and Drug / Allergy Interaction Checks.
  - Maintain an Up to Date Problem List
  - Maintain an Up to Date Medication List
  - Maintain an Up to Date Medication Allergy List
  - Record Vital Signs
  - Record Smoking Status
  - Implement One Clinical Decision Support Rule
  - Exchange Key Clinical Information with other providers of care
  - Protect Patient Information
  - Use E H R Resources to identify Patient Specific Educational Resources (m)
  - Medication Reconciliation (m)
  - Provide Summary of Care with Transitions of Care (m)

# IHE Profiles

- The IHE Profiles that support Improved Patient Safety are:
  - Radiology and Cardiology Scheduled Workflow (SWF) and Lab Workflow (LTW)
  - Clinical Guidance and Oversight via the Retrieve Form for Data Capture (RFD) and Retrieve Process for Execution (RPE) profiles
  - Discipline-specific content profiles; e.g. Ante partum Record (APR), Labor and Delivery Record (LDR), Emergency Encounter Summary (EDES)

# Improved Efficacy

- Efficacy – noun : the power to produce an effect.
- So what is “Improved” Efficacy ....it is the power to provide better quality health care for each individual patient.

# Improved Efficacy

- The Stage 1 Measures that relate to Improved Efficacy are:
  - Use CPOE for Medication Orders
  - Implement Drug/Drug and Drug/Allergy Interaction Checks.
  - Maintain an Up to Date Problem List
  - Transmit Prescriptions Electronically
  - Maintain an Up To Date Active Medication List
  - Maintain an Up To Date Medication Allergy List
  - Record Vital Signs
  - Implement One Clinical Decision Support Rule
  - Provide Patients with an Electronic Copy of their Health Information
  - Exchange Key Clinical Information among Providers
  - Implement Drug/Formulary Checks (m)
  - Incorporate Lab Results as structured Data
  - Generate Lists of Patients by specific conditions
  - Send Patient Reminders
  - Use E H R Technology to identify Patient Specific Educational Resources
  - Medication Reconciliation
  - Transition of Care Summary Document

# IHE Profiles

- The IHE Profiles that support Improved Efficacy are:
  - Radiology and Cardiology Scheduled Workflow (SWF) and Lab Workflow (LTW)
  - Clinical Guidance and Oversight via the Retrieve Form for Data Capture (RFD) and Retrieve Process for Execution (RPE) profiles
  - Discipline-specific workflow profiles; e.g. Perinatal Workflow (PW), Treatment Delivery Workflow (TDW)
  - Electronic Nursing Summary (eNS), Patient Plan of Care (PPOC) nursing documentation profiles

# Coordination of Care

“Coordination of Care is all about communication between caregivers. That communication can be direct between EMR packages, through a health information exchange, or even with the patient as a vector.”

*Dr Michael Brody DPM*

# Coordination of Care

- The Stage 1 Measures that relate to Coordination of Care are:
  - Use of CPOE
  - Maintain an Up to Date Problem List
  - Maintain an Up to Date Medication List
  - Maintain an Up to Date Medication Allergy List
  - Record Vital Signs
  - Provide Patients with an Electronic Copy of their Health Information
  - Provide Clinical Summaries for Each Office Visit
  - Exchange Key Clinical Information with other providers of Care
  - Provide Transition of Care Summary Document (m)

# IHE Profiles

- The IHE Profiles that support Care Coordination are:
  - Radiology and Cardiology Scheduled Workflow (SWF) and Imaging Results Distribution (XDS-I)
  - Lab Workflow (LTW) and Results Distribution (XDS-Lab)
  - Discipline-specific content profiles; e.g. Ante partum Record (APR), Labor and Delivery Record (LDR), Emergency Encounter Summary (EDES)
  - Discipline-specific workflow profiles; e.g. Perinatal Workflow (PW), Treatment Delivery Workflow (TDW)
  - Electronic Nursing Summary (eNS), Patient Plan of Care (PPOC) nursing documentation profiles

# Improved Population Health

“This is the net result of all of the measures for meaningful use. By establishing measures and thresholds to meet when caring for patients, communicating with patients and other care providers, and reporting to various registries it will enable those of us involved in the health care system to provide better quality care and improve the health of the population.”

*Dr Michael Brody DPM*

# IHE Profiles

- The IHE Profiles that support Population Health are:
  - Clinical Guidance and Oversight via the Retrieve Form for Data Capture (RFD) and Retrieve Process for Execution (RPE) profiles
  - Public Health reporting profiles, e.g. Anatomic Pathology (ARPH), Provider Reporting for Cancer (PRPH-Ca), Lab Results Distribution (XDS-Lab)
  - Immunization Content (IC)
  - Info Exchange services for Multi-patient Queries (MPQ), Document Metadata Subscription (DSUB)

# Redundant??

- You have probably noticed that many of the measures of Meaningful Use and IHE Profiles are listed multiple times when cross referencing the priorities of Meaningful Use.
- The priorities of Meaningful Use cross many domains and therefore require a collaborative effort on our part to insure that the tools, measures and profiles we build can meet the requirements of our health care ecosystem.

## ....Not Specifically Addressed By IHE

- Patient Reminders - This is where the patient tells you things like:
  - ✓ You can leave a message on my machine
  - ✓ You can not leave a message with my husband /wife, etc
- Patient Having Portal Access to Their Records
  - ✓ Portal access...but not interoperability
- Clinical Decision Support Algorithms
  - ✓ Currently internal in EMR system...future consideration

# ....Not Specifically Addressed By IHE

- Insurance Eligibility
  - Typically to be covered by the Practice Management System module
- ✓ Interoperability standards and guidance addressed by CAQH Core Operating Rules
- ✓ New IHE Finance / Admin domain under consideration

# Different Info Exchange Approaches

- Point –to- Point

- Known Partners
- Patient Association May Be “Out-of-Band”
- Document Content, “Blind” or Labelled

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- Health Information Exchange

- One to Many
- Provider to Public Health

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- EMPI
  - Document Registry / Record Locator
  - 1-n Document Repositories

# Different Deployment Models

- Point –to- Point
  - Known partners, patient ID out-of-band, “blind” document
  - Known partners, patient ID out-of-band, labelled document
  - Known partners, linked patient, labelled document
- Secure Email...ONC Direct Project w/o Document Metadata Option
- **IHE Cross-Enterprise Document Exchange - Email Option (XDM-Email), Healthcare Provider Directory (HPD)**
- **IHE Cross-Enterprise Reliable Exchange (XDR) w Patient ID Reconciliation (PIX/PDQ)**

# Different Deployment Models

- Health Information Exchange
  - Many potential partners, linked patient, labelled document
  - Nationwide Health Information Exchange / CONNECT™
- IHE Cross-Enterprise Document Sharing (XDS-b) and IHE Cross-Community Exchange (XCA)
  - On-Demand Document Option
  - Document Subscription / Notification
- IHE Patient ID Cross-reference (PIX) and Patient Demographics Query (PDQ)
- IHE Cross-community Patient Discovery (XCPD)



*Questions?*



# Learn More about IHE International

## *Important Links and Information*

- IHE Webinar Series runs June-September 2011
  - Visit [www.ihe.net](http://www.ihe.net) for the full list of webinars
  - Registration is free!
- All webinar recordings and slide decks will be posted online at: [www.ihe.net/Events/webinars2011.cfm](http://www.ihe.net/Events/webinars2011.cfm)
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