IHE

Integrating the Healthcare Enterprise

QUALITY, RESEARCH AND PUBLIC HEALTH

Quality, Research & Public Health (QRPH)

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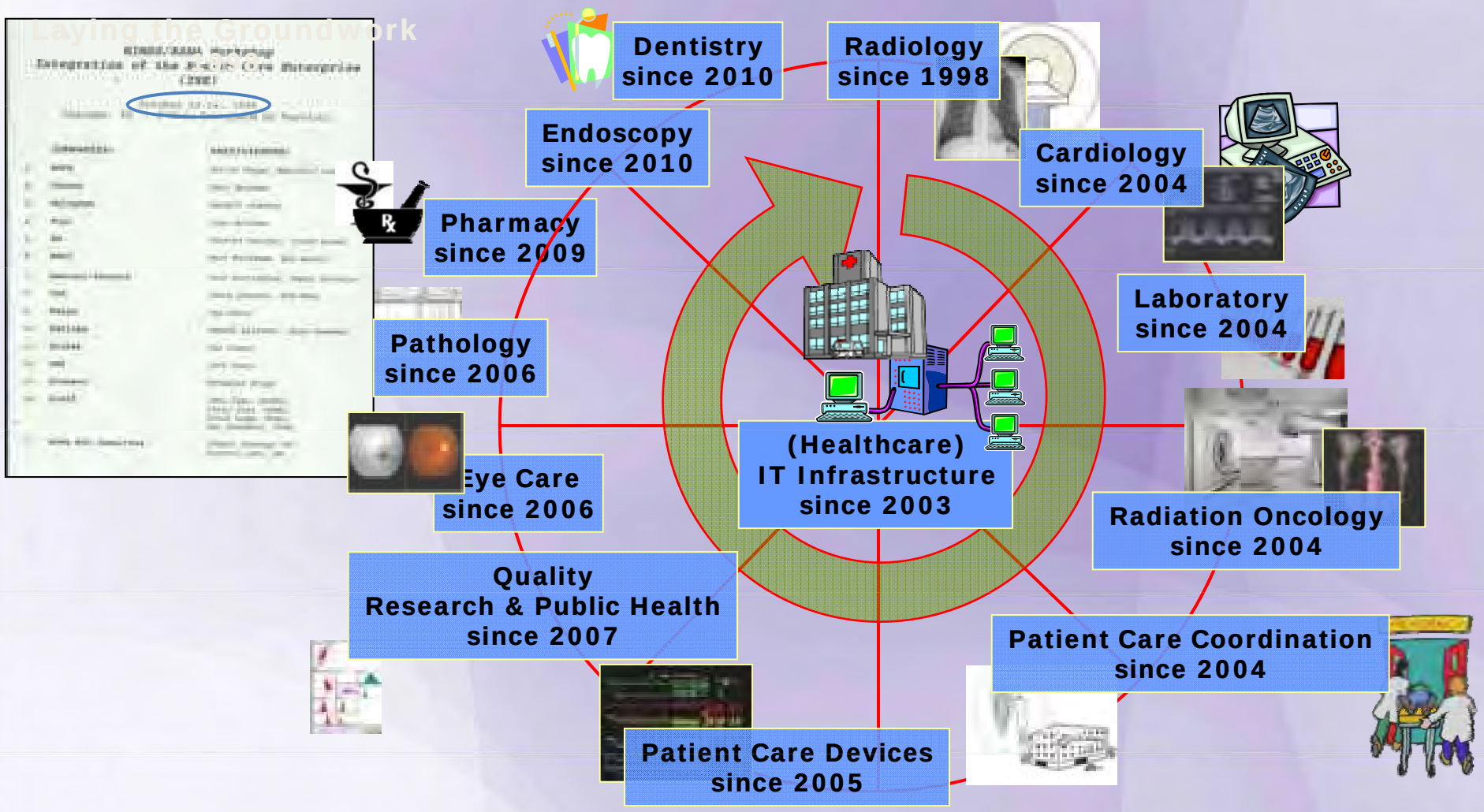
CDC/National Center for Health Statistics

Quality, Research & Public Health Agenda

- Domain & Committee Overview
- How to Participate
- Domain Profiles
- Discussion

The IHE Development Domains

16 Years of Steady Evolution 1997 – 2013



Engaging HIT Stakeholders in a Proven Process

IHE brings together users and developers of healthcare information technology (HIT) in an annually recurring four-step process:

- Clinical and technical experts define critical use cases for information sharing.
- Technical experts create detailed specifications for communication among systems to address these use cases, selecting and optimizing established standards.
- Industry implements these specifications called IHE Profiles in HIT systems.
- IHE tests vendors' systems at carefully planned and supervised events called Connectathons.

IHE Profiles Drafted & Revised

IHE Technical Framework Developed

Published For Public Comment

Trial Implementation Posted

months 6-13

Test at IHE Connectathons

months 14-18

Publish in IHE's Product Registry

Demonstrate at a HIMSS INTEROPERABILITY SHOWCASE

Install Interoperable products in Clinical Settings worldwide

IHE Improves, Safety, Quality and Efficiency in Clinical Settings

Profile Selection by Committees

IHE Call for Proposals Opens

months 1-5

Quality, Research & Public Health (QRPH) Domain Overview

- Overview

  IHE Quality, Research and Public Health Domain (QRPH) addresses the infrastructure and content necessary to:
  - Share information relevant to quality improvement in electronic patient care and health care records
  - Facilitate interoperability between the healthcare system and clinical research
  - Facilitate interoperability between the healthcare system and public health
- Sponsors
  - Healthcare Information and Management Systems Society (HIMSS)
  - Radiological Society of North America (RSNA)
- History
  - Domain launched in 2007

Implementations and Testing

- Connectathon Testing
- IHE Regional Projectathon and HIMSS Use Case Testing
- Deployment Testing in the US under CDC Lead
  - CDA for Public Health
    - Pertussis and Tuberculosis Reporting using Retrieve Form for Data Capture (2 states, 1 county, 3 EMRs)
  - Early Hearing Screening Detection and Intervention
    - (2 states, 1 EMR product)
  - Birth and Fetal Death Reporting
    - (1 state, 1 Perinatal System)
  - Death Reporting (1 state using HIE)
  - Healthy Weight (1-3 states to be announced)

How to Participate in QRPH?

IHE International Membership is Free

- Apply for IHE International Organizational Membership
  - Visit: http://www.ihe.net/Join_IHE_Application/
  - Approved monthly by IHE International Board
  - Review IHE's 600+ Organizational Members
- Participate in IHE Domains & Committees
  - IHE Organizational Members only
  - Each Domain has one planning and one technical committee or one joint committee
  - QRPH Meets Fridays 10-11am Central Time (16:00 UTC) via Webex
  - Meeting February 10-14 2014 in Vienna
- Non-members participate in comment periods and implement IHE Technical Frameworks

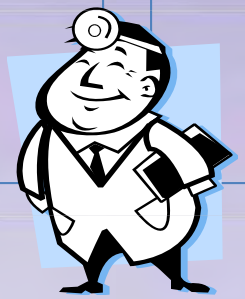
QRPH Committee Responsibilities

Planning Committee

- Recruitment
- Education
- Review IHE Profiles Proposals
- Identifies committee priorities and problems
- Planning for 2013-2014
- Committee Roadmap

Contact Information

- General Questions/Information
  - qrph@ihe.net
- Didi Davis and Michelle Williamson, Planning Committee Co-Chairs
- Google Group
  - https://groups.google.com/forum/#!forum/iheqrphplan
- Website
  - http://www.ihe.net/Quality_Research_and_Public_Health/
- Wiki
  - http://wiki.ihe.net/index.php?title=Quality,_Research_and_Public_Health_Planning_Committee



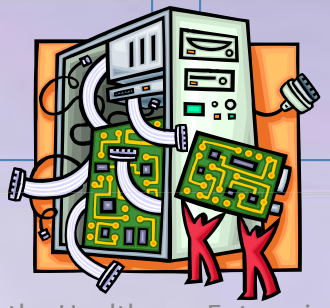
QRPH Committee Responsibilities

Technical Committee

- Recruitment
- Development of IHE Profiles for Public Comment and Trial Implementation
- Development of Whitepapers
- Maintenance of IHE Technical Frameworks

Contact Information

- General Questions/Information
  - qrph@ihe.net
- Amit Popat and Gokce Laleci, Technical Committee Co-Chairs
- Google Group
  - http://groups.google.com/group/iheqrphtech
- Website
  - http://www.ihe.net/Quality_Research_and_Public_Health/
- Wiki
  - http://wiki.ihe.net/index.php?title=Quality,_Research_and_Public_Health_Technical_Committee



IHE QRPH Profile Cycle Stages	Participation Status	Open Date	Close Date	Learn More
Planning Committee Call for Proposal	Open	Week of July 29, 2013	September 29, 2013	http://wiki.ihe.net/index.php?title=Profile_Proposal_Process
Planning and Technical Profile Selection	Member Only	October 9-10, 2013	December 2013	http://wiki.ihe.net/index.php?title=Quality,_Research_and_Public_Health_Planning_Committee
IHE Profiles drafted in IHE Technical Committee	Member Only	January 2014	May 2014	http://wiki.ihe.net/index.php?title=Quality,_Research_and_Public_Health_Technical_Committee
New QRPH Profile Work Public Comment	Open	June 2014	July 2014	http://wiki.ihe.net/index.php?title=Public_Comment_Process
QRPH Trial Implementation Published	Open	N/A	August 2014	http://www.ihe.net/Technical_Frameworks/#qrph
IHE USA Connectathon Registration	Open	September 23, 2013	October 18, 2013	http://www.iheusa.org/Events.aspx
IHE USA Connectathon & Conference (1/29)	Open	January 27, 2014	January 31, 2014	http://www.iheusa.org/Events.aspx
IHE Europe Connectathon	Open	April 2014	April 2014	http://www.ihe-europe.net/connectathon/65/connectathon

Learn More about IHE International

Important Links and Information

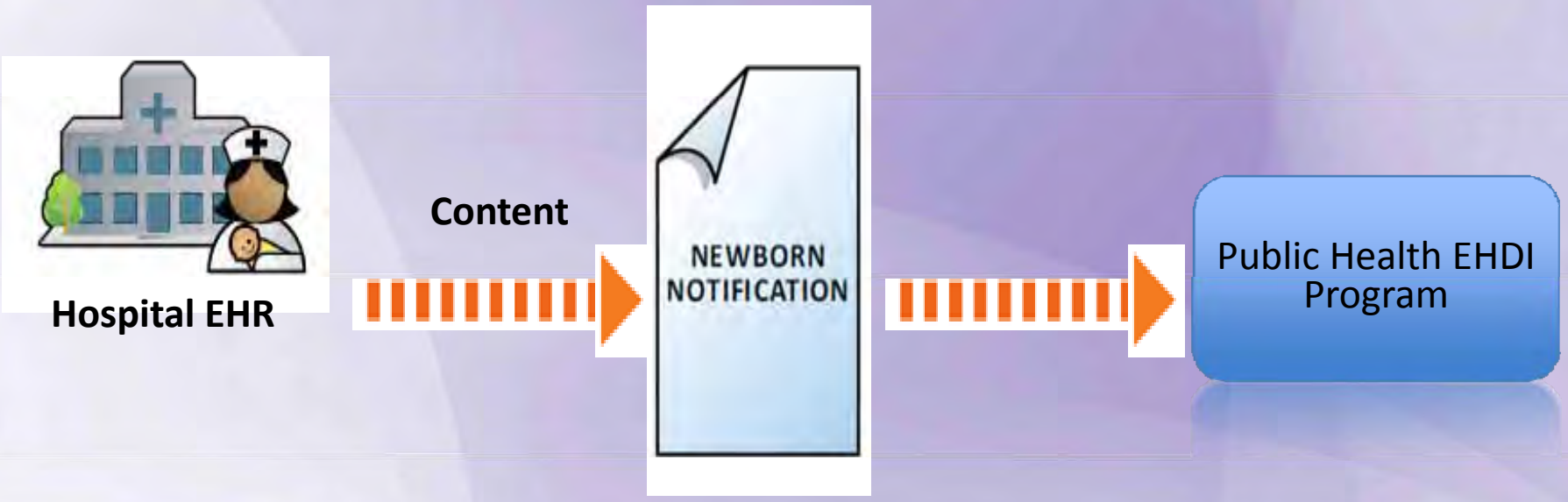
- IHE Technical Frameworks
  - http://www.ihe.net/Technical_Frameworks/#qrph
- IHE Profiles developed by QRPH
  - http://wiki.ihe.net/index.php?title=Quality,_Research_and_Public_Health
- 2013 IHE Webinar Series July-September 2013
  - Visit http://www.ihe.net/Webinars/ for the full list of domain webinars
  - All webinar recordings and slide decks will be posted
- Integration Statements/Product Registry
  - http://www.ihe.net/IHE_Product_Registry/
- Sign up for the IHE International News
  - Email qrph@ihe.net
- Apply for IHE International's Free Membership
  - Visit: http://www.ihe.net/Join_IHE/

Public Health Profiles

Profiles & Technical Frameworks

QRPH: Newborn Admission Notification Information (NANI)

Status - Trial Implementation



Profiles & Technical Frameworks

QRPH: What will NANI provide?

- Timely newborn demographic information to public health
- Denominator of hospital newborn admissions
- Helps to:
  - Ensure care for all babies
  - Evaluate program quality
  - Decrease duplicate data entry

Profiles & Technical Frameworks

QRPH: Profiles Enable Vital Events Reporting for Birth Certificate, Death Certificate and Fetal Death

- Vital Events reporting for births, deaths and fetal deaths include:
  - Wide range of demographic, medical, and geographic data derived from birth certificates, death certificates and fetal death reports
  - For example, in the US, over six million vital records events are reported annually covering the 57 registration areas: 50 states, 2 cities, and 5 U.S. territories
- Vital statistics data are widely used to monitor and improve the nation's health
  - For example, the data may be used to track and explain trends in:
    - Cesarean delivery
    - Preterm and low birth weight births
    - Causes of infant death and disparities in health among populations groups

Electronic Health Record (EHR) and Vital Record (VR) Systems Information Exchange

Capturing birth and death data in electronic health record systems

Electronic exchange using HL7 and IHE-based standards

Improving the timeliness, accuracy, and completeness of vital records data

Profiles & Technical Frameworks

QRPH: Profiles Enable Vital Events Reporting for Birth Certificate, Death Certificate and Fetal Death

- **Health Birth Summary (HBS) – Status – Trial Implementation**
  - Describes the content and format to be used to communicate compiled Health Birth Summary data for the mother and newborn
- **Birth and Fetal Death Reporting (BFDR) – Status – Trial Implementation**
  - Supports pre-population of data (defined by IHE PCC LDS profile) from EHRs to birth certificate and fetal death reporting forms to meet Federal, state and local reporting requirements
- **Vital Records Death Reporting (VRDR) – Status – Trial Implementation**
  - Supports pre-population of data (using a Medical Summary) from EHRs to death reporting forms to meet Federal, state and local reporting requirements
  - Enables interoperability between EHRs and Electronic Death Registration Systems
- **BFDR and VRDR utilize a Form Filler and Form Manager to implement the ITI Retrieve Form for Data Capture (RFD) Profile**

2013

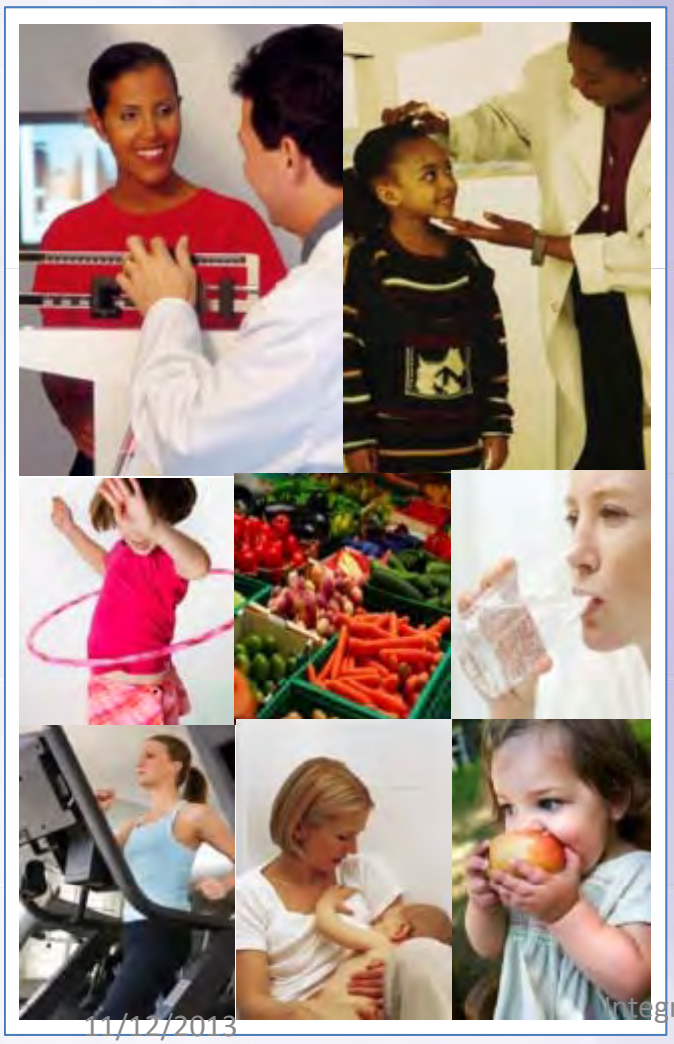
Profiles & Technical Frameworks

QRPH: Profiles to support Early Hearing Detection and Intervention (EHDI)

- **Early Hearing Detection and Intervention:** Screening, Short-Term Care, and Clinical Surveillance for Hearing Loss
  - Assists with the detection, documentation of and intervention for newborn hearing loss with subsequent short-term follow-up and clinical surveillance
  - Identifies standards and data requirements for newborn hearing screening
  - Defines an Early Hearing Care Plan (EHCP) made available to all authorized providers of care as jurisdictionally directed by Public Health
  - Enables the reporting on quality measures to assure more effective care
  - Enables public health and population health surveillance to assure access to care and appropriate resources
- **Early Hearing Care Plan (EHCP) – Status – Trial Implementation**
  - Assists with the early detection, documentation of and intervention for hearing loss by enabling electronic communication of care plan content and instructions available to all authorized providers of care as jurisdictionally directed by the Public Health EHDI Program

Electronic Health Record (EHR) and Healthy Weight (HW) Surveillance Systems Information Exchange

Capturing HW data in EHR systems



Electronic exchange using HL7 and IHE-based standards

HWS

HWS, HWFeed

Impact

Improving the timeliness, accuracy, and completeness of HW surveillance data, informing programs, policy, systems, environments

Profiles & Technical Frameworks

QRPH: Profile Healthy Weight (HW)
Status – Trial Implementation

- **Healthy Weight:** Height/Weight measures, Counseling, Care Plan and Coordination, and Clinical Surveillance
  - Assists with the overweight and obesity identification, intervention, care management and clinical surveillance
  - Identifies standards and data requirements for healthy weight monitoring and intervention
  - Supports healthy weight goals, resources, and care plan for healthy weight improvements available to all authorized providers of care
  - Uses several different mechanisms for capturing and communicating healthy weight information
  - Enables public health and population health surveillance to assure access to appropriate resources for healthy weight management

Profiles & Technical Frameworks

QRPH: PRPH-Ca Profile Status – Trial Implementation

- **Physician Reporting to a Public Health Repository – Cancer Registry**
  - Defines the CDA R2-based content for physicians to report a diagnosis and/or treatment of a cancer patient to the public health cancer registry
  - Defines Content Creator – Healthcare Provider
  - Defines Content Consumer – Public Health Cancer Registry
  - Fulfills state legal obligations to report cancers to state cancer registries
  - Provides a single, consistent method that allows efficient and accurate exchange of information while reducing the burden on EMR system-specific or registry-specific implementations
  - Refer to the PRPH-Ca Profile for the business case for background and rationale for physician reporting to the public health cancer registry

QRPH 2013/2014 New Work

- Birth and Fetal Death Reporting Extension
- Structured Data Content
- Contraception and Family Planning Content
- Early Hearing Screening Detection and Intervention progression (Quality Metrics)
- EHR Enabled Research Whitepaper
- Qualified Clinical Data Registries Whitepaper

2013 QRPH White Papers

- **Public Health Reuse of Administrative Data**
  - Will serve as a roadmap for developing Health IT interoperability standards for data exchanges between clinical electronic health record systems, administrative data systems and public health programs. Use case focus on diabetes care management, surveillance and quality measures reporting

Other Public Health Related Profiles

- Patient Care Coordination (PCC)
  - Immunization Content (IC)
  - Early Hearing Detection and Intervention Workflow Definition (EHDI-WD)
  - Retrieve Clinical Knowledge
  - Data Access Framework (DAF) Whitepaper (ONC S&I)
- IT Infrastructure
  - Retrieve Form for Data Capture (case reporting)
  - Sharing Value Sets (SVS)
  - De-Identification White Paper

Research Profiles

- **Clinical Research Data (CRD)**
  - Defines pre-population data for the clinical research use
- **Drug Safety Content (DSC)**
  - Defines the content to be used by a drug safety reporting use case in conjunction with RFD
- **Retrieve Process for Execution (RPE)**
  - RPE enables a healthcare provider to access a process definition, such as a research protocol, and to execute automated activities, without leaving an EMR session
- **Data Element Exchange (DEX)**
  - DEX leverages the power of an ISO/IEC 11179 Metadata Registry standard to apply mappings earlier in the process, at the point of form design
- **Research Matching (RM)**
  - RM specifies methods of matching patients and investigators with appropriate clinical research studies

Thank you for your attention

Discussion