CMS
CENTERS FOR MEDICARE & MEDICAID SERVICES

Promoting Prevention in Medicaid and CHIP

Using health IT to improve access to preventive services

May 30, 2013

Agenda

- Welcome
  - Deirdra Stockmann, Division of Quality, Evaluation and Health Outcomes, Center for Medicaid and CHIP Services
- Medicaid eHealth programs
  - Jason McNamara, Data Systems Group, Center for Medicaid and CHIP Services
- Reactive to Preventive: Patient Care Using EHR Technology
  - Beth Schindele, Director, Quality Insights of Delaware
- The MDPHnet Distributed Querying Approach for Public Health
  - Jeffrey Brown, PhD, Asst. Professor, Department of Population Medicine, Harvard Pilgrim Healthcare Institute and Harvard Medical School
- Discussion and Questions
- Upcoming sessions

Using health IT to improve access to preventive services – Part 1

Medicaid eHealth Programs

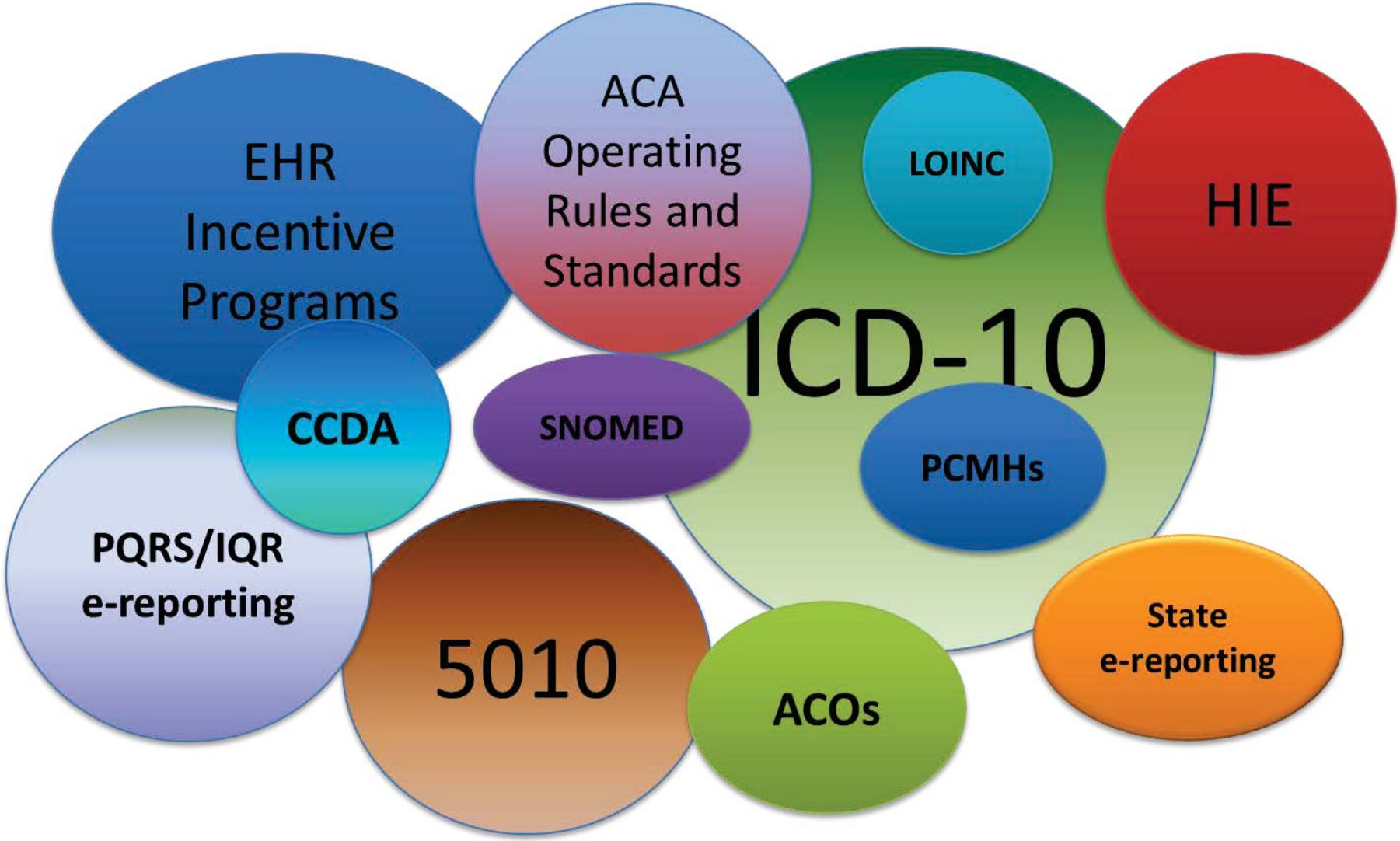
Jason McNamara

Technical Director for Health IT

Center for Medicaid and CHIP Services

http://www.cms.gov/eHealth

eHealth Programs and Focus Areas



Starting Place

Federal e-health directives as outlined in HIPAA, ARRA that includes the HITECH Act, and ACA support:

- Improved quality of care
- Improved health outcomes
- Reduced costs without compromising quality or patient safety

Trends

- Advances in healthcare delivery via mobile and wireless e-health technologies
- Increasing use of telemedicine
- Personalized medicine by which healthcare is customized based on information about a person's unique clinical, genetic, genomic, and environmental information
- Interactive health care via social media and Web 2.0 applications

Interoperability

- The country's e-health future is dependent on the sharing of healthcare data among stakeholders that comprise a national health information infrastructure
- Overwhelming majority of Americans receive their care from more than one caregiver or provider

eHealth Transformation as Standardization

- Standardizing health data
- Deploying an industry model with standardized metadata
- Increasing the level of standardization and incenting stakeholders to make exchanging healthcare data easier across organizations

Policy & Program Levers

- Administrative Simplification, including ICD-10
- EHR Incentive Programs
- Quality Data, Quality Measures, Quality Strategies
- Health Information Exchange
- Medicaid Management Information Systems (MMIS)
- Medicaid Healthcare Policy

Administrative Simplification

- Administrative Simplification
  - Standardized operating rules
  - Standardized benefit coverage information
  - Standardized benefit utilization information
  - Standardized timeliness of query response
  - Standardized referrals and pre-authorizations
- ICD-10 will result in several improvements in the areas of reimbursement, research, quality measurement, public health, and organizational monitoring and performance

EHR Meaningful Use and Interoperability

CMS oversees EHR Incentive Programs

- Stage 1 (began in 2011; starting point for all providers)
  - Focus: transferring data to EHRs and being able to share information
- Stage 2 (to be implemented in 2014 under the final rule)
  - Focus: online access for patients to their health information and electronic health information exchange between providers
- Stage 3 (expected to be implemented in 2016)
  - Focus: demonstrating that quality of health care has been improved

Quality

- Goals
  - Better Care
  - Healthy People/Healthy Communities
  - Affordable Care
- Nexus: Quality Data / Health Information Exchange / EHRs / E-Health Standards
- From paying for volume to quality and value-based payments
- State conversations about Quality Strategies (data and policy alike)

Health Information Exchange

- Evolving nature of HIEs from exchanging data and incenting EHR meaningful use to turning data into actionable information
- HIEs emerge in the healthcare marketplace as competing platforms of differentiated healthcare data services
  - Provide integration of data activities
  - Offer enterprise decision and business intelligence (BI) support tools
- CMS funds Medicaid HIE infrastructure development related to the EHR incentive program

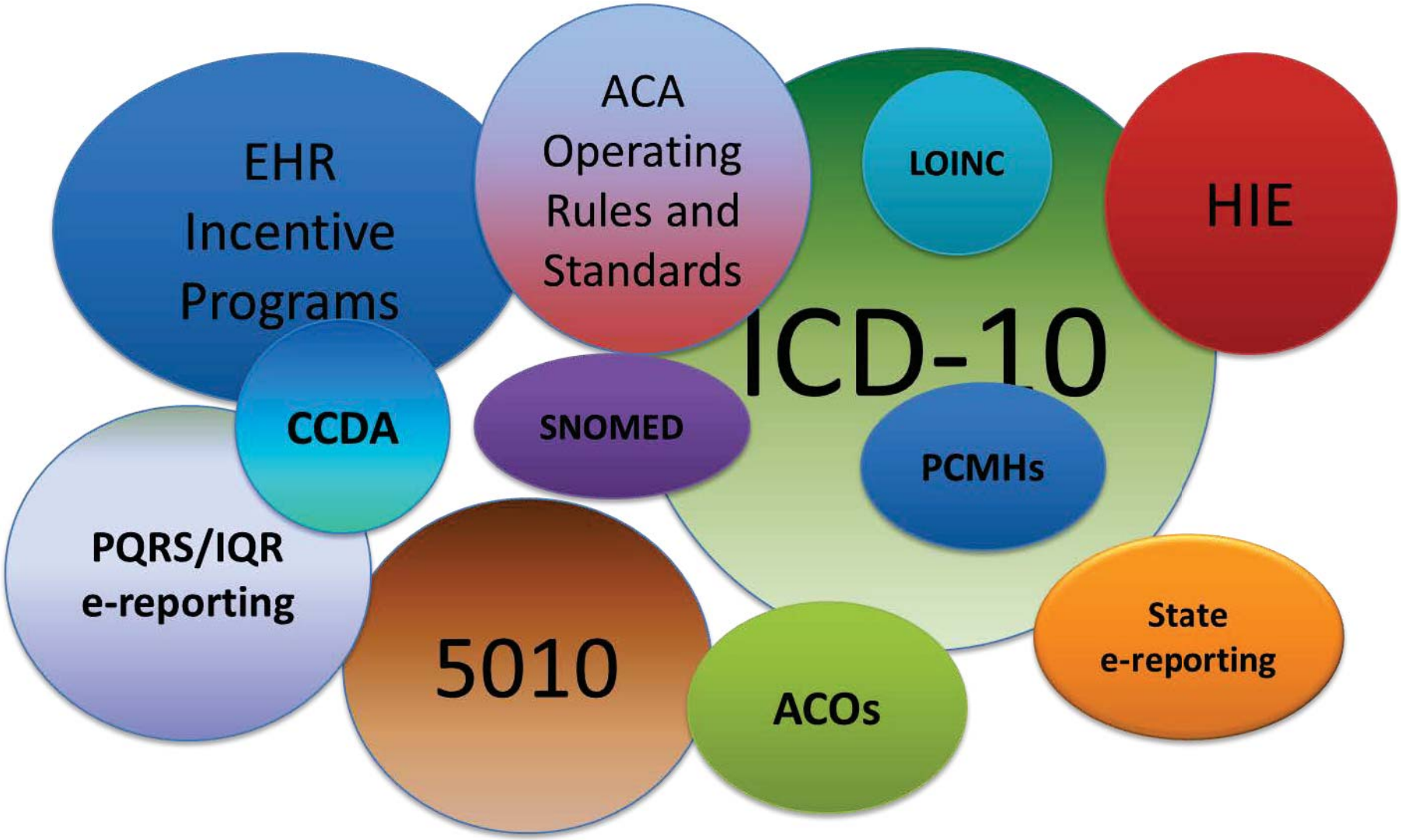
Medicaid Management Information Systems

- Changing the way we fund and support MMIS projects
- Admission, Discharge, and Transfer data feeds
- Interfacing the MMIS to the HIE (or Clinical Data Repository) to “marry” claims data with clinical data
- Advanced analytics to support data queries

Future is NOW

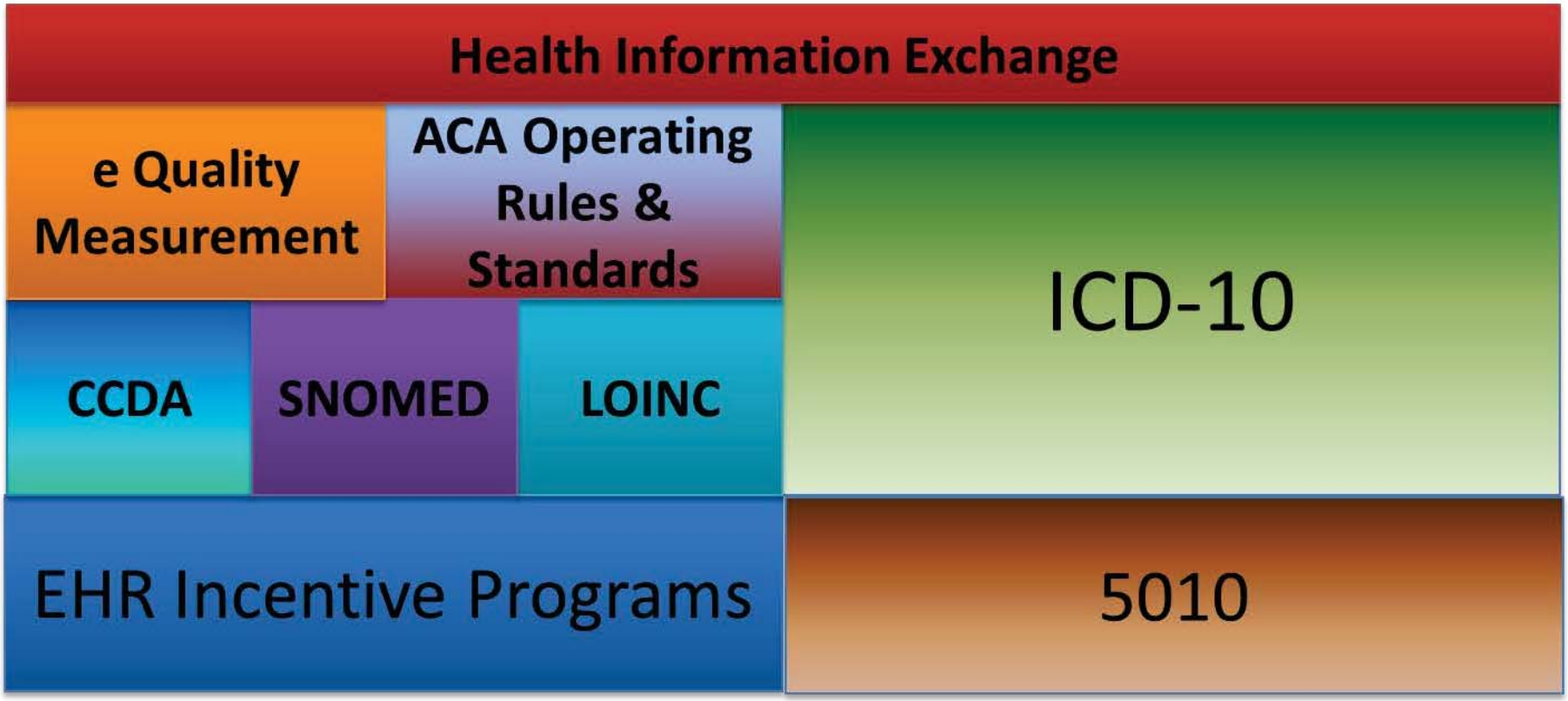
- It’s about transforming health care delivery and payments
- Mobile and real-time transactions
- Enterprise thinking
- Private and public partnerships
- Better coordination of e-health implementation
  - Align statutory requirements of e-health initiatives with “operational compliance”

eHealth Programs



eHealth Programs, revisited

Better care, Better outcomes, lower costs – data driven



Prevention

- Data availability (patient, provider, system)
- Drive education
- Questions to challenge the process
- Transparency to adjust approach
- Data driven prevention

Questions?

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Using health IT to improve access to preventive services – Part 2

Reactive to Preventive: Patient Care Using EHR Technology

Beth Schindele

Director

Quality Insights of Delaware

EHR Utility

- Clinical Quality Measures – Meaningful Use reports
- Custom reports

Clinical Quality Measures – 2014 and Beyond

Must Report 9 from list of 64 CQM
Must select from at least 3 of the 6 National Quality Strategy Domains
Must be electronically submitted (unless 1st year of MU)
9 Core CQM recommended (not required)
NQF 0018 strongly encouraged

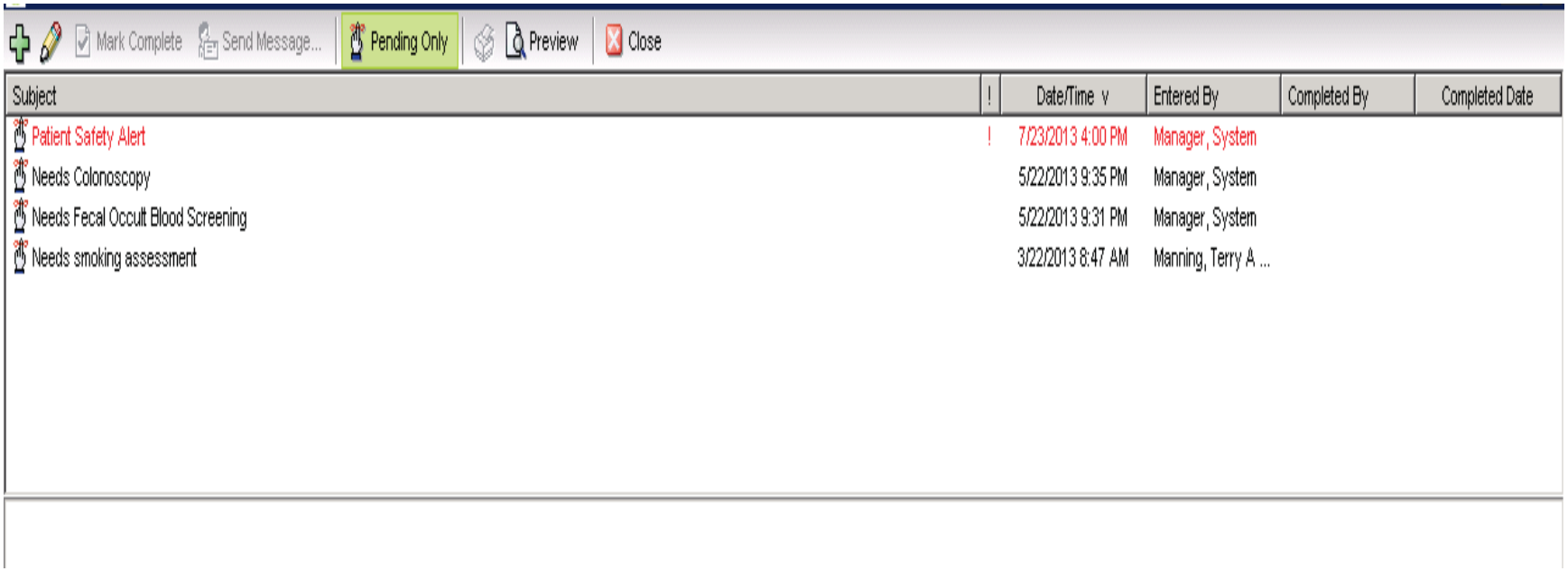
NQF# (*new)	2014 Clinical Quality Measure Titles (64 total)	Core
Care Coordination Domain (1)		
TBD*	Closing the Referral Loop: Receipt of Specialist Support	Adult
Patient & Family Engagement Domain (4)		
0384*	Oncology: Medical & Radiation - Pain Intensity Quantified	
TBD*	Functional Status Assessment for Knee Replacement	
TBD*	Functional Status Assessment for Hip Replacement	
TBD*	Functional Status Assessment for Complex Chronic Conditions	Adult
Efficient Use of Healthcare Resources Domain (4)		
0002	Appropriate Testing for Children with Pharyngitis	Peds
0052	Use of Imaging Studies for Low Back Pain	Adult
0069*	Appropriate Treatment for Children with Upper Respiratory Infection (URI)	Peds
0389	Prostate Cancer: Avoidance of Overuse of Bone Scan for Staging Low Risk Prostate Cancer Patients	
Patient Safety Domain (6)		
0022*	Use of High-Risk Medications in the Elderly	Adult
0101*	Falls: Screening for Future Fall Risk	
0419*	Documentation of Current Medications in the Medical Record	Adult
0564*	Cataracts: Complications within 30 Days Following Cataract Surgery Requiring Additional Surgical Procedures	

Provider Aptitude

- Learning curve
- Vendor training & resource materials
- Properly documenting patient encounters

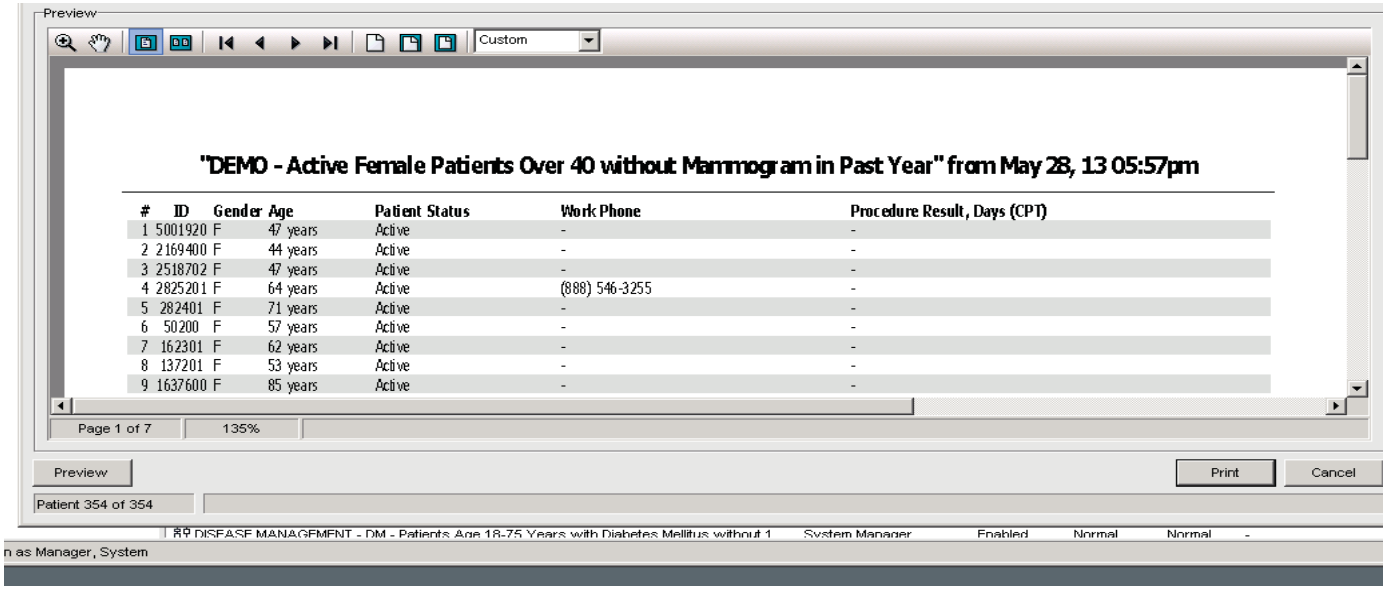
Tools to Improve Patient Care

- Setting alerts & reminders in patient charts
  - Counsel patients to promote healthier lifestyle
  - Check tests, labs and review with patients



Identify Patient Populations

- Monitor target patient populations
  - Use of reports to do double duty
    - Track missing preventive tests patients need
    - Tool to remind patients



What We Learned

- Shift in patient care: Reactive to Preventive
  - Visit summaries
  - Patient Portal
  - Education
  - Communication

Using health IT to improve access to preventive services – Part 3

The MDPHnet Distributed Querying Approach for Public Health

Jeffrey Brown, PhD

Asst. Professor, Department of Population Medicine

Harvard Pilgrim Healthcare Institute and Harvard Medical School

Approach to Distributed Querying

Distributed Querying Guiding Principles

- Data partners maintain control of their data
- Standardize data using a common data model
- Distribute code to partners for local execution
- Provide results, not data, to requestor

Distributed Querying Guiding Principles, cont.

- Data partners' ongoing involvement is crucial
- Little or no exchange of person-level data is needed
- Secondary use can't interfere with primary use
- Few data elements are needed

PopMedNet Software Design

- Facilitates operation of distributed networks
- Handles the network “pipes”
- Software-enabled governance
- Enables flexible distributed querying
- Any data model from any source
- Integrates with other querying platforms
- Data partner autonomy
- Open source application and community of users

PopMedNet: Current Networks and Partners

Data Partner	AHRQ Funder	AHRQ Funder	FDA Funder	NCI Funder	ONC Funder	
	SPAN	PEAL	Mini-Sentinel	CRN	MDPHnet	HMORnet
HMO Research Network (#sites in each network)	✓ (11)	✓ (4)	✓ (13)	✓ (9)		✓ (12)
Vanderbilt		✓	✓			
Aetna			✓			
Humana			✓			
Optum (United HealthCare)			✓			
WellPoiont (HealthCore)			✓			
MA League of Community Health Centers					✓	
Atrius					✓	
Beth Israel Deaconess Medical Center			✓ (Query Health Pilot)			

CHORDS and NIH Collaboratory coming soon

PopMedNet Networks: Details

	PMN Version	Query Interface/ Mechanism	Data Model	Query Format	Network Use	Data Sources	Total Population
Mini-Sentinel (FDA)	2.3.22/ 3.2	Menu-driven query builder Modular Program (planned)	MSCDM Summary Tables MSCDM	SQL SAS	Medical product safety surveillance	18 health insurers and integrated delivery systems	~130 million; 350 million person-years
HMORNnet (N/A)	2.3.22	Menu-driven query builder File Distribution	MSCDM Summary Tables HMORN Virtual Data Warehouse (VDW)	SQL SAS	Preparatory-to-research; feasibility	12 current; 18 planned; health insurers and integrated delivery systems	11-15 million covered lives (2012)
SPAN (AHRQ)	2.3.18	Menu-driven query builder (patient level) File Distribution	Subset of the HMORN VDW Subset of the HMORN VDW	SQL SAS	Comparative effectiveness research	11; insurers, integrated delivery systems & community sites	4.2 million

PopMedNet Networks: Details cont.

	PMN Version	Query Interface/ Mechanism	Data Model	Query Format	Network Use	Data Sources	Total Population
MDPHnet (ONC)	3.1	Menu-driven query builder	Electronic medical record Support for Public health (ESP)	SQL	Public health surveillance	2; multi-site medical group practices	1 million patients; hundreds of clinics
PEAL (AHRQ)	2.3.22	File Distribution	HMORN VDW	File transfer	Comparative effectiveness research	5; insurers & integrated delivery systems	1.5 million patients
CRN (NCI)	2.3.22	Menu-driven query builder File Distribution	MSCDM Summary Tables HMORN VDW	SQL SAS	Research	9; Health insurers and integrated delivery systems	8.5-9.7 million covered lives
NIH DRN (NIH))	3.2	Menu-driven query builder Modular Programs File Distribution	MSCDM STs; ESP MSCDM HMORN VDW	SQL SAS SAS	Research	HMORN, several others; expanding	TBD
CHORDS	3.2.x	TBD	Electronic Medical Records	TBD	Clinical Quality improvement and research	5; Medical research institutions	TBD

PopMedNet.org

PopMedNet About Resources Register Contact

PopMedNet

The PopMedNet™ software application enables simple creation, operation, and governance of distributed health data networks. It facilitates distributed analyses of electronic health data to support medical product safety, comparative effectiveness, quality, medical resource use, cost-effectiveness, and related studies. The software:

- Allow users to send questions to the data
- Provide secure, customized, private portals, and file transfer capabilities that allow users to query data held by disparate partners
- Allow participating network data partners to maintain physical and operational control over their data
- Support both menu-driven analyses and distribution of complex analytic programs
- Accommodate any network size, from single datasets held by a single study involving two organizations to multi-year projects encompassing dozens of organizations and multiple projects
- Accommodate any data model
- Is open source and available through a no cost license

MDPHnet Overview

- ONC funded; coordinated by MA eHealth Collaborative
- Distributed public health surveillance capability for Massachusetts DPH
- Based on the ESP data model
- 2 medical group practices; ~1million patients
- Launched in November 2012
- Consistent with ONC Query Health framework

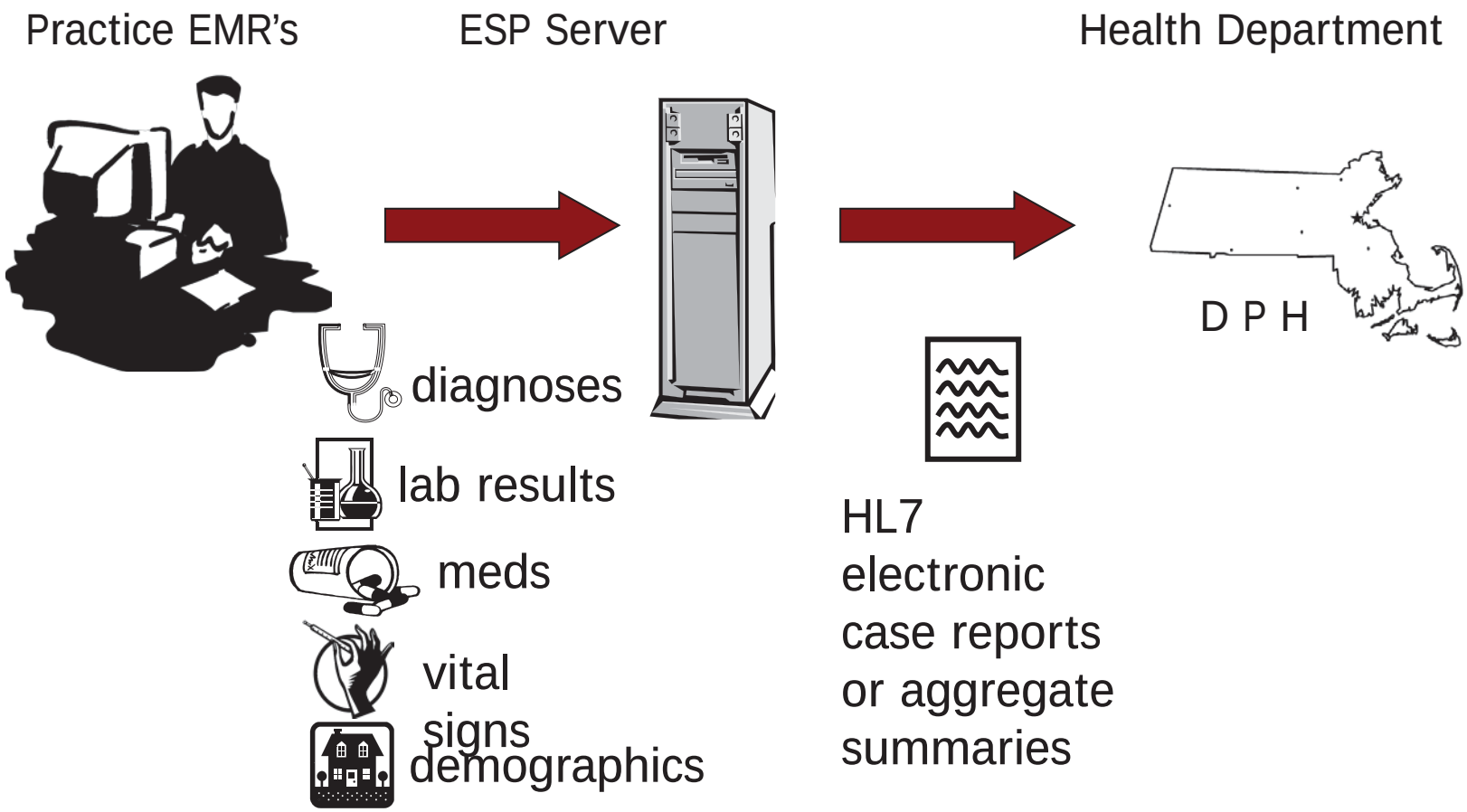
Electronic Support for Public Health (ESP)

- Extracts, analyzes, and transmits electronic health information from providers to public health
  - Standardize data (ESP data model)
  - Apply case finding algorithms
  - Send secure electronic reports to health authority
  - Designed to be compatible with any EHR system

http://www.Esphealth.org

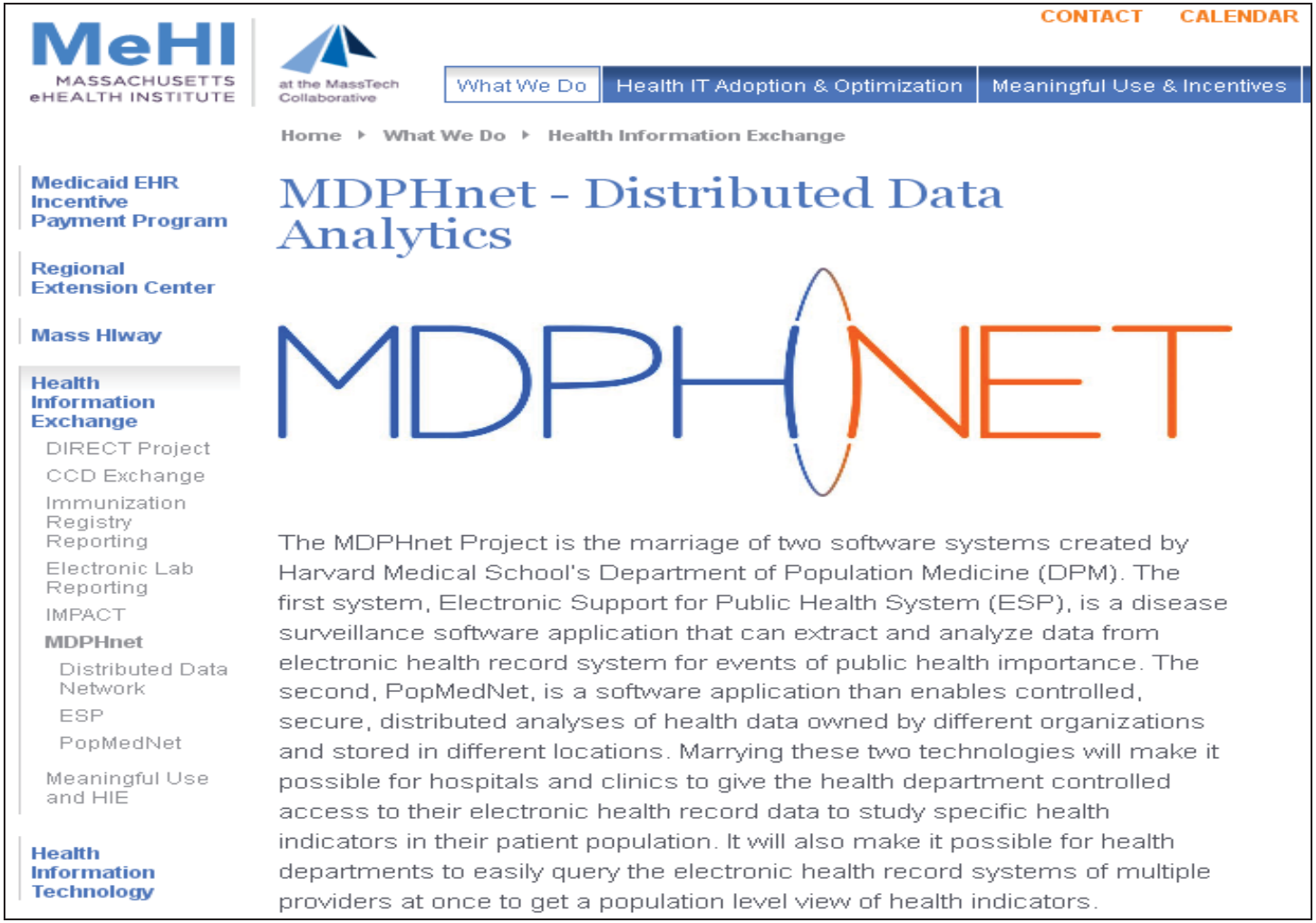
JAMIA 2009;16:18-24
MMWR 2008;57:372-375
Am J Pub Health 2012;102:S325–S332

ESP: Automated Disease Detection and Reporting for Public Health



JAMIA 2009;16:18-24
Am J Pub Health 2012;102:S325–S332

MDPHnet


MeHI
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Health IT Adoption & Optimization
Meaningful Use & Incentives
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Medicaid EHR Incentive Payment Program
Regional Extension Center
Mass Hlway
Health Information Exchange
DIRECT Project
CCD Exchange
Immunization Registry Reporting
Electronic Lab Reporting
IMPACT
MDPHnet
Distributed Data Network
ESP
PopMedNet
Meaningful Use and HIE
Health Information Technology
MDPHnet - Distributed Data Analytics
MDPHNET
The MDPHnet Project is the marriage of two software systems created by Harvard Medical School's Department of Population Medicine (DPM). The first system, Electronic Support for Public Health System (ESP), is a disease surveillance software application that can extract and analyze data from electronic health record system for events of public health importance. The second, PopMedNet, is a software application than enables controlled, secure, distributed analyses of health data owned by different organizations and stored in different locations. Marrying these two technologies will make it possible for hospitals and clinics to give the health department controlled access to their electronic health record data to study specific health indicators in their patient population. It will also make it possible for health departments to easily query the electronic health record systems of multiple providers at once to get a population level view of health indicators.

MDPHnet Implementation Process

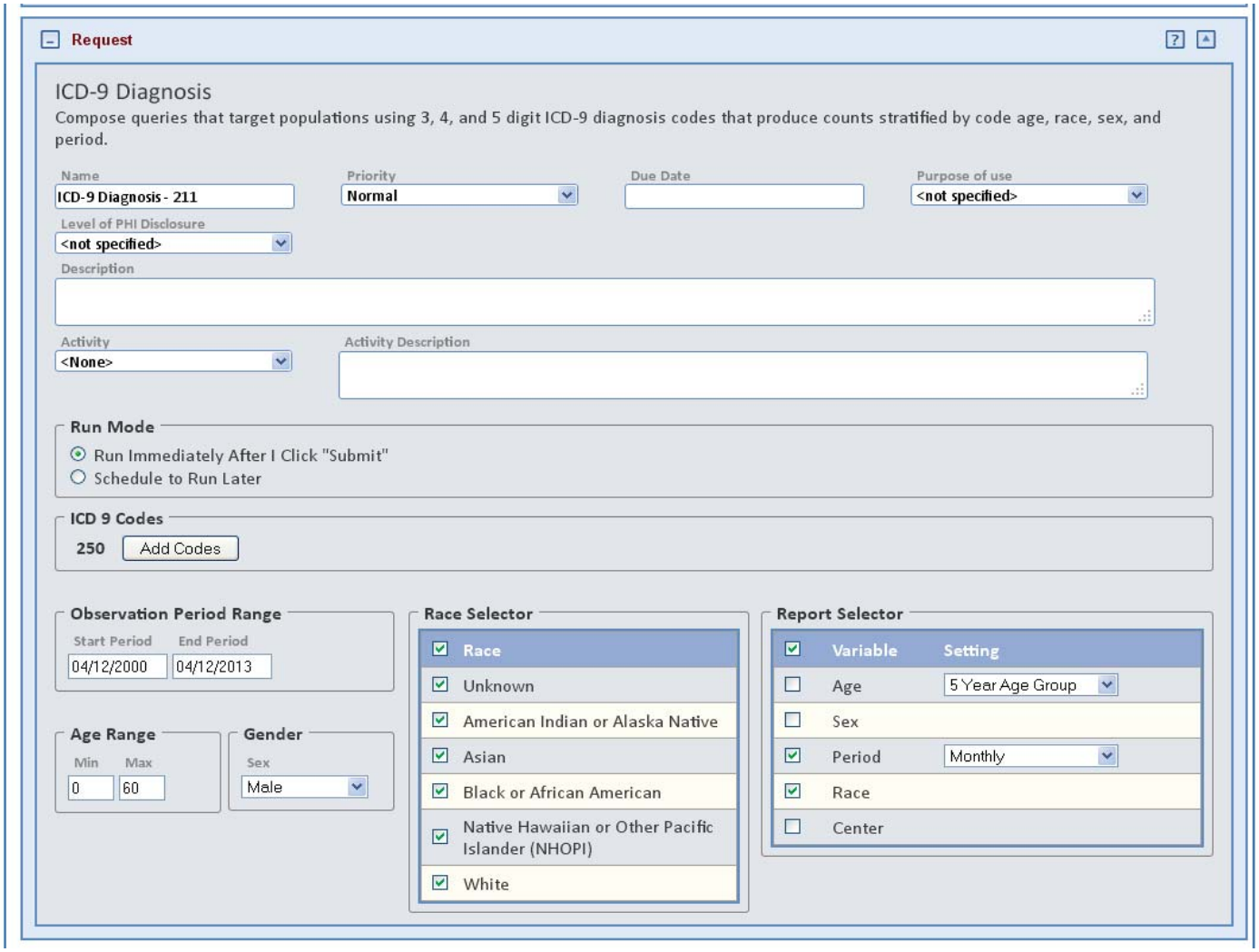
- Establish governance
- Assigns tasks and responsibilities
- Create and host secure portal
- Partners install ESP
- Partners install PopMedNet
- Partners assign roles for query response
- Maintain, manage, and enhance…repeat

Using MDPHnet

Current Querying Capabilities

- Menu driven queries
  - Menu-driven ICD-9 diagnoses querying
  - Reportable Disease queries
- Ad hoc complex query
- Query scheduling
- Stratification by sex, age, race, period, and location
- Geographic mapping (heat maps) possible using RiskScape

Building a Query



Features in Development

- SQL query type and automatic execution
- Development of ‘And’ logic and temporal relationships
- Zip code stratification
- Denominators

Thank You

- For more information:
  - PopMedNet: popmednet.org
  - ESP: esphealth.org
  - Jeff_brown@hphc.org

Resources

TA Mailbox: MedicaidCHIPPrevention@cms.hhs.gov

Prevention on Medicaid.gov: http://medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Benefits/Prevention.html