

Query Health

Distributed Population Queries

Update to the HIMSS Government Roundtable

Richard Elmore – ONC Coordinator, Query Health

October 3, 2011

Enable a learning health system to understand population measures of health, performance, disease and quality, while respecting patient privacy, to improve patient and population health and reduce costs.

Context:

The nation is reaching critical mass of deployed Electronic Health Records (EHRs) with greater standardization of information in support of health information exchange and quality measure reporting.

The Opportunity: Improve community understanding of population health, performance and quality

- Enable proactive patient care in the community
- Deliver insights for local and regional quality improvement
- Facilitate consistently applied performance measures and payment strategies for the community (hospital, practice, health exchange, state, payer, etc.) based on aggregated de-identified data
- Identify treatments that are most effective for the community

- High transaction and “plumbing” costs
 - Variation in clinical concept coding, even within organizations
 - Lack of query standards
 - Lack of understanding of best business practices
- Centralizing tendency
 - Moves data further away from source
 - Increases PHI risk exposure
 - Limits responsiveness to patient consent preference – less actionable
- Limited to large health systems
 - With larger IT or research budgets
 - Few notable exceptions

Improve community understanding of patient population health



Clinical Information

An illustration of a clinic entrance with a sign featuring a red caduceus symbol. The building has green accents and a set of stairs leading to the entrance.

Clinical Information

An illustration of a multi-story hospital building with a cross on top of one of the towers.

Questions about disease outbreaks, prevention activities, health research, quality measures, etc.

Query Health: Example User Story – Case Control, Statin Efficacy

	Hyper-lipidemic	Not Hyper-lipidemic	Population Total
Individuals Who Take a Statin	200	500	700
Individuals Who Do Not Take a Statin	800	100	900
Population Total	1,000	600	1,600

	Hyper-lipidemic	Not Hyper-lipidemic	Population Total
Patients on Medication A	50	300	350
Patients on Medication B	150	200	350
Population Total	200	500	700

1. Quality Compliance : Number of patients over the age of 18 who have been diagnosed with CAD and are taking a statin (NQF 0074)
2. Surveillance: Determine how many patients are hyperlipidemic.
3. 2 x 2 of Statin and Hyperlipidemia
4. Refine Query
Select two statins
Compare efficacy of two statins

Query Health Scope and Approach

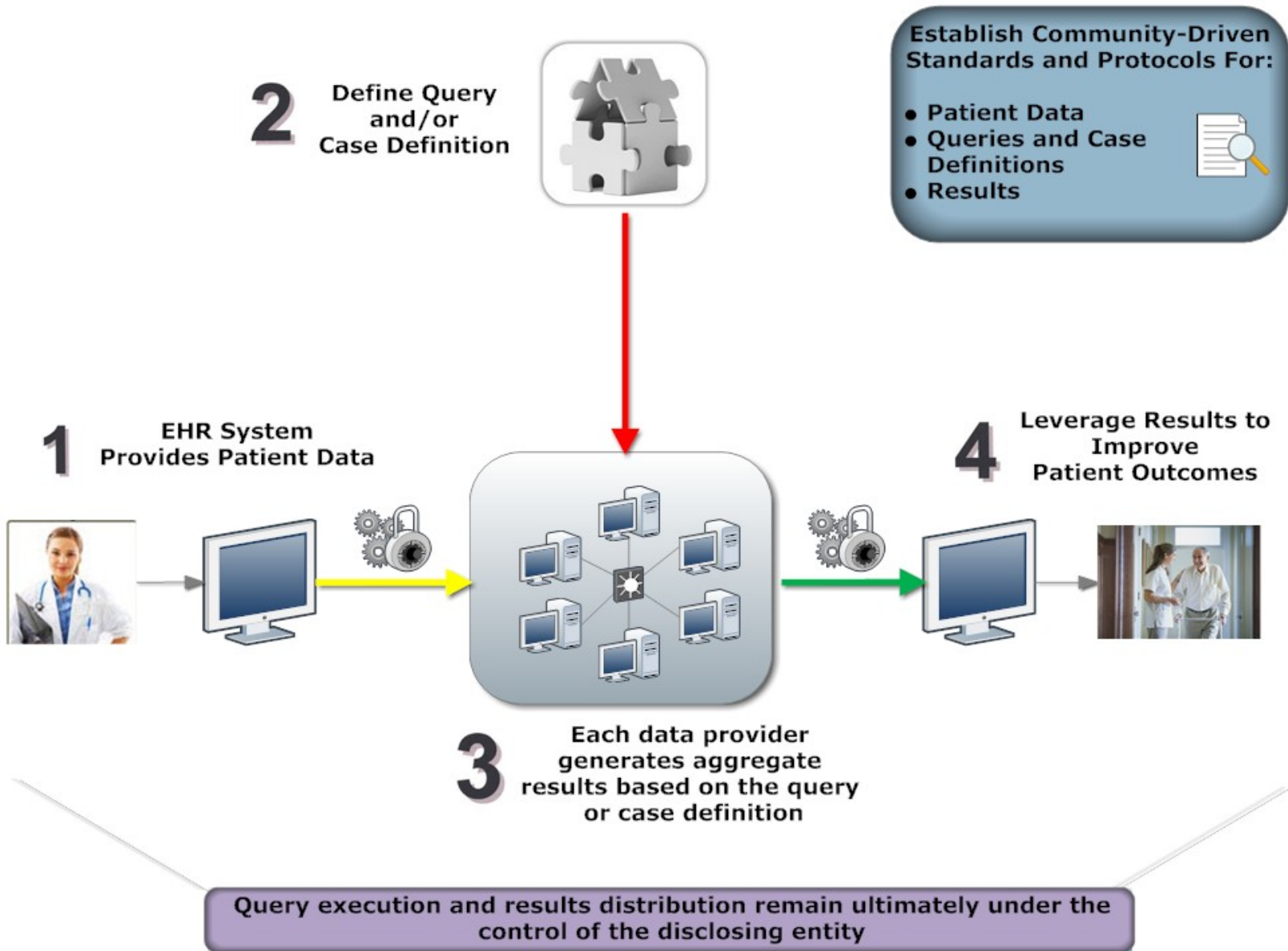
Putting the I in HealthIT
www.HealthIT.gov



HIT Policy Committee:
Policy Guideposts

- Practice drives standards**
1. Rough consensus
 2. Running code (open source)
 3. Pilot
 4. Specifications
 5. Standards

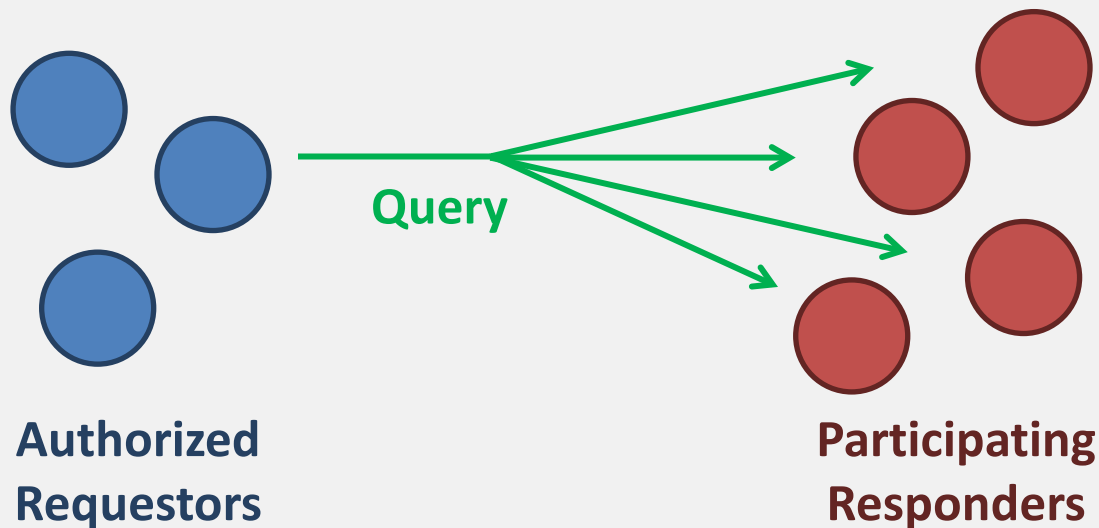
Inside Query Health



Query Networks

Voluntary, No Central Planning

Community of participants that voluntarily agree to interact with each other. There will be **many** networks; requestors and responders may participate in **multiple** networks.



Summer Concert Series

Putting the I in HealthIT 
www.HealthIT.gov

popCCR

Approach for simplifying and integrating performance reporting and decision support

Michael Buck
NYC Dept. Of Health

Steven E. Waldren, MD
Open Health Data

Increasing Research Data Liquidity and Velocity through an Open-Source Framework

Ken Buetow, Ph.D.
Director, Center for Biomedical Informatics and Information Technology
National Cancer Institute

Query Health
Summer Concert Series
August 22, 2011

cancer Biomedical Informatics Grid[®] | caBIG

PopMedNet™

Distributed Networking Technologies for Population Medicine

ONC Summer Concert Series on Distributed Population Queries

Jeffrey Brown
Richard Platt

August 3, 2011



Department of Population Medicine
Harvard Pilgrim Health Care Institute / Harvard Medical School



An Introduction to DARTNet



Wilson D. Pace, MD, FAAFP
Caretaker, DARTNet



i2b2

Informatics for Integrating Biology & the Bedside

GSI Health

Overview of the Universal Public Health Node (UPHN)

Presenters:

Dr. Ivan Gotham - Director Bureau of Health/Health Networks Management
New York State Department of Health

LaRoy Jones - CEO, GSI Health

Vincent Lavis - Principal Architect, GSI Health

August 9, 2011

OBSERVATIONAL MEDICAL OUTCOMES PARTNERSHIP

The Observational Medical Outcomes Partnership: Demonstration of distributed population queries

Patrick Ryan, Marc Overhage, Tom Scarnecchia
on behalf of OMOP Research Team
August 29, 2011

An Overview of the Indiana Network for Patient Care, a Distributed, Federated Model for Querying and Exchanging Health Care Data

Shaun Grannis, MD, MS FAAFP
The Regenstrief Institute
Indiana University School of Medicine
August 29, 2011

Indiana Health Information Exchange | Regenstrief Medical Informatics
The Source for Medical Informatics

Query Health i2b2 / SHRINE Presentation

Isaac Kohane MD, Ph.D.
Shawn Murphy MD, Ph.D.

BioSense 2.0 Introduction

Building a Community-Controlled and Shared PH Surveillance Environment

Query Health Series
Friday, August 29th, 8am-1:30-3pm

Taha A. Kass-Hout, MD, MS

Deputy Director for Information Science and BioSense Program Manager
Division of Infectious Diseases and Healthcare Infection (DHDI), Proposed
Public Health Surveillance Program Office (PHSPO)
Office of Surveillance, Epidemiology, and Laboratory Services (OSLE)
Centers for Disease Control & Prevention (CDC)

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Division of Surveillance, Epidemiology, and Laboratory Services
Public Health Surveillance Program Office



ISDS

INTERNATIONAL SOCIETY FOR DISEASE SURVEILLANCE

Distribute

A Novel Approach to Rapid Regional and National Sharing of Surveillance Data

David Buckridge, MD PhD FRCP
Medical Consultant, Montreal Public Health and INSPQ
Associate Professor, Epidemiology and Biostatistics, McGill University
President and board chair, International Society for Disease Surveillance
ONC Query Health Series, August 26th, 2011

The Hub Population Health System: Ad-Hoc Queries and Alerts

Jesse Singer DO, MPH
Michael D Buck, PhD

Primary Care Information Project
New York City Department of Health
and Mental Hygiene &
NYC Regional Extension Center

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mbuck@health.nyc.gov

August 25, 2011

NYC Primary Care Information Project

Primary Care Information Project | 0

hQuery

The MITRE Corporation

Andrew Gregorowicz
August 8th, 2011

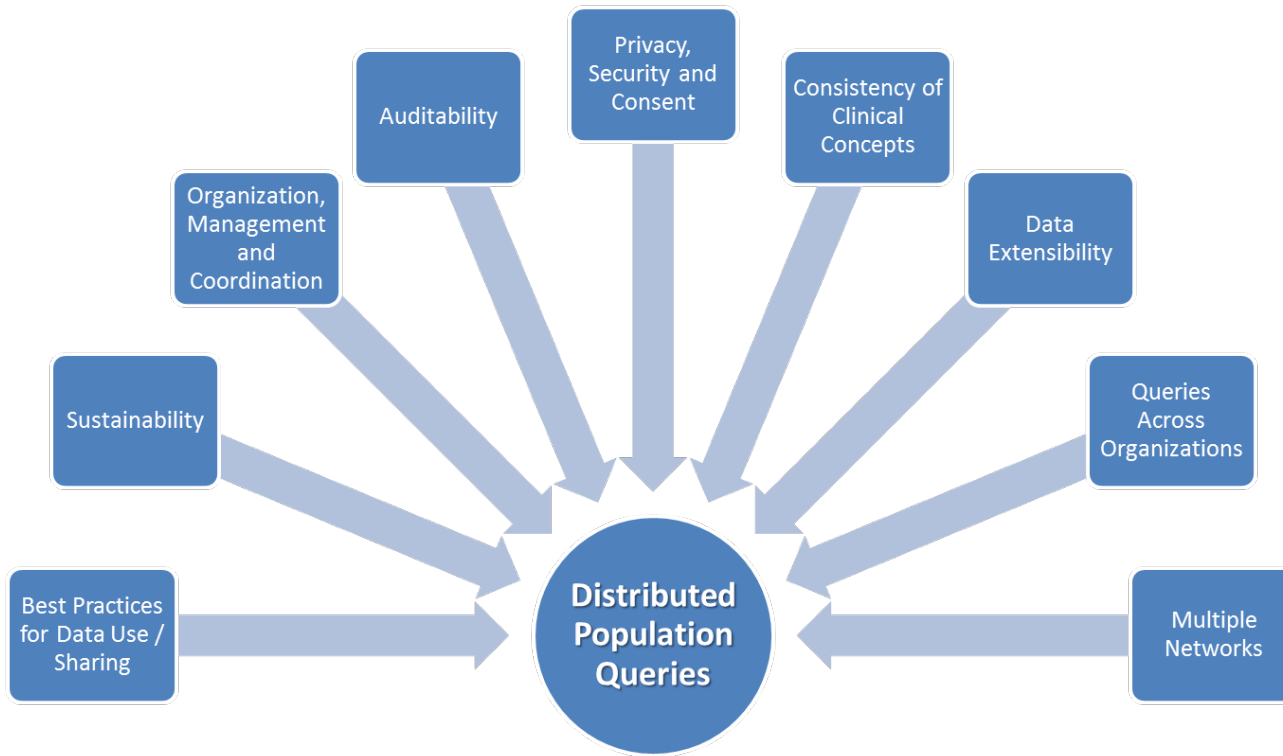


MITRE

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Summer Concert Series: Challenges



“The hardest part of distributed queries isn’t the technology, it’s the policy and governance”
- - From several distributed query practitioners

Query Health Org & Timeline

Query Health
Implementation
Group

Clinical
Workgroup

Technical
Workgroup

Business
Workgroup



Current State
August

Requirements /
Specifications
*September / October
(Face to Face)*

Approach
Consensus
*November / December
(Face to Face)*

Ready for
Pilots
April

Clinical

Current State
Presentations

CIM, Query,
Result

Alternatives,
Convergence &
Consensus

Pilots

Technology

Current State
Presentations

Standards &
Reference
Implementation

Alternatives,
Convergence &
Consensus

Feedback to
Standards & Pilot
Support

Business

Current State
Presentations

Privacy, Security,
Consent,
Sustainability
DUA, & Best
Practices

Alternatives,
Convergence &
Consensus

Pilots

Community Participation

Implementation Group
Tuesdays 1:30pm-3:00pm ET

Technical Work Group
Wednesdays 11am-12pm ET
(look for a new time to be posted soon)

Clinical Work Group
Wednesdays 12pm-1pm ET

Business Work Group
Thursdays 11am-12pm ET

Face to Face Meeting
October 18-19

Download to your
calendar at
QueryHealth.org



Goals Alignment with: S&I Framework

S&I Framework Governance

- Open Government Initiative
- Engaging leaders from consumers, public health, research community, providers, health IT vendors, states / HIOs, payers and federal partners

Meaningful Use and Standards

- Standardized information models and terminologies, e.g., SNOMED, LOINC – vocabulary value sets associated with patient care and quality metrics
- CIM model to support user stories, leveraging S&I initiatives and existing distributed query models
- Transport approach will leverage the NwHIN

Goals Alignment with: Digital Infrastructure for a Learning Health System

- ☑ Build a shared learning environment
- ☑ Engage health and health care, population and patient
- ☑ Leverage existing programs and policies
- ☑ Embed services and research in a continuous learning loop
- ☑ Anchor in an ultra-large-scale systems approach
- ☑ Emphasize decentralization and specifications parsimony
- ☑ Keep use barriers low and complexity incremental
- ☑ Foster a socio-technical perspective, focused on the population
- ☑ Weave a strong and secure trust fabric among stakeholders
- ☑ Provide continuous evaluation and improvement

Query Health Recap

