



eHEALTH INITIATIVE
Real Solutions. Better Health.

Innovative Connectivity Strategies

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April 28, 2011

Housekeeping Issues

- **ALL LINES ARE MUTED**
 - **To ask a question or make a comment, please submit via the chat feature and we will address them in the order received at the appropriate time**

Housekeeping Issues

- **Slides and Recording of Webinar**

- Members can access slides and replays of any webinar for free on eHI's members-only site
 - Non-members can purchase access to any webinar replay for \$25

Visit the eHI Store online at:

<http://www.ehealthinitiative.org/store/storeWebMat.html>

About the eHealth Initiative

- Mission is to drive improvements in the quality, safety, and efficiency of healthcare through information and information technology.
- Over 200 members of eHI
- In addition, EHI serves as a resource and tracks the progress of Regional Extension Centers, and 260 regional, state, and local initiatives working on health information exchange (HIE)

eHI Membership

- The eHealth Initiative members are some of the most informed and influential executives in the health care industry
- Membership is open to all interested organizations
- Join online at our website www.ehealthinitiative.org or contact Amy Eckenroth, 202-624-3265, Amy.eckenroth@ehealthinitiative.org

Take Advantage of eHI Events and Resources

- 2011 National Forum on Health Information Exchange (HIE)
 - July 14, 2011 at the Omni Shoreham Hotel in Washington, DC
- Northwest Medical Informatics Symposium
 - September 19-20, 2011 at the Davenport Hotel in Spokane, WA

Thank You to Our Sponsor



Session Moderator

David McCallie Jr., MD
VP Medical Informatics
Cerner



Overview of Our Agenda

- **Introduction and Welcome (3:00 – 3:05)**
 - David McCallie Jr, VP Medical Informatics , Cerner
- **Overview of HIE in Oklahoma (3:05– 3:20)**
 - Robert Roswell, Senior Associate Dean, University of Oklahoma College of Medicine
- **SMRTNET (3:20 – 3:35)**
 - Mark Jones, Principal Investigator, SMRTNET
- **Providers, CDS and ACO Collide (3:35 – 3:55)**
 - Brian Yeaman, Chief Medical Informatics Officer, Norman Regional Health System
- **Panel Discussion (3:55 – 4:28)**
- **Closing (4:28 – 4:30)**
 - David McCallie Jr, VP Medical Informatics , Cerner

Robert H. Roswell, MD

Senior Associate Dean

University of Oklahoma College of Medicine





Oklahoma's Health Information Exchange Governance Structure and Mission

Robert H. Roswell, M.D.

Chairman Oklahoma Health Information Exchange Trust

Early Planning Efforts

- Governor designated:
 - Oklahoma Secretary for Health as lead
 - Oklahoma Health Care Authority (state Medicaid agency) as the state designated entity (SDE)
- Broad stakeholder participation in planning efforts
- Initial SHIECAP award of \$8.9M

Creation of a Permanent Governance Structure

- Planning group drafted legislation creating a state beneficiary trust
- Unanimously passed Oklahoma House and Senate
- Signed into law by Governor in 2010

Oklahoma Health Information Exchange Trust (OHIET)

- Seven Trustees appointed by Oklahoma Governor, Speaker of the House, and President Pro Tempore
- Five year staggered terms
- Broad background experience in health care, and information technology
- Large Advisory Board with extensive experience representing all key stakeholders
- Oklahoma Health Information Technology Coordinator serves as Executive Director



Oklahoma Health Information Exchange Trust Mission

- Improve the health of all Oklahomans through the enhanced use and sharing of health information
- Assure that all Oklahoma healthcare providers have an opportunity to meet electronic health record meaningful use requirements



Oklahoma Health Information Exchange Trust Philosophy

- Create a network of networks allowing all providers throughout the state to participate in the electronic exchange of health information

Oklahoma Health Information Exchange Trust Operating Principles

- Facilitate dialogue, information sharing, and consensus among all stakeholders
- Leverage existing state efforts, both operational and planned
- Utilize grant funding to encourage development and adoption in underserved areas
- Develop an HIO certification process to assure interoperability and sustainability of activities

Oklahoma Health Information Exchange Trust: Current status

- Transfer of state designated entity (SDE) status to OHIET being finalized
- Strategic and Operational plans have been submitted to the Office of the National Coordinator (ONC) where they await final approval
- Supplemental Challenge Grant award has brought total funding to \$10.6M
- Advisory Board and Trustees actively pursuing specific milestones outlined in operational plan

Mark Jones
Principal Investigator
SMRTNET



SMRTNET

Secure Medical Records Transfer Network

**A Public Non-Profit Health Information
Organization Utility Company**



HIO Utility Company

- **Based on AHRQ Transforming Healthcare Through Health Information Technology-Eight Success Stories**
<http://healthit.ahrq.gov.SuccessStoriesTHQIT>
- **Rapid cycle planning of networks (11)**
- **Multiple self governed networks (7 operational)**
- **“Network of networks” to share data through common management committee**
- **Share meaningful use data (over 3 million patients)**
- **Sustainable without government support (over two years)**
- **Wide disbursement (64 cities)**
- **\$ 5 million, 5 years**

Development Network

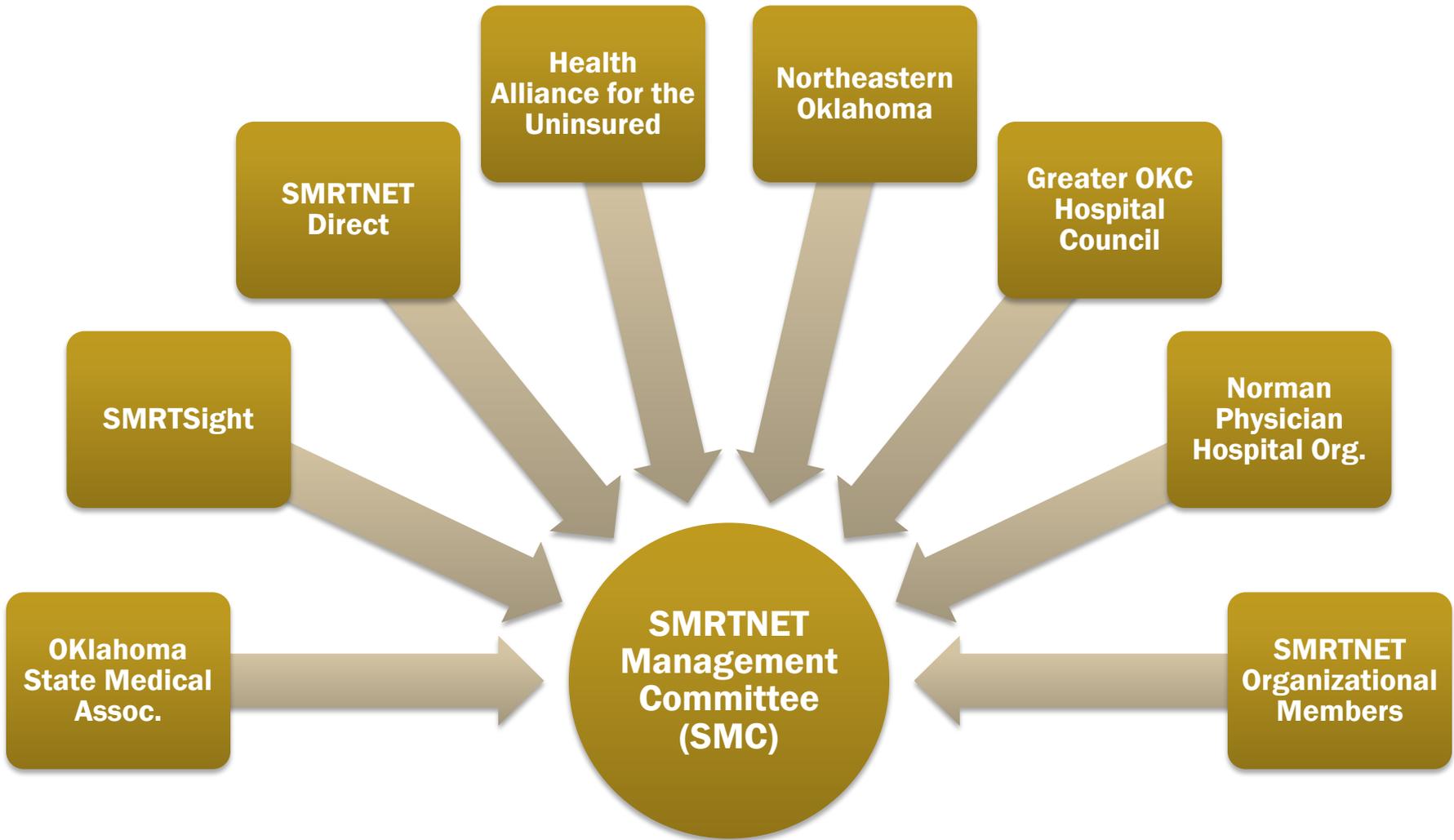
- **Hospital** Tahlequah City Hospital
- **University** Northeastern State University
- **Public Health** OSDH/Cherokee County
- **Federal** Hastings Medical Center
- **Tribal** Cherokee Nation
- **Mental Health** Bill Willis Community MHC
- **Community Health Ctr** NEO Community Health Centers

Current SMRTNET Networks

Network	SMRTNET Planning Process	Sponsor	Status
SMRTNET Direct statewide	Yes	SMRTNET Management Committee	Operational
Oklahoma State Medical Association	Yes	Oklahoma State Medical Association	Governance
SMRTNET Northeast	Yes	SMRTNET Management Committee	Operational
Greater Oklahoma City Hospital Council	Yes	GOCHC	Operational

Current SMRTNET Networks

Network	SMRTNET Planning Process	Sponsor	Status
Oklahoma Association of Optometric Physicians	Yes	Oklahoma Association of Optometric Physicians	Operational-pilot
Norman Physician Hospital Organization	Yes	Norman PHO	Operational
Health Alliance Uninsured	Yes	HAU/OSMA	Operational



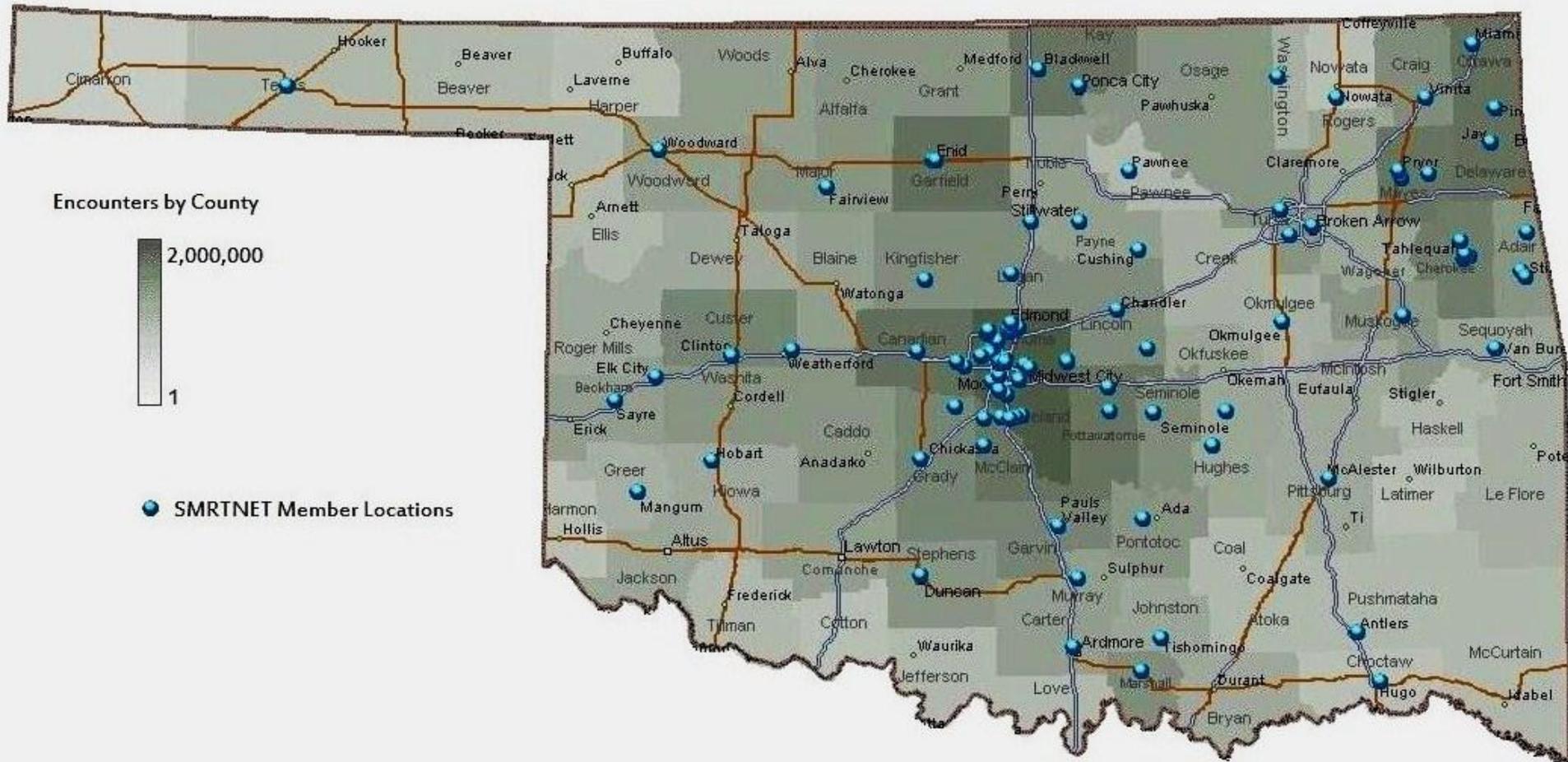
Common Planning and Certification Process

- **Governance (15 issues)**
- **Legal (14 legal functions)**
- **Privacy (27 guidelines)**
- **Clinical (Meaningful use plus other)**
- **Quality (identified per organization)**
- **Sustainability (no government or grant funds for basic operations)**
- **Over 500 health professionals for six hours each for 11 networks**

Shared Data Between Networks

- **Seven networks**
- **Data on over 3.1 million patients**
- **2,600 providers**
- **Data from 113 sources and all future**
- **64 cities**
- **Many more in process**

SMRTNET Networks User and Data Distribution



How Networks are Similar

- **Security policies**
- **Fourteen legal documents**
- **Sixteen shared services**
- **Core data set for meaningful use**
- **Data on over 3.1 million patients**
- **Vendor neutral**
- **Core management committee common policy for all “network of networks”**

How Networks are Different

- **Can be committee, affiliate, or legal organization**
- **Separate governance committee**
- **Define membership**
- **Internal policies within SMRTNET boundaries**
- **May add additional services**
- **Richer data set than shared to others**
- **Confidential data reports for members**
- **Set pricing over core price**
- **Add staff**
- **Protect data**

Points of Interest

- **Beacon project in Tulsa**
- **Challenge grant in Norman**
- **AHRQ Task order 17 in Norman**
- **EMS**
- **Two pilots for Direct**
- **Planned hospital based network for northwest Florida**
- **Day long consultations to Iowa, Chicago, North Carolina**
- **Several others in process**

Brian Yeaman, MD

Chief Medical Informatics Officer
Norman Regional Health System





HIE: Providers, CDS and ACO Collide

Brian Yeaman MD
CMIO Norman Regional Health System



Overview Session Goals

EHR to HIE to ACO to Norman, Oklahoma

- Define how HIE and EHR interact around structured data
 - Clinical Workflow
 - Vendor and CCD Obstacles
 - Decision Support and QI
- Accountable Care Organizations and HIE
 - Hosting Organizations
 - ACO and HIE Footprints
- Norman HIE and ACO Model and CDS



Sooners



EHR to HIE



EHR to HIE

Structured Data Details

- Discrete data elements that can be exchanged across care settings and technology platforms via HIE
 - LOINC/SNOMED/ICD9/ICD10 etc
 - Current ONC efforts via Meaningful Use to create standards
- Who Owns the Data?
 - Patient
 - Doctor
 - Payer?
 - CMS?



EHR Pros and Cons



***"My data system isn't speaking to
your data system."***



EHR to HIE

Structured Data Barriers to Adoption

- Traditionally Vendors Have Given 2-3 Options For Documentation of Data
- Not All Fields Are Structured
- Free Text Boxes
- Option Overload For Providers, CDS, Order Sets, Structured Data, Demographics, Quality Measures, Formulary Checks, Drug Drug Drug Allergy Checking, HIE



EHR to HIE

Structured Data and Health Information Exchange

- Health Information Exchange SMRTNET Example
 - Crosswalk for Structured Data
 - eMPI
 - Direct and HISP Services
 - RLS
- Governance and Trust
- Legal
- Sustainability
- Use Case: Quality/Safety, Duplication, Transitions of Care Eligibility Checking?



EHR to HIE

Clinical Decision Support

- HIE the Enabler for Meaningful CDS
 - Evidence Base Medicine and Content Vendors
 - Clinical Rules
 - Order sets, next logical step is CDS imbedded in CPOE and in HIE data consumption
 - Quality Improvement Tools at HIE Level
 - Disease and Case Management
 - Personal Health Record Tools and Record Portability



EHR to HIE

Clinical Decision Support

- EHR Level Obstacles
 - Workflow to Access HIE
 - Workflow to Document Critical Data Elements
 - To Many Options
 - Not Always Intuitive
 - Hard Stops vs Soft Stops
 - CDS at the EHR Level Limitations
 - HIE CCD Import and utilization of Structured Data



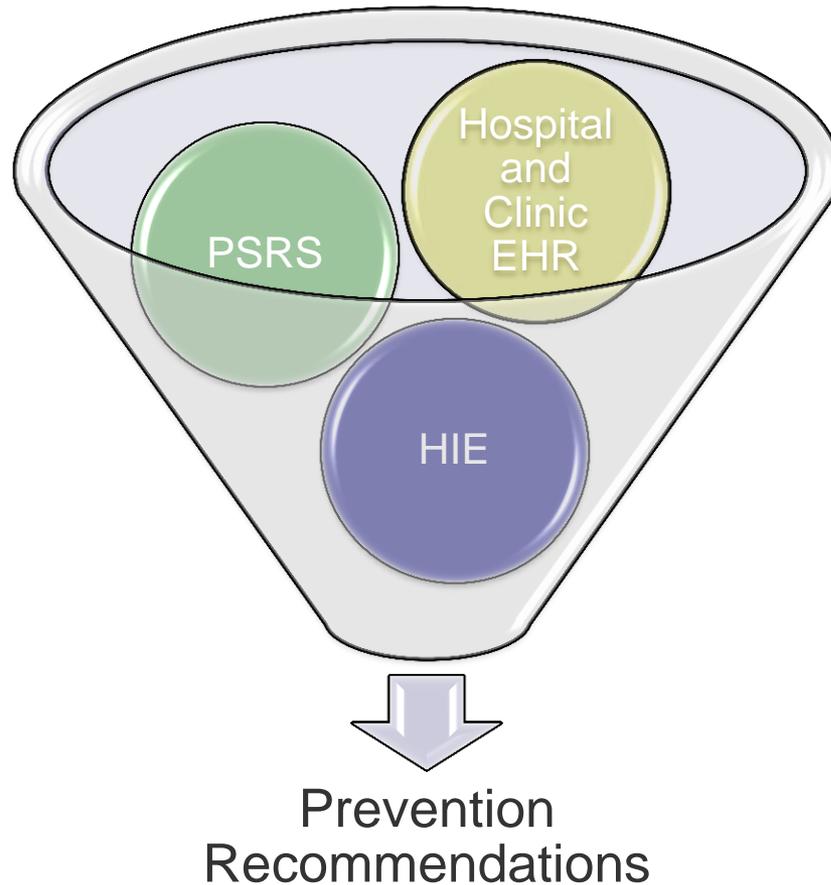
Norman PHO Model

AHRQ Project

- Imbed Clinical Decision Support In Ambulatory Clinics
 - Primary Care
 - Primary Prevention Services
 - Pneumovax
 - Influenza
 - Mammogram
 - Colonoscopy
 - Frequency of Testing
 - LDL, CMP, TSH
 - Efficiency of Prevention Documentation
 - Pre and Post HIE and CDS implementation
 - Learning Cycles

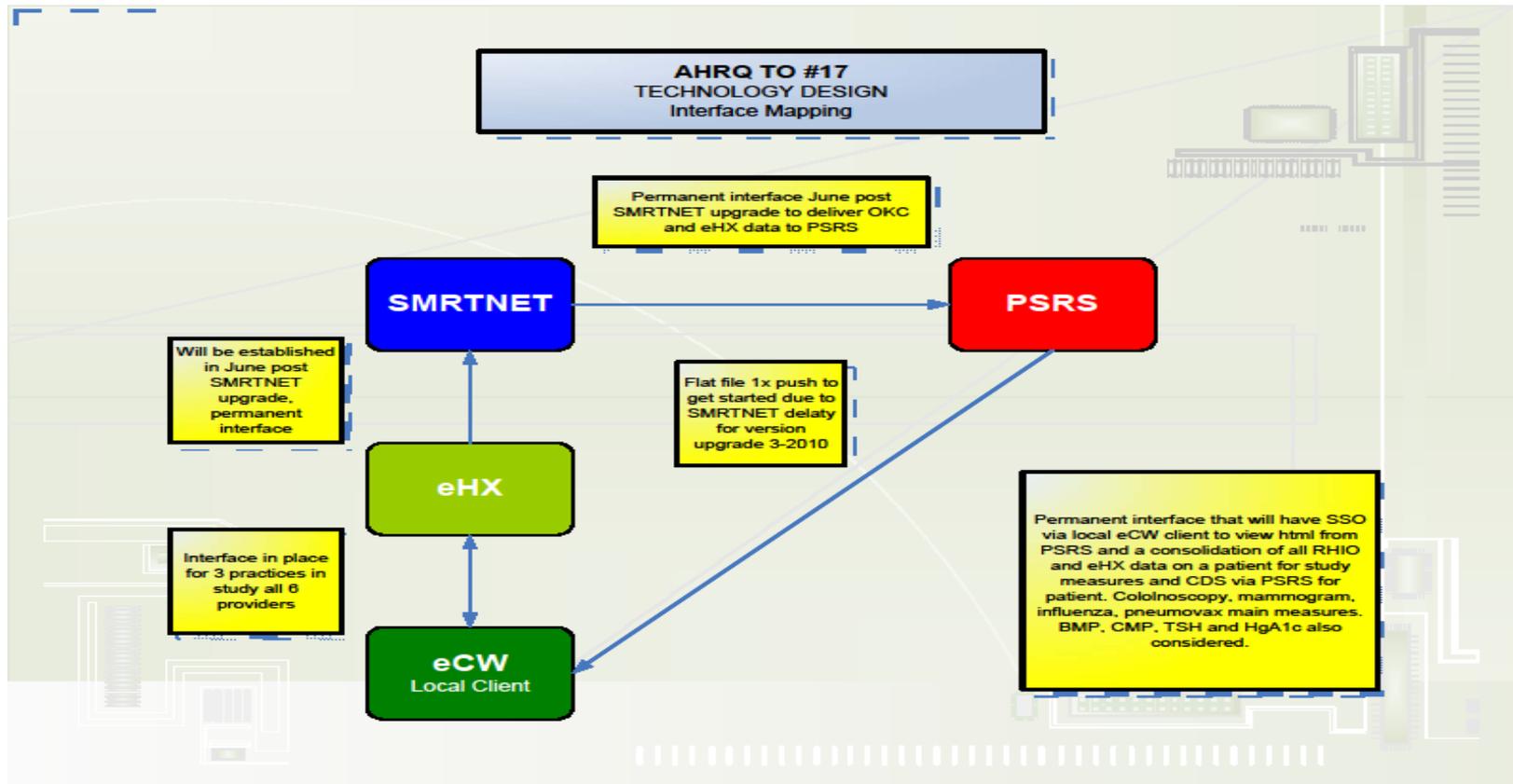


CDS Live NPHO/SMRTNET HIE



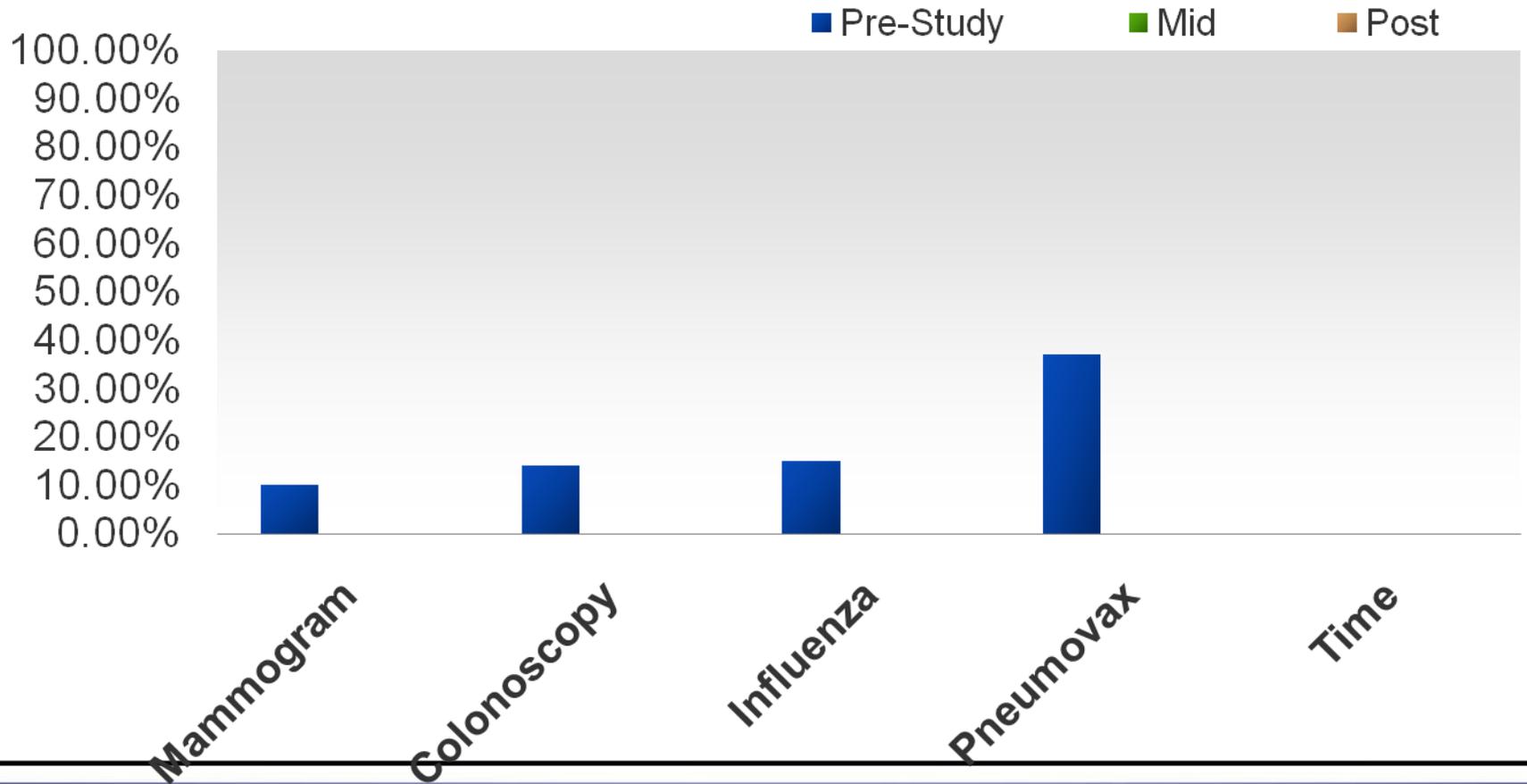
Norman PHO Model

AHRQ Project



Norman AHRQ Project

Pre-Measurement Results



Norman PHO Model

Barriers to HIE Data Collection

- EHR Variability
 - Many Locations To Enter the Same Data Points
 - Clicks
 - Different Elements of Prevention and CDS in Different Areas
 - Inconsistency Across Vendors
 - Standardization of the CCD
- Provider Variability
 - Workflow
 - Data Entry
 - Ease of Use
 - Embedded HIE and CDS
- Patient Contributions Through PHR



Shakespeare



HIE to ACO

Ownership of the HIE

- Considerations and Stumbling Blocks
 - HIPAA
 - Governance
 - Legal
 - Patient Data
 - Patient Privacy
 - Reports Identified vs De-Identified



HIE to ACO

CMS ACO Priorities

- Negotiation of Reimbursements
- Flatten Out the Growth of CMS Expenditures While Expanding Enrolment
- Leveraging a Technology Infrastructure
- Construction of HIO's
- Bundled Payments
 - Improved Care Transitions
 - Improved Condition Management
 - Improved Quality Reporting



HIE to ACO

HIO and ACO Overlap

- HIO
 - Health Information Organization
 - Legal and Governance for HIE
 - Data Management/Control/Permissions
 - Contracts with HIE Vendor for Software
- ACO
 - Accountable Care Organization
 - HIO PLUS...
 - Quality, Performance, Transitions, Condition Management
- ACO Will Need to Subscribe or Create an HIO



ACO Regulations

- Proposed CMS Rule For ACO
 - Implementation Timing January 2012 Start Date
 - CMS Expecting 150 Participants
 - 65 Measures of Quality
 - “One Side” Risk Model
 - “Two Sided” Risk Model
 - Benchmarks For Spending Over Three Years
 - Providers Assigned
 - Beneficiaries NOT Assigned
 - Emphasis on Primary Care Role



PHR the Outlier for Sustainability

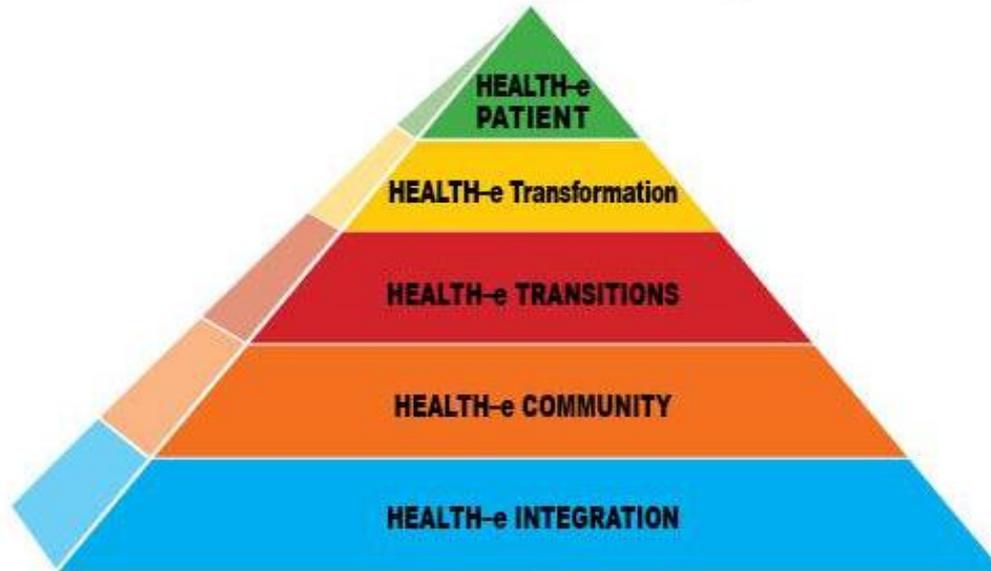
PHR

- Patient Contributions
 - Health Improvement
 - Condition Management
 - Results Receipt and Communication Requests
- Clinical Decision Support For Patients
 - Education Resources
 - Group Education
 - Health Risk Appraisal Tools
- Patient Accountability
 - Where Is It? Employers? City Government? ACO?



HIE Roadmap to ACO

The **HEALTH-e** Pyramid Community Project



HIE Roadmap to ACO

INITIATIVE	OBJECTIVES	GOALS
<p>HEALTH-e PATIENT Enhanced Healthcare Delivery Model</p>	<p>Integrated Community Health Disease Management Prevention</p>	<ul style="list-style-type: none"> • Aggregate Reduction In Overall Healthcare Expenditures • Healthier Patients & Community
<p>HEALTH-e TRANSFORMATION Sustainability And Continued Utilization Of The PHR</p>	<ul style="list-style-type: none"> • Points Store • Patient Accountability • Transparency In Transitions Of Care • Social Networking • Education Via The PHR 	<ul style="list-style-type: none"> • Increase Patient Participation In Care • Greater Patient Adherence to Medications • Rewarded Healthier Behaviors
<p>HEALTH-e TRANSITIONS Integration Into Practice and Enhance Functionality Of HIT For Patients And Providers</p>	<p>Daily Health Not Episodic Care Patient Trainers Disease Management Condition & Immunization Reporting</p>	<ul style="list-style-type: none"> • Reduced Readmissions • Improved Transitions Of Care • Meaningful Use Criteria
<p>HEALTH-e COMMUNITY Patient Engagement</p>	<p>Health Age Education PHR & Home Vital Sign Monitoring Prevention</p>	<ul style="list-style-type: none"> • Improved Public Health • Reduced Unnecessary Admissions • Medication Reconciliation
<p>HEALTH-e INTEGRATION Beacon Community Eligibility</p>	<p>Electronic Health Records & Continuity of Care Documents Health Information Exchange</p>	<ul style="list-style-type: none"> • Fewer Duplicate Tests • Meaningful Use Criteria

Norman PHO Model

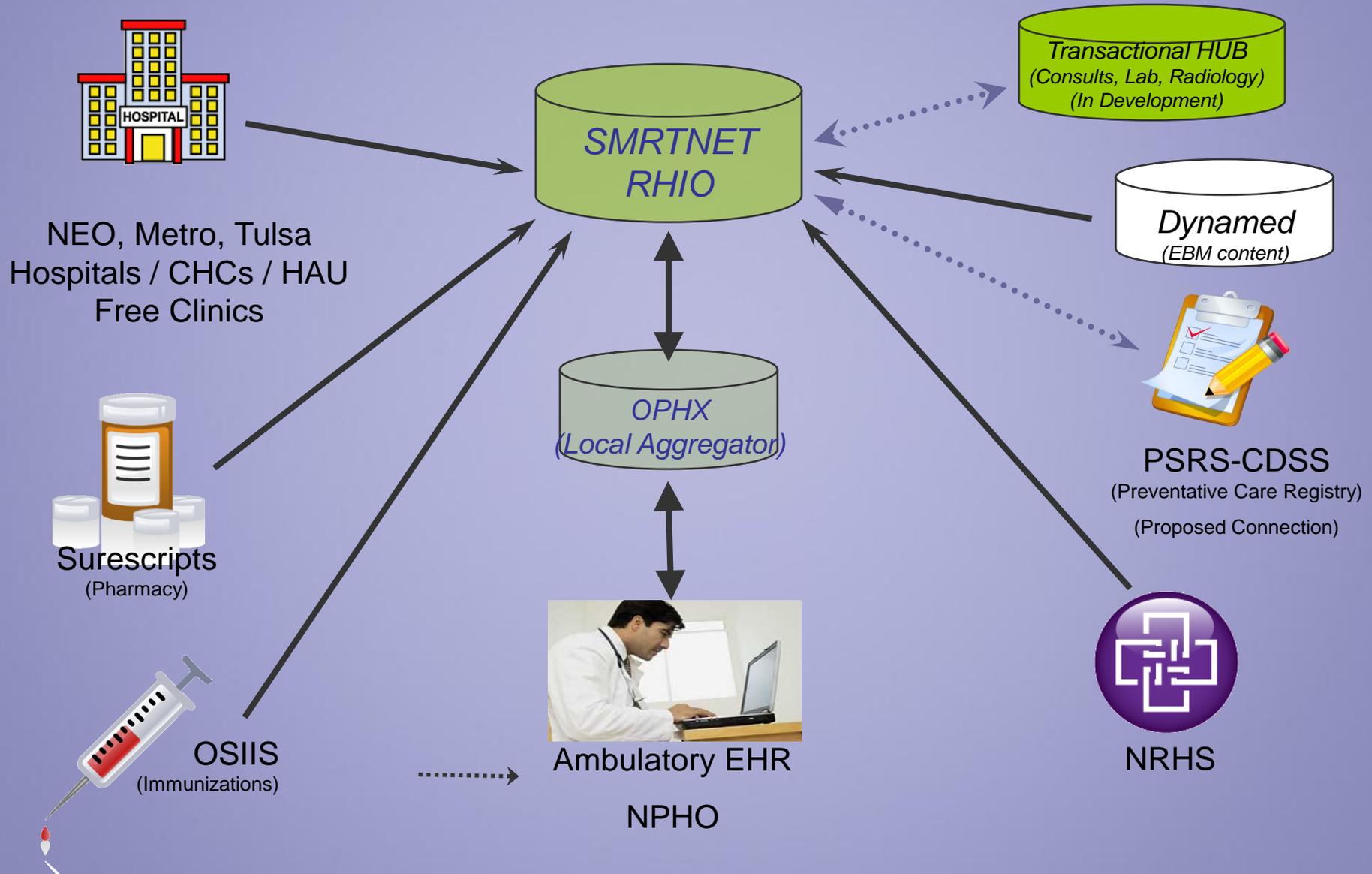
Groundwork For Clinical Integration to ACO

- OPHX
- SMRTNET HIO partnership
- Legal and governance
- Data usage



HIE Norman to OKC to Statewide Adoption

(RHIO -> Local Networks/Hospitals -> Community Providers)



Norman PHO Model

Clinical Integration

- Clinically Integrated to Improve Quality, Performance and Cost Savings
 - HIPAA (SMRTNET)
 - Governance (SMRTNET)
 - Legal (SMRTNET)
 - Patient Data (Opt Out)
 - Reports Ident vs Deidentified (NPHO)



Sustainability

- Sustainability through Shared Services
 - SMRTNET HIE Services to Hospitals and Doctors
 - Meaningful Use Qualification Phase 1
 - Shared cost amongst private providers and hospital organizations
 - Centralized Resources for 2,600 providers to do eMPI, HISP and Direct services with Credentialing
 - NPHO layered in a Quality Officer to sit at the HIE level for over 120 providers
- Added Value Services
 - CDS, Data Cubes, EBM Content, e-RX, ACO Enablement

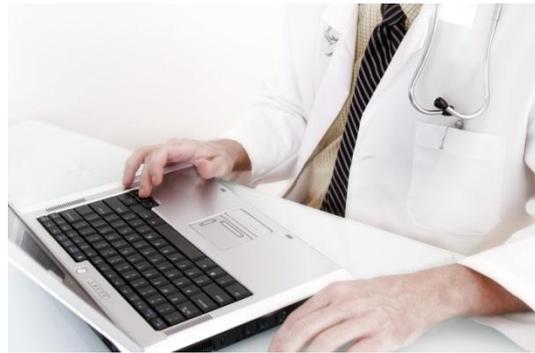


Sustainability

- Greater Oklahoma City SMRTNET and NPHO
 - Live for three years Pre-ARRA
 - All private funding
 - Medical Director Locally
 - Local Network Coordinator
- Hospital Pricing 20-30 K total cost Per Facility
- Physician Pricing for SMRTNET 70/month
- NPHO Service with local HIE, CDS, QI Officer Plus SMRTNET
 - 125/month



Sustainability



- ROI for Members

- Reduced Faxing and Medical Records Time and Duplication
- Improved Workflow for Nursing and Physicians
- Potential for Reduced Adverse Events
- Meaningful Use Enablement
- Active AHRQ Study at the NPHO to Measure These Factors



State HIE Related Entities

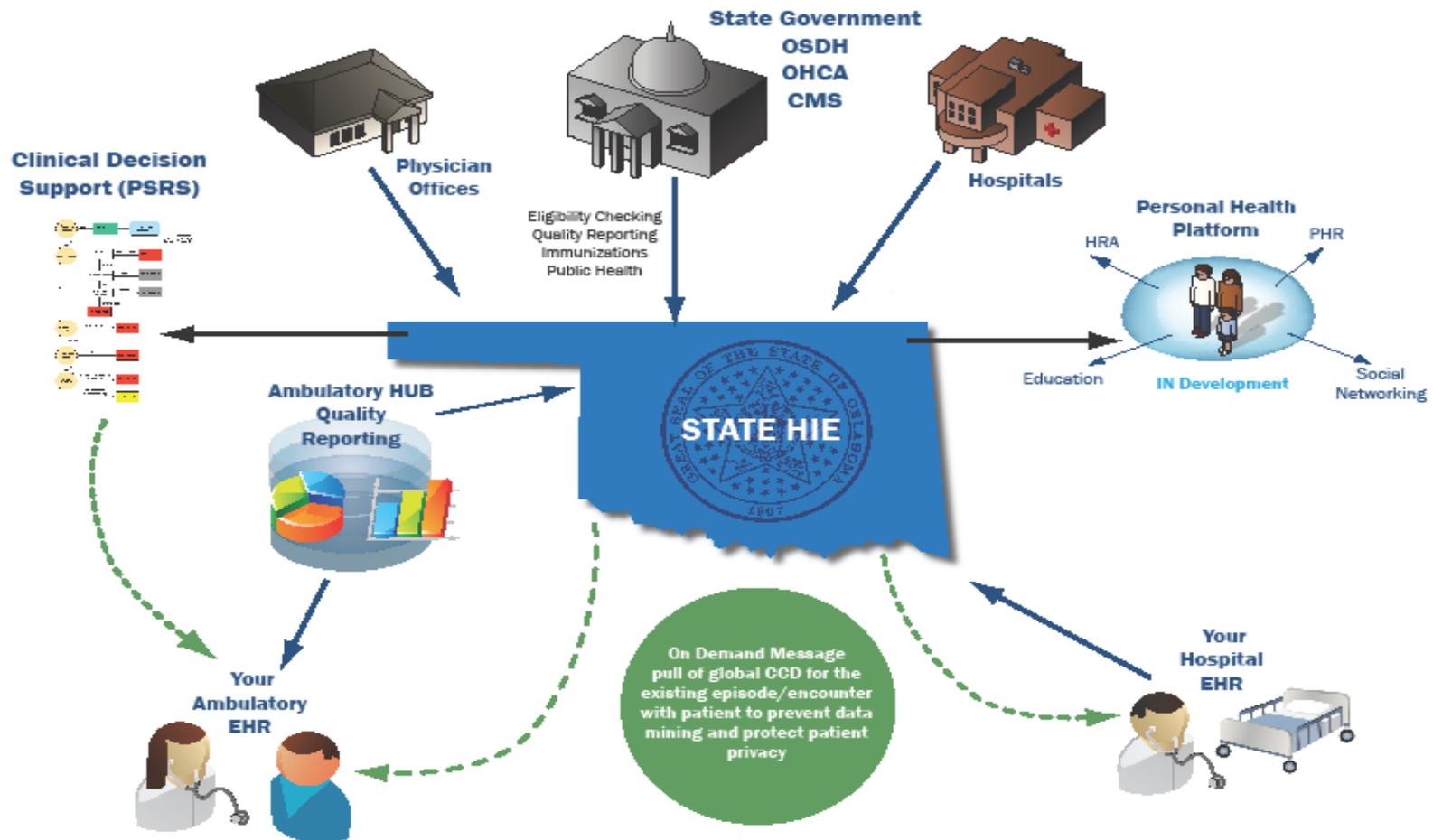
OK the State to Watch For Rural/Suburban/Urban Mix

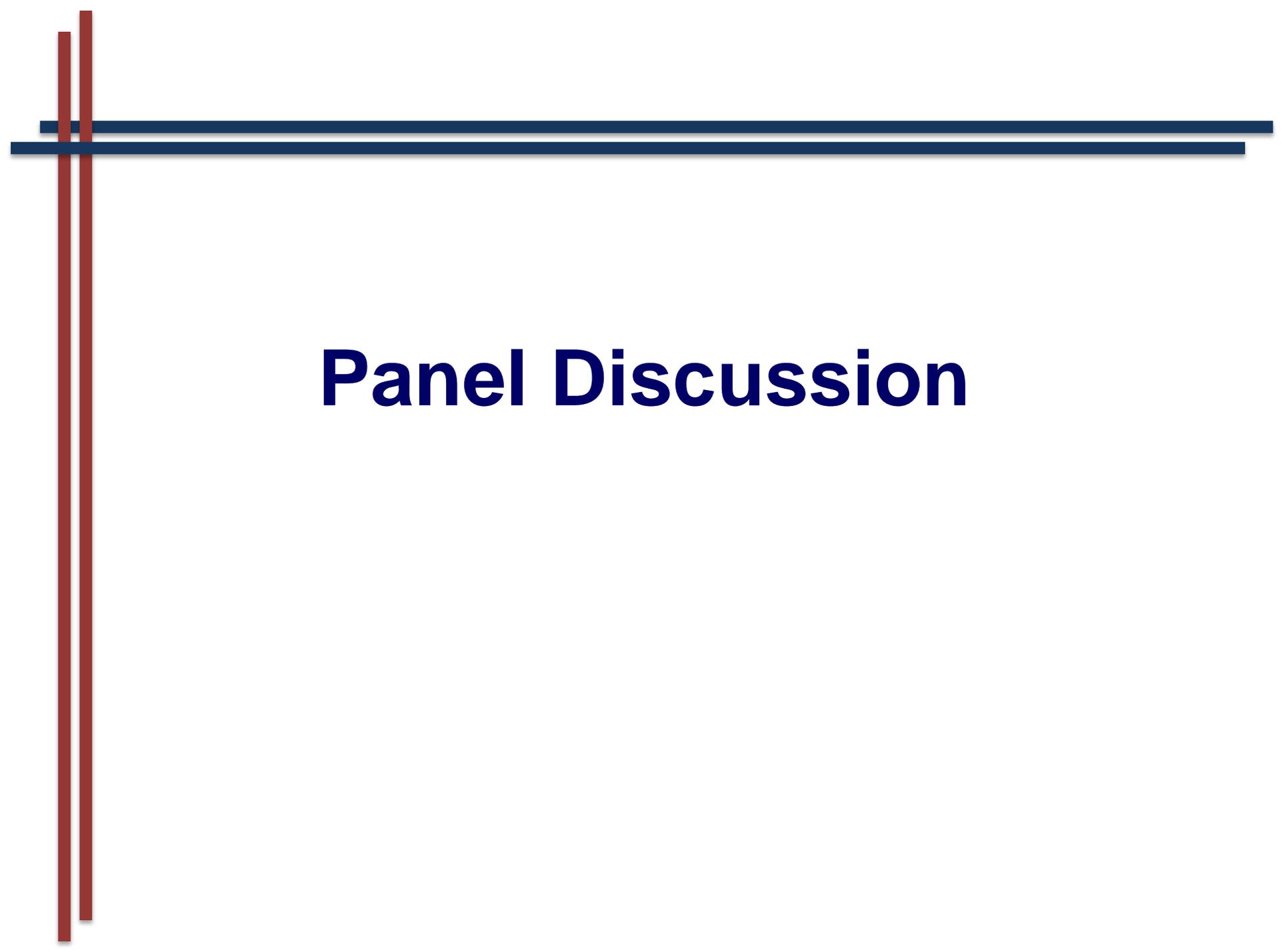
- OHIET
- SMRTNET
- Beacon Grant
- Health Insurance Exchange (Declined by Governor Fallin)
- Challenge Grant
- Regional Extension Center
- **Oklahoma ARRA Funding Around HIE**
 - **83 Million Dollars**
 - **Most Per capita of Any State**



Oklahoma Health Information Exchange Trust

FUNCTIONING OKLAHOMA HOSPITAL & AMBULATORY HIE MODEL





Panel Discussion

Thank You to Our Speakers

- David McCallie, Jr., MD, VP Medical Informatics, Cerner
- Roger Roswell, Senior Associate Dean, University of Oklahoma College of Medicine
- Mark Jones, Principal Investigator, SMRTNET
- Brian Yeaman, MD, Chief Medical Officer, Norman Regional Health System

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