A Survey of State, Regional and Community-Based Health Information Organizations and Initiatives

HL7/OMG Workshop on Interoperability Among Healthcare Services
Alexandria, Virginia

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Overview of Discussion

- Overview of What's Happening at the National Level

- Review of What's Happening at the State and Regional Levels in the U.S.

- Emerging Guiding Principles for RHIOs and Health Information Exchange

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Overview of National Landscape

Understanding the National Agenda

- Enormous momentum around HIT, health information exchange and quality both within Administration *and* Congress

- Key themes
  - National standards for interoperability
  - Value based purchasing
  - Some upfront funding for those in need
  - Public-private sector collaboration

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Activities in Congress

- 10 bills introduced this year, one in draft, more coming

- Most bi-partisan

- Unprecedented collaboration between the Republicans and Democrats on the importance of leveraging HIT and the mobilization of information to address healthcare challenges

Common Themes of Legislation

- The **need for standards** —creation of a public-private sector body designed to achieve consensus on and drive adoption of interoperability standards

- **Grant and loan programs**, for providers and regional health information technology networks – most link to use of standards and adoption of "quality measurement systems"

- **Value-based purchasing programs** – measures related to reporting of data, process measures including HIT, and eventually outcomes

- Role of **government – catalyst**, driver of change

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Administration Leadership

- Leadership on all Sides
  - Office of Secretary of DHHS
  - Agency for Healthcare Research and Quality
  - Centers for Disease Control and Prevention
  - Centers for Medicare and Medicaid Services
  - Department of Defense
  - Department of Veterans Affairs
  - Office of the National Coordinator for HIT
  - Office of Personnel Management

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American Health Information Community

- Formed under auspices of FACA, it will provide input and recommendations to HHS on how to make health records digital and interoperable and assure that privacy and security are protected

- 16 Commissioners – consumer groups, providers, payers, hospitals, vendors, government (50-50 split) – Chaired by Secretary Leavitt

- Dissolution within two to five years with goal of creating self-sustaining, private sector replacement

- First meeting early October….

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Office of National Coordinator for Health Information Technology

- On August 19, 2005 Federal Register announced formal formation of the office

- Purpose: provides leadership for the development and nationwide implementation of an interoperable HIT infrastructure to improve quality and efficiency of healthcare and the ability of consumers to manage their care and safety

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ONCHIT July 2004
Framework for Strategic Action

1. Inform Clinical Practice

   – Incentivize EHR Adoption

   – Reduce risk of EHR investment

   – Promote EHR diffusion in rural and underserved areas

2. Interconnect Clinicians

   – Foster regional collaborations

   – Develop a national health information network

   – Coordinate federal health information systems

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ONCHIT July 2004
Framework for Strategic Action

3. Personalize Care

   – Encourage use of PHRs

   – Enhance informed consumer choice

   – Promote use of telehealth systems

4. Improve Population Health

   – Unify public health surveillance architectures

   – Streamline quality and health status monitoring

   – Accelerate research and dissemination of evidence

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Four RFP's on Interoperability and Health Information Sharing Policies

1. Contract to develop, prototype, and evaluate feasibility and effectiveness of a process to unify and harmonize industry-wide health IT standards development, maintenance and refinements over time

2. Contract to develop, prototype, and evaluate compliance certification process for EHRs, including infrastructure or network components through which they interoperate

3. Contract to assess and develop plans to address variations in organization-level business policies and state laws that affect privacy and security practices, including those related to HIPAA

4. Six contracts for the development of designs and architectures that specify the construction, models of operation, enhancement and maintenance, and live demonstrations of the Internet-based NHIN prototype

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U.S. Agency for Healthcare Research and Quality HIT Programs

Over $150 million in grants and contracts for HIT

- Over 100 grants to support HIT – 38 states with special focus on small and rural hospitals and communities - $96 million over three years

- Five-year contracts to five states to help develop statewide networks – CO, IN, RI, TN, UT - $25 million over five years

- National HIT Resource Center: collaboration led by NORC and including eHealth Initiative, CITL, Regenstrief Institute/Indiana University, Vanderbilt and CSC - $18.5 million over five years

CMS Focuses on Quality and HIT

- Quality Improvement Organizations playing a critical role…. Doctors Office Quality – Information Technology Program (DOQ-IT) – technical assistance for HIT in small physician practices included in eighth scope of work

- Section 649 – Pay for Performance Demonstration Programs – link payment to better outcomes and use of HIT – launched in early 2005

- Chronic Care Demonstration Program – linking payment to better outcomes – IT a critical component

- Section 646 "area-wide" demonstration just released early September

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Section 646 – CMS Demonstration

- Five year project to find ways to identify, develop, test and disseminate major and multi-faceted improvements to health care systems at the area or regional level

- Purpose is to test models of health care delivery system redesign, coupled with alternative payment models

- CMS expects that a significant component of delivery system redesign will involve use of health information technology

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Section 646 – CMS Demonstration

- Demonstration aimed at fostering significant quality improvements via major health care delivery system redesign involving entire patient population

- Expectations for use of HIT within practice settings, promotion of clinical data exchange across and among practices and prototypes for national health information network

- Physician groups, integrated delivery systems, or regional coalitions of such groups or systems expected to apply

- Proposals accepted in two groups—1/06 and 9/06

- Funded through Medicare Trust Funds

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Overview of Activities at State, Regional and Local Levels

Why State and Regional Activities?

- Wide-spread recognition of the need for health information technology and exchange/ interoperability at the national level

- While federal leadership and national standards are needed, *healthcare indeed is local* and leadership is needed at the state, regional and community levels across the country

- Collaboration and development of consensus on a shared vision, goals and plan is needed among multiple, diverse stakeholders at the *state and regional level* in order to effectively address healthcare challenges through HIT and health information exchange

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Why Health Information Exchange?

- U.S. healthcare system highly fragmented….data is stored —often in paper form—in silos, across hospitals, labs, physician offices, pharmacies, and insurers

- Public health agencies forced to utilize phone, fax and mail to conduct public health surveillance, detection, management and response

- Physicians spend 20 - 30% of their time searching for information…10 - 81% of the time, physicians don't find the information they need in the patient record

- Clinical research hindered by paper-based, fragmented systems – costly and slow processes

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eHealth Initiative's Connecting Communities for Better Health Program

- Currently funded by DHHS, provides seed funding to regional and community-based multi-stakeholder collaboratives that are mobilizing information across organizations

- Develops and disseminates common principles, policies and guides to help regions navigate organizational, financial, clinical and technical aspects of health information exchange

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eHI State and Regional HIT Policy Summit Initiative

- Currently supporting approximately 10 states in the U.S.
- Facilitates public-private sector collaboration, bringing state and regional policy-makers, healthcare stakeholders and business community together
- Focus is on
  - Stimulating local innovation
  - Facilitating collaboration among all stakeholders in healthcare
  - Aligning incentives not only with quality and safety but also HIT and health information exchange

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What is Health Information Exchange?

- Health information exchange provides the capability to electronically move clinical information between disparate healthcare information systems while maintaining the meaning of the information being exchanged.

- The goal of health information exchange is to facilitate access to and retrieval of clinical data to provide safer, more timely, efficient, effective, equitable, patient-centered care.

Characteristics of Successful Health Information Exchange Initiatives

- Governed by a diverse and broad set of stakeholders within the region or community

- Develop and assure adherence to a common set of principles and standards for the technical and policy aspects of information sharing - addressing the needs of every stakeholder

- Develop and maintain a model for sustainability that aligns the costs with the benefits of HIE; and

- Use metrics to measure performance from the perspective of: patient care, public health, provider value, and economic value.

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Survey of Over 100 State, Regional and Community-Based Initiatives
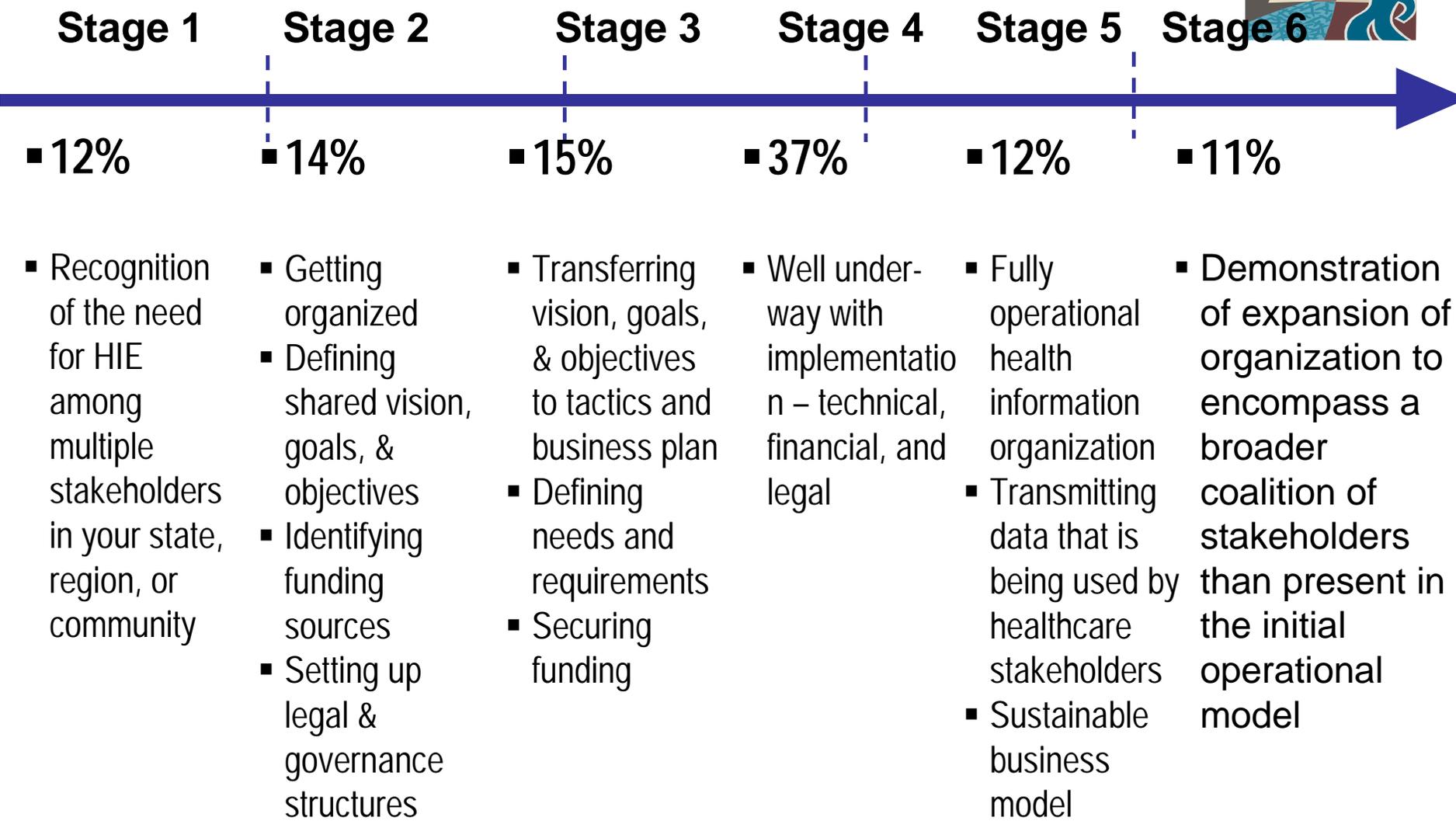
- 109 respondents from 45 states and the District of Columbia

- Covered aspects related to goals, functionality, organization and governance models, information sharing policies, technical aspects, funding and sustainability

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Key Findings from Survey

- Health information exchange activity is on the rise….there are more efforts, and those that are out there are maturing

- Of the 109 health information exchange efforts in the survey:
    - 40 are in the implementation phase and
    - 25 fully operational

- Nine were fully operational in 2004

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Stage of Health Information Exchange Programs

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
▪ 12%	▪ 14%	▪ 15%	▪ 37%	▪ 12%	▪ 11%

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
▪ Recognition of the need for HIE among multiple stakeholders in your state, region, or community	▪ Getting organized ▪ Defining shared vision, goals, & objectives ▪ Identifying funding sources ▪ Setting up legal & governance structures	▪ Transferring vision, goals, & objectives to tactics and business plan ▪ Defining needs and requirements ▪ Securing funding	▪ Well under-way with implementation – technical, financial, and legal	▪ Fully operational health information organization ▪ Transmitting data that is being used by healthcare stakeholders ▪ Sustainable business model	▪ Demonstration of expansion of organization to encompass a broader coalition of stakeholders than present in the initial operational model

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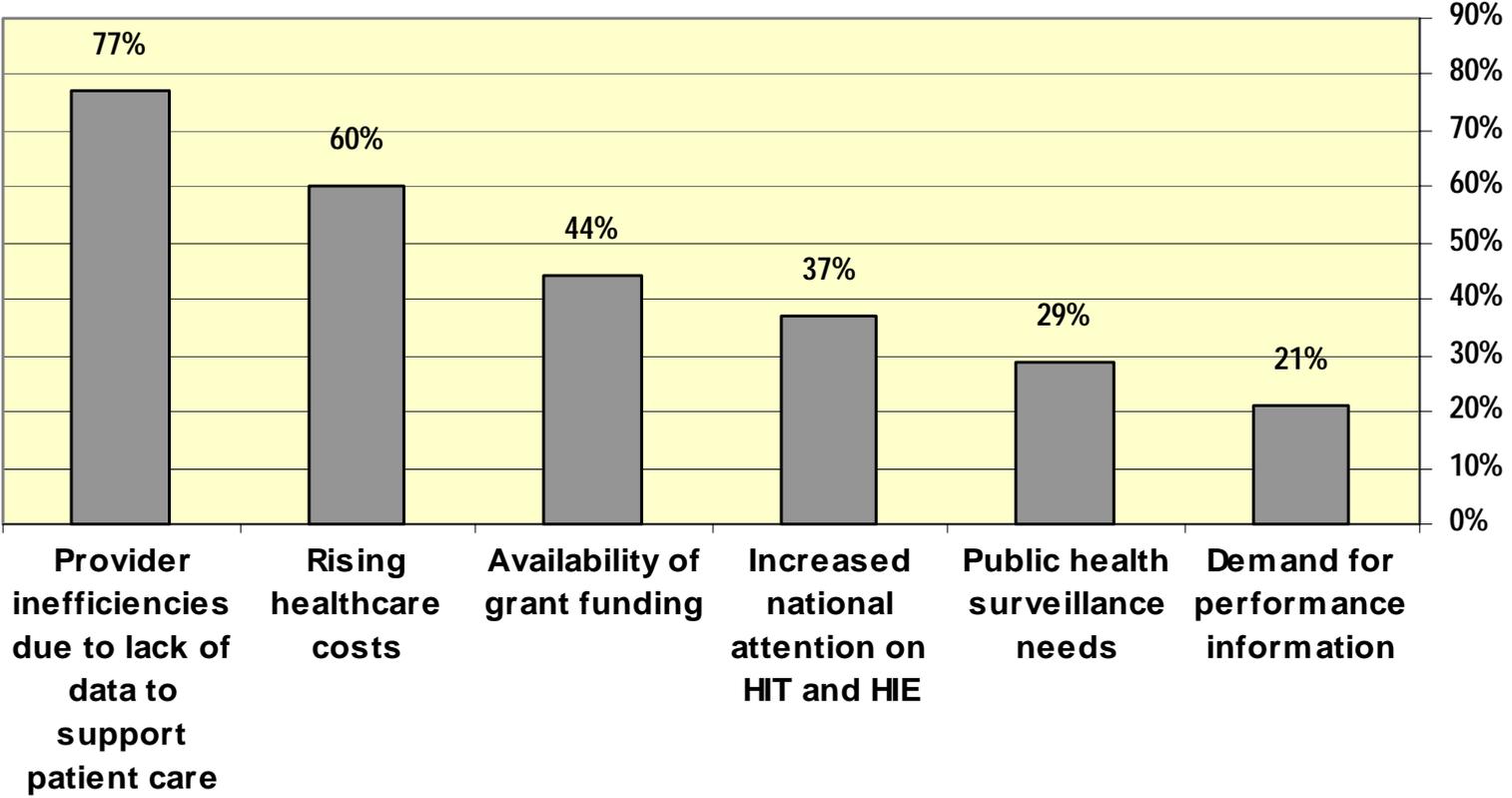Real Solutions, Better Health

Key Findings from Survey

- The key driver moving states, regions and communities toward health information exchange is
  - Perceived provider inefficiencies (77% of all respondents)
  - Rising healthcare costs also seen as important driver (60% of all respondents)

Key Drivers for Health Information Exchange

Significant Drivers for Health Information Exchange

Bar chart showing:
- Provider inefficiencies due to lack of data to support patient care: 77%
- Rising healthcare costs: 60%
- Availability of grant funding: 44%
- Increased national attention on HIT and HIE: 37%
- Public health surveillance needs: 29%
- Demand for performance information: 21%

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Key Findings from Survey

- Organization and governance structures are shifting to multi-stakeholder models with the involvement of providers, purchasers and payers

    – 60% of advanced stage are incorporated, among them 70% are non-profit models
    – Providers continue to play the most dominant role but see an increase in others: health plans (37%), local public health departments (33%), employers (27%), patient consumer groups (26%), QIOs (16%)
    – Clear shift towards leadership by neutral, multi-stakeholder entity (55%)

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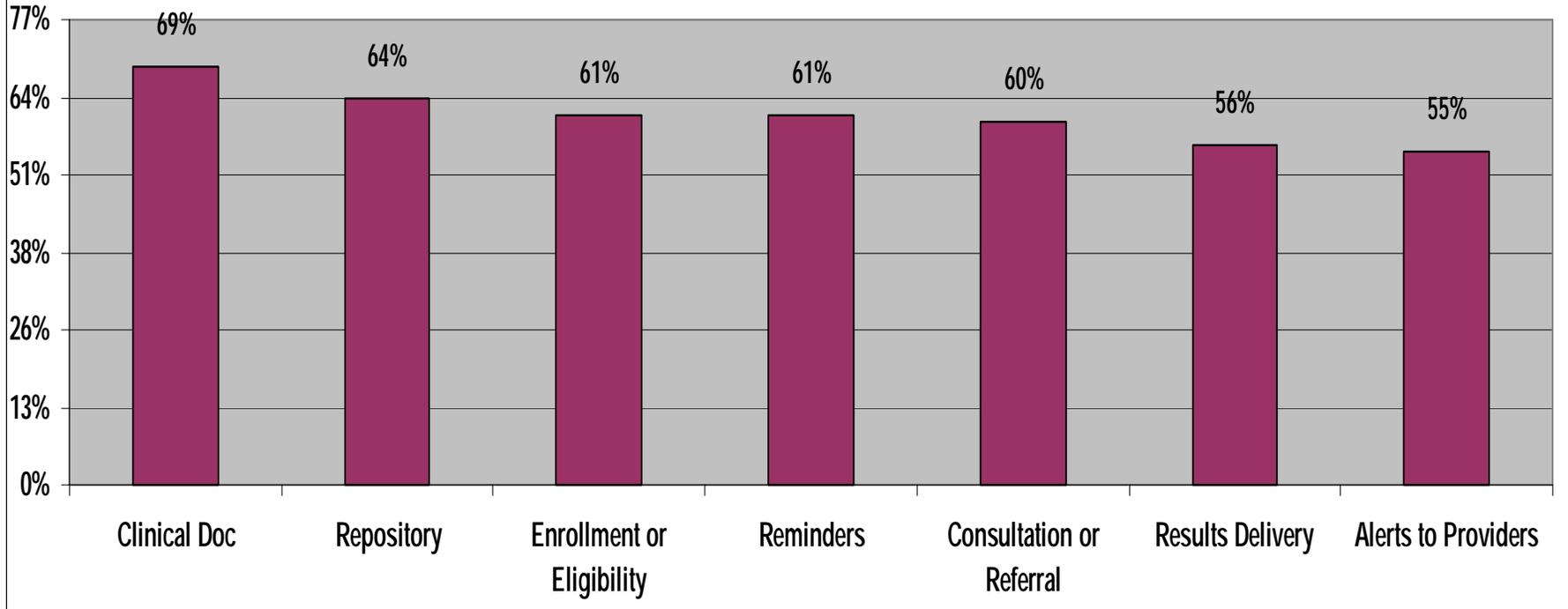Real Solutions, Better Health

Key Findings from Survey: What are They Doing?

- Primary focus continues to be on supporting care delivery
  - Clinical documentation
  - Reminders
  - Results delivery

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Health Information Exchange Initiatives: What Are They Doing?

Functionalities to Support Patient Care

Current and Within Next Six Months: Advanced Stage Initiatives

Category	Percentage
Clinical Doc	69%
Repository	64%
Enrollment or Eligibility	61%
Reminders	61%
Consultation or Referral	60%
Results Delivery	56%
Alerts to Providers	55%

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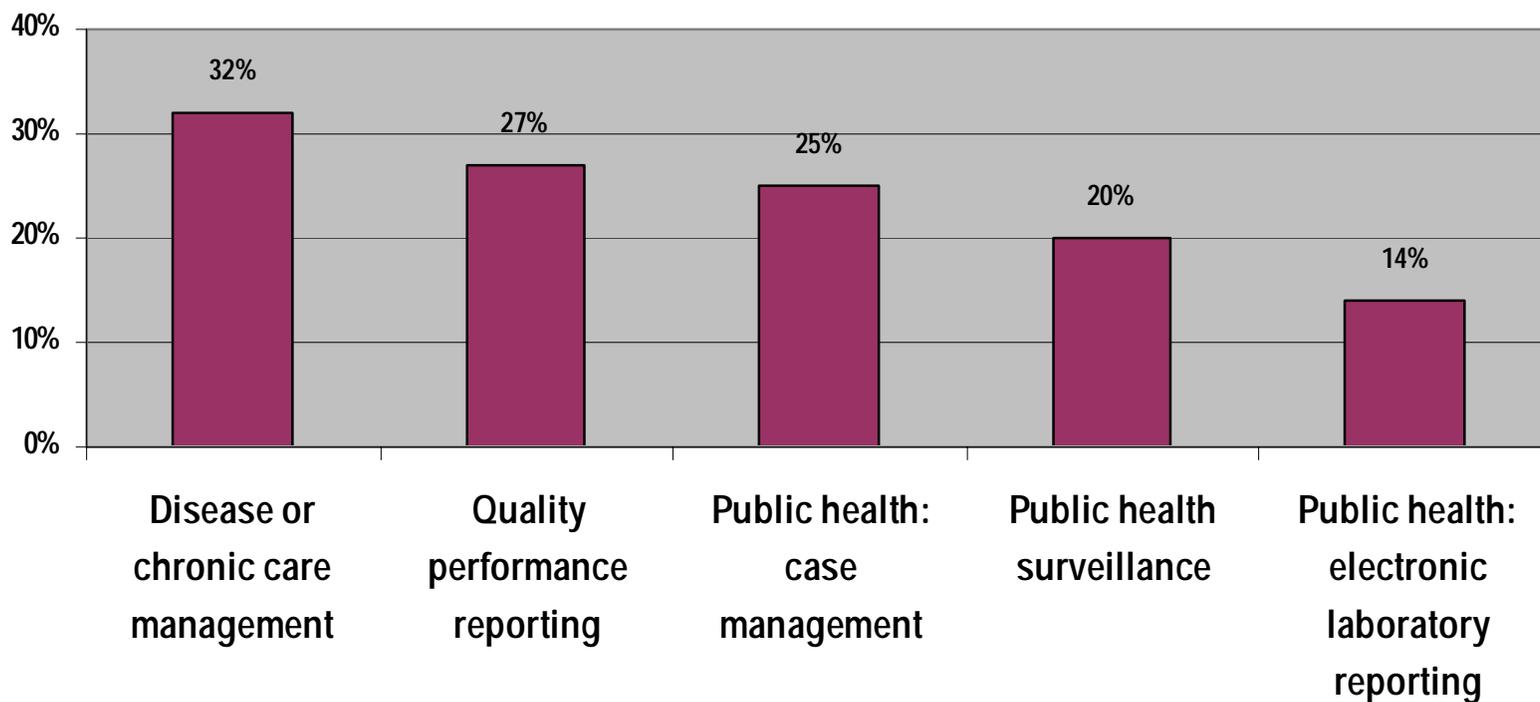# Key Findings from Survey: What are They Doing?

- Advancements in functionality to support improvements in quality and safety are evident. In addition to traditional uses to support care delivery, a number are now expanding functionality

    - 32% currently providing disease or chronic care management services (with additional 21% expecting to within six months)

    - 27% are currently supporting quality performance reporting efforts (with additional 18% expected within six months)

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Growing Focus on Disease Management, Quality Reporting

Functionality to Support Efforts to Improve Population Health and Patient Safety: Advanced Stage

Bar chart showing percentages:
- Disease or chronic care management: 32%
- Quality performance reporting: 27%
- Public health: case management: 25%
- Public health surveillance: 20%
- Public health: electronic laboratory reporting: 14%

Key Findings from Survey: What are They Doing?

- Health information exchange efforts are delivering *more information* and increasingly *using standards* for data delivery

- More than 50% are exchanging or expecting to exchange outpatient and inpatient episodes, lab results, ED episodes, pathology and enrollment and eligibility

- 76% of advanced stage are using HL7 as messaging standards and 41% are using LOINC for laboratory reporting

Key Findings from Survey

- Securing funding to support initial start-up costs and ongoing operations is still recognized as the greatest challenge for all health information exchange initiatives and organizations. Following citing very or moderately difficult
  - 91% cited securing upfront funding
  - 84% cited developing a sustainable business model
  - 80% cited accurately linking data
 - 74% cited engaging health plans

Key Findings from Survey

- Funding sources for both upfront and ongoing operational costs still rely heavily upon government funds
  - 46% of all respondents cited federal government contracts as current revenue source
  - 48% of advanced stage cite federal government as source for ongoing operations

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Federal Government Still Key Funding Source

Current Revenue Sources for Upfront Funding: All Respondents
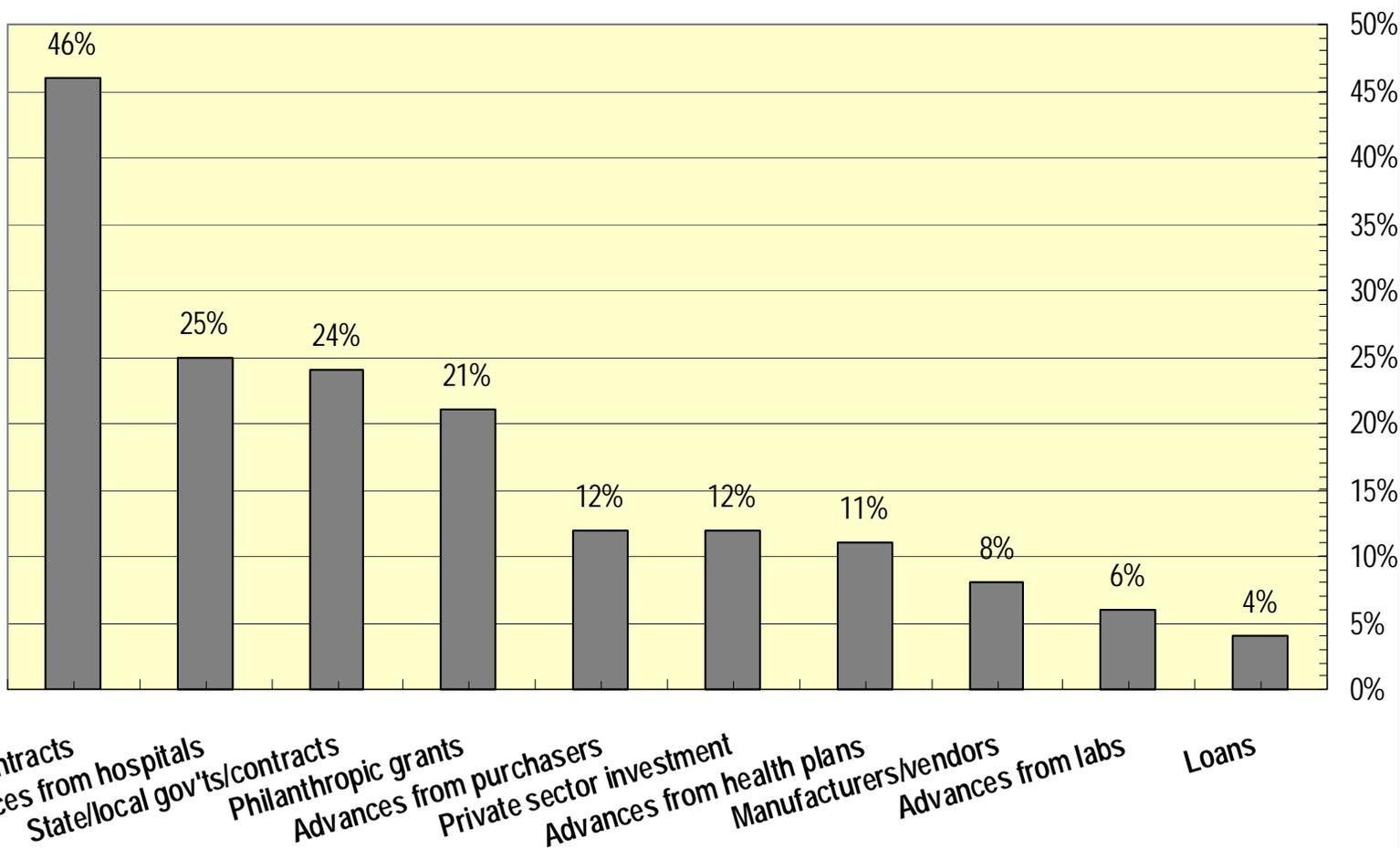
Federal gov't grants/contracts: 46%
Advances from hospitals: 25%
State/local gov'ts/contracts: 24%
Philanthropic grants: 21%
Advances from purchasers: 12%
Private sector investment: 12%
Advances from health plans: 11%
Manufacturers/vendors: 8%
Advances from labs: 6%
Loans: 4%

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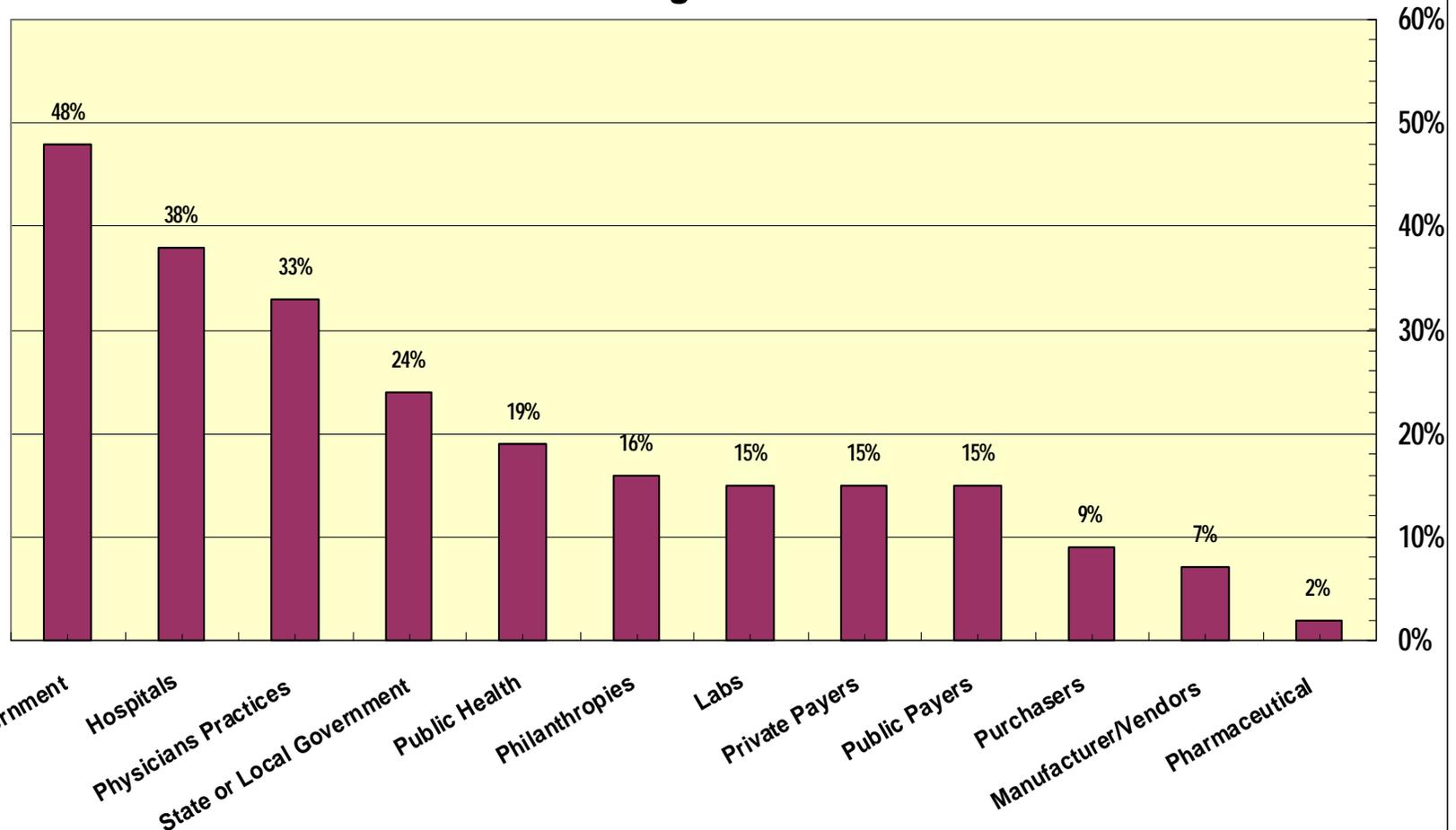
Federal Government Still Key Funding Source

Current Revenue Sources for Ongoing Operational Costs
Advanced Stage Initiatives

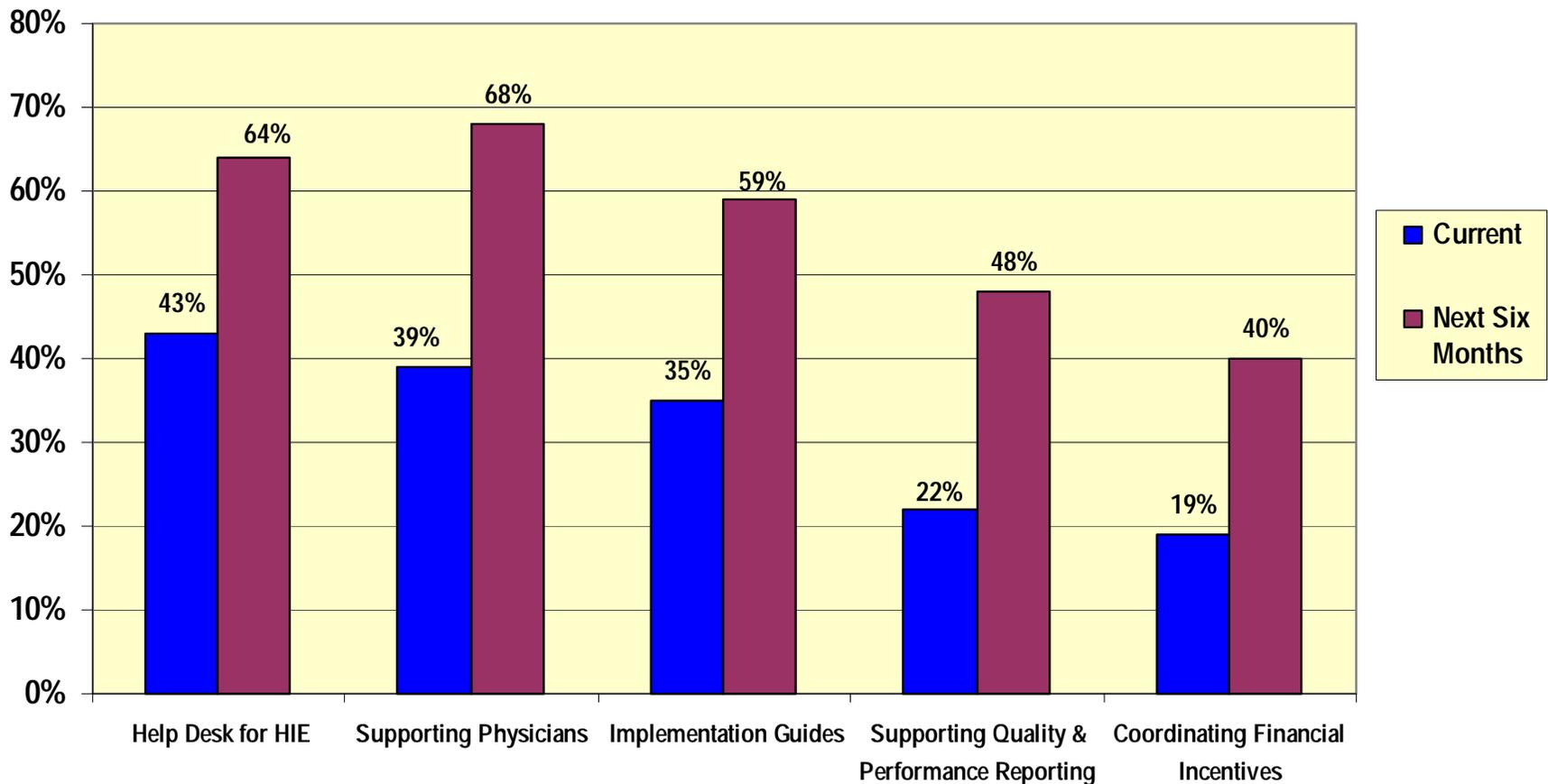| Source	Percentage
Federal Government	48%
Hospitals	38%
Physicians Practices	33%
State or Local Government	24%
Public Health	19%
Philanthropies	16%
Labs	15%
Private Payers	15%
Public Payers	15%
Purchasers	9%
Manufacturer/Vendors	7%
Pharmaceutical	2%

Key Findings from Survey

- **But alternative funding sources for ongoing sustainability are beginning to emerge.**
    - Advance payments from hospitals (38%)
    - Physician practices (33%)
    - Public health (19%)
    - Labs (15%)
    - Payers (15%), and
    - Purchasers (9%)

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New Models for Sustainability Emerging

Expansion of Services: Advanced Stage
Current and Within Next Six Months

Legend: Current, Next Six Months

Help Desk for HIE: Current 43%, Next Six Months 64%
Supporting Physicians: Current 39%, Next Six Months 68%
Implementation Guides: Current 35%, Next Six Months 59%
Supporting Quality & Performance Reporting: Current 22%, Next Six Months 48%
Coordinating Financial Incentives: Current 19%, Next Six Months 40%

Emerging Guiding Principles

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Emerging Guiding Principles

- **Approach for Getting Organized**
  - Convening by trusted, neutral party
  - Important to engage all of the stakeholders in your region or community: practicing clinicians, hospitals, laboratories, community health centers, pharmacies, health plans, employers, patient groups, public health, and the state and local government
  - Very, very important to understand your shared vision, goals and objectives, and principles for working together
  - Migrate from loose affiliation to organized legal structures
  - Representation of all of the diverse stakeholders
  - Open disclosure of biases and interests

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Emerging Guiding Principles

- **Approach to Organizing the Work**
  - HIT adoption and health information exchange will require local / regional collaboration; a "national or state-wide, one-size-fits-all" approach will not work
  - Incremental; no "big bang" approach
  - Value—to various stakeholders is critical here
  - How are you evaluating the various alternatives within your incremental roadmap? What criteria are you using?
  - How does this link with your region's or community's healthcare goals?
  - Build on what exists….
  - Minimally invasive with limited disruptions

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Emerging Guiding Principles

- **Approach for Technical Aspects**
  - Build in your policies for information sharing as you build your technical architecture!
  - Need information environment that facilitates and structures connectivity - adherence to precisely defined, uniform technical standards, common policies, and common methods
  - Connectivity built on the Internet and other existing networks
  - Environment is private, secure
  - Minimally invasive approach – leverages existing systems - no "rip and replace"
  - Accurate patient identification based on uniform and standardized methodologies….record locator services created and controlled regionally or within other sub-networks, to help authorized parties learn where authorized and pertinent information is housed

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Emerging Guiding Principles

- **Engaging Practicing Clinicians in the Changes Required**
  - Innovation and investment will be needed to support small physician practices in migration
  - Reduce burden of multiple reporting systems (health plans, employers, regulators, public health)
  - Build reporting into current work-flow
  - Improve trust through certification processes
  - Realign incentives to promote adoption

Emerging Guiding Principles

- **Sharing Burden and Benefits**
  - Must create value for all participants, both globally and for each stakeholder interest
  - Must address the highly competitive environment
  - Look for incremental value gains – projects that will immediately return value – as you move towards your longer-term goal

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Emerging Guiding Principles

- **Financing and Sustainability**
  - Recognize that value of HIT accrues to many stakeholders, including clinicians, health plans, hospitals, purchasers, patients and public health
  - Incentive amounts offered should be meaningful
  - Purchaser or payer sponsors of the incentive program should represent a meaningful proportion of the clinician's patient panel
  - Any applications covered by the program should be "interoperable" and standards-based

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Emerging Guiding Principles

- **Financing and Sustainability: Coordination and collaboration within the region or community is critical.**
  - Physician practices ordinarily contract with a large number of purchasers and payers.
  - Incentives offered by a small number of purchasers or payers generally are not effective
  - Reduce the potential for the "free rider" effect (in which some purchasers and payers to reap the benefits of HIT adoption without sharing the costs),
  - Most of the data required to deliver care within physician practices resides somewhere else (hospital, lab, pharmacy, health plan, etc.)
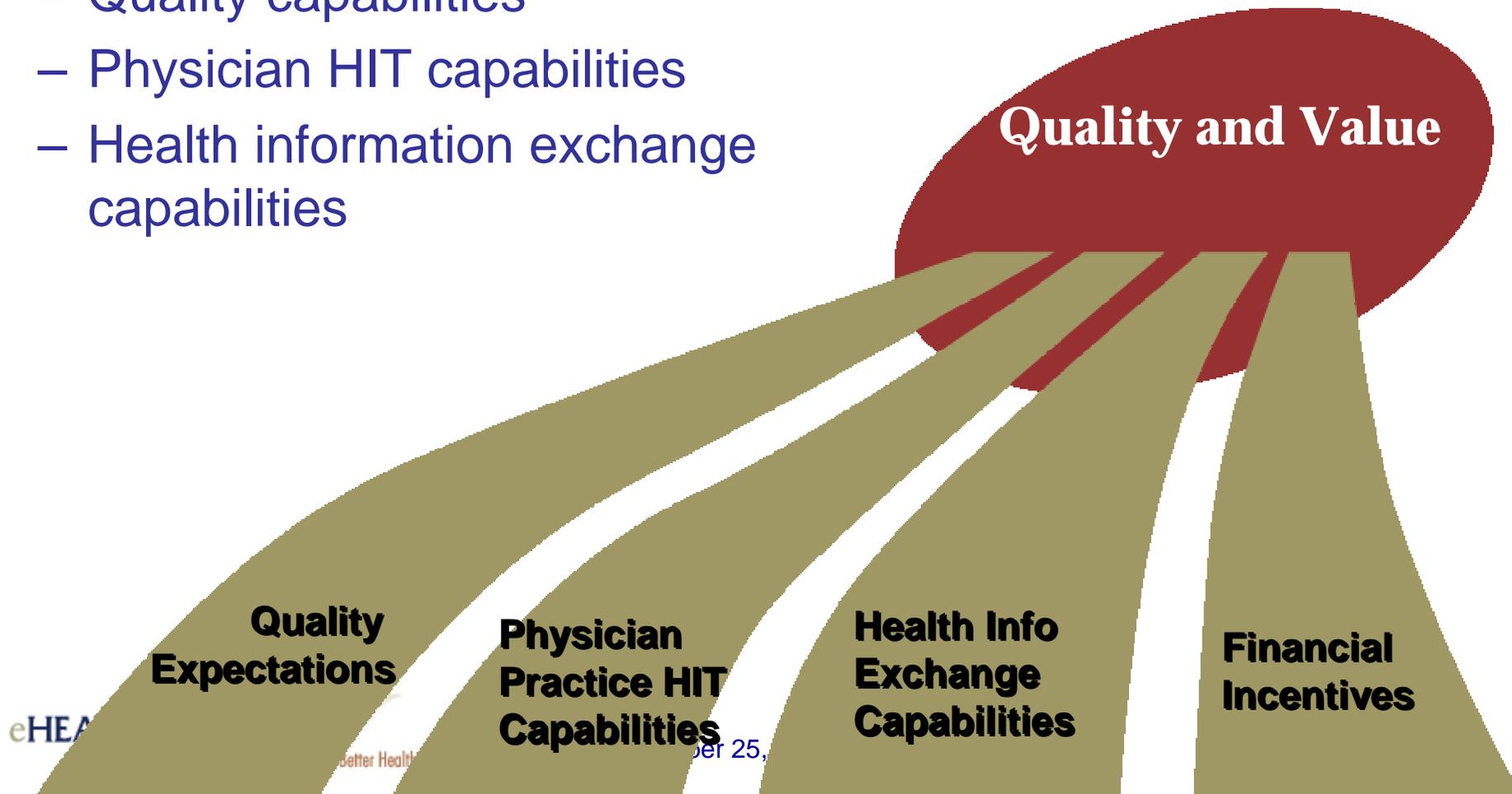
Emerging Guiding Principles

- **Financing and Sustainability:**
  - **Rapidly emerging interest in aligning quality improvement initiatives with the HIT and health information exchange infrastructure required**
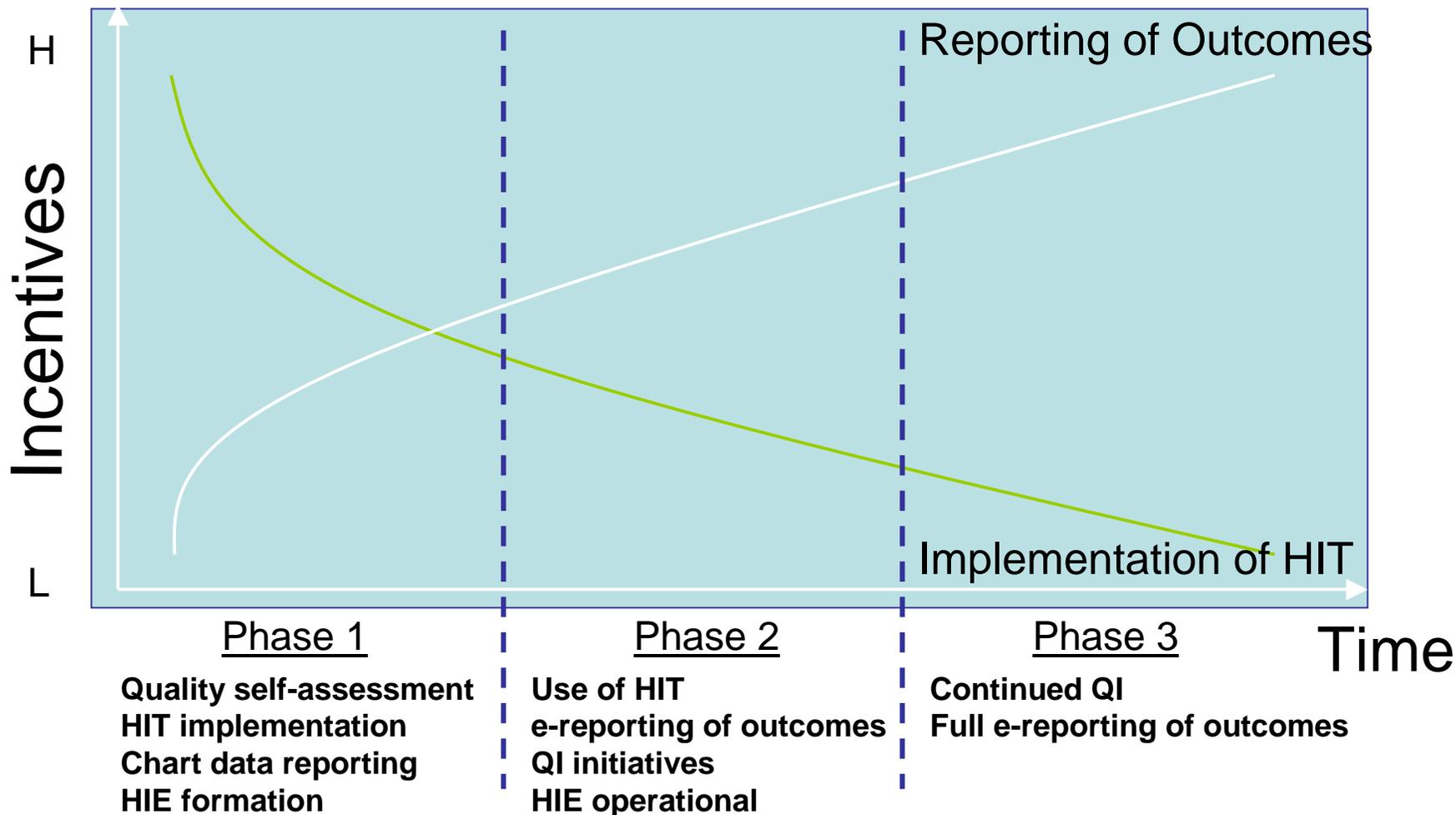
eHI's Parallel Pathways: Aligning Incentives with Quality *and* HIT

- Aligning Incentives with
  - Quality capabilities
  - Physician HIT capabilities
  - Health information exchange capabilities

Quality and Value

Quality Expectations

Physician Practice HIT Capabilities

Health Info Exchange Capabilities

Financial Incentives

Aligning Quality Expectations with HIT and HIE Capabilities

Graph with Incentives (L to H) on the vertical axis and Time on the horizontal axis. A green curve labeled "Implementation of HIT" declines from high to low. A white curve labeled "Reporting of Outcomes" rises from low to high. Two dashed vertical lines divide the graph into three phases.

Phase 1
Quality self-assessment
HIT implementation
Chart data reporting
HIE formation

Phase 2
Use of HIT
e-reporting of outcomes
QI initiatives
HIE operational

Phase 3
Continued QI
Full e-reporting of outcomes

The Private Sector has Many Programs in Place

- Physician-based:
  - Bridges To Excellence has a program focused on adoption of systems of care, including HIT….enormous uptake across the country
  - The Integrated Healthcare Association in CA rewards physician groups for ambulatory POE and eRX systems
- Hospital-based – The Leapfrog Group has launched a new national program that rewards good outcomes and adoption of CPOE systems

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Many Health Plans have Incorporated Incentives as Well

- CareFirst BCBS – they licensed BTE and are expanding their program to reward many practices in the DC & Virginia areas

- UHC, CIGNA, Aetna – they are all recognizing physicians that adopt and use HIT to varying degrees

Key Take-aways

- You are not alone! There is a great deal going on at the national level and within states and regions across the country…learn from them, share your learnings

- National standards are emerging to support interoperability- stay in tune with them…build them in as they get defined

- Value-based purchasing will be here soon….keep this in mind as you proceed

- Engaging your purchasers and health plans is critical…without them you don't have a sustainable business model

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Key Take-aways

- Remember that most of healthcare is delivered by small physician practices…engage them, and engage them early

- Most important thing is to **stay focused** …build your incremental roadmap based on value…. **at the end of the day, value is the only thing that matters**

- You are poised to have great impact…keep the momentum and energy and focus going….

- Mobilizing health information is going to dramatically improve the quality and safety of healthcare in the U.S.

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