

HIE Participant Onboarding Process & Best Practices

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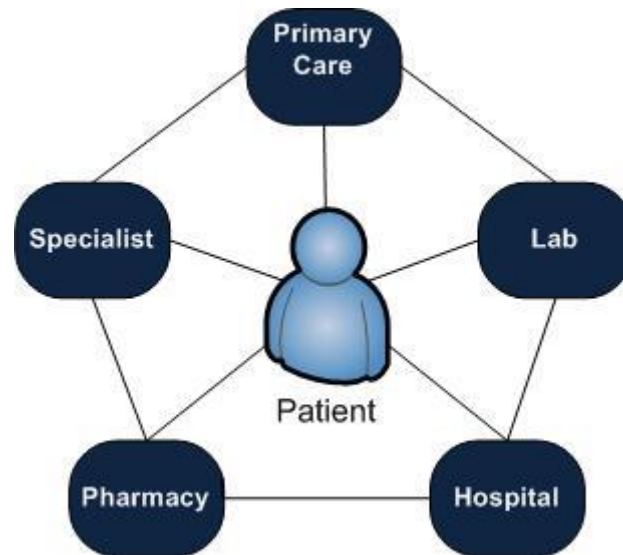
Director, Technical Services

Welcome

- **HIE Background: Definition, Architecture & Benefits**
- **eHealth Initiative 2013 Survey**
- **HIE By The Numbers**
- **ACA, PCMH, ACO**
- **HIE Adoption Strategy**
- **Participant On-Boarding**
 - Readiness Assessment
 - Challenges & Best Practices
 - Process

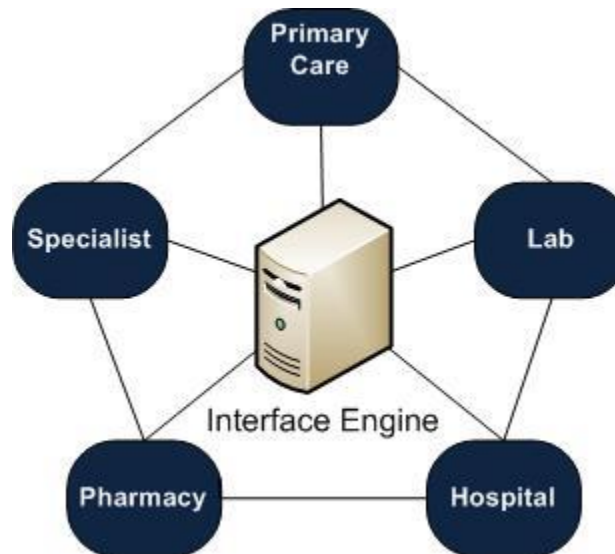
Health Information Exchange Defined

- The secure electronic movement of health information among treating physicians and other health care providers and related organizations according to national and state laws and nationally recognized standards.



Health Information Exchange is...

- **“Health Information Exchange allows health care professionals and patients to appropriately access and securely share a patient’s vital medical information electronically”. (HealthIT.gov)**



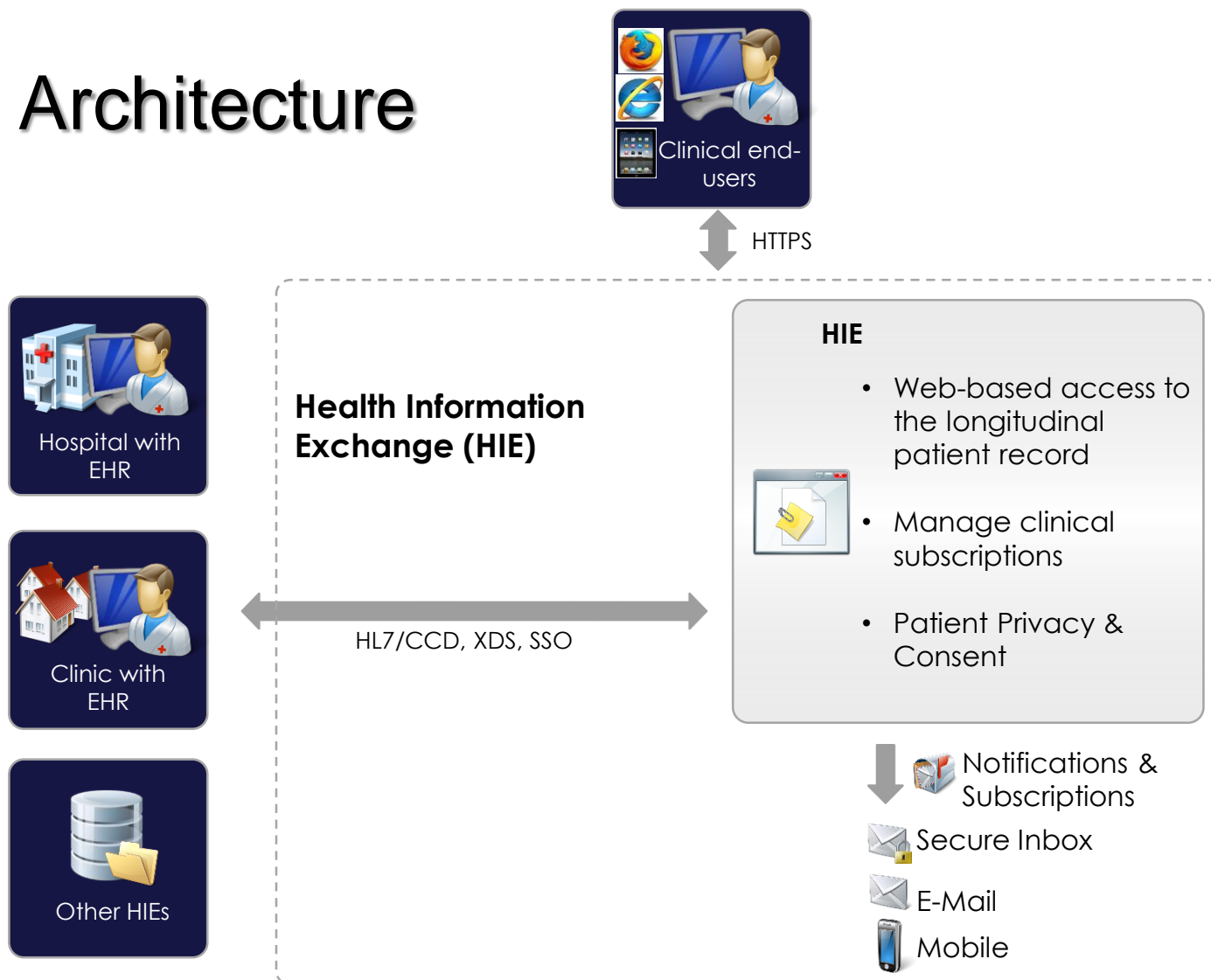
HIE – Hub & Spoke



HIE Clinical Data Types

- Patient registration and/or admission information
- Visit Notes
- Other transcribed reports
- Discharge Summaries
- Medication history
- Lab test results
- Problem list
- Cardiology studies
- Allergies
- EKG text reports
- Vital signs
- Pathology reports
- Patient Histories
- Radiology studies and reports
- Immunizations
- Operative notes
- Lab orders
- Progress Notes
- Other clinical data

HIE Architecture



HIE Benefits

- **Improved care coordination**
- **Ensure compliance with MU objectives for electronic transmissions of care summary and public health reporting**
- **Replace traditional inefficient point-to-point communications (unsecure fax, mail, etc.)**
- **Quick & secure access to patient information for providers**
- **Having the right information at the right time to enhance clinical decision making**

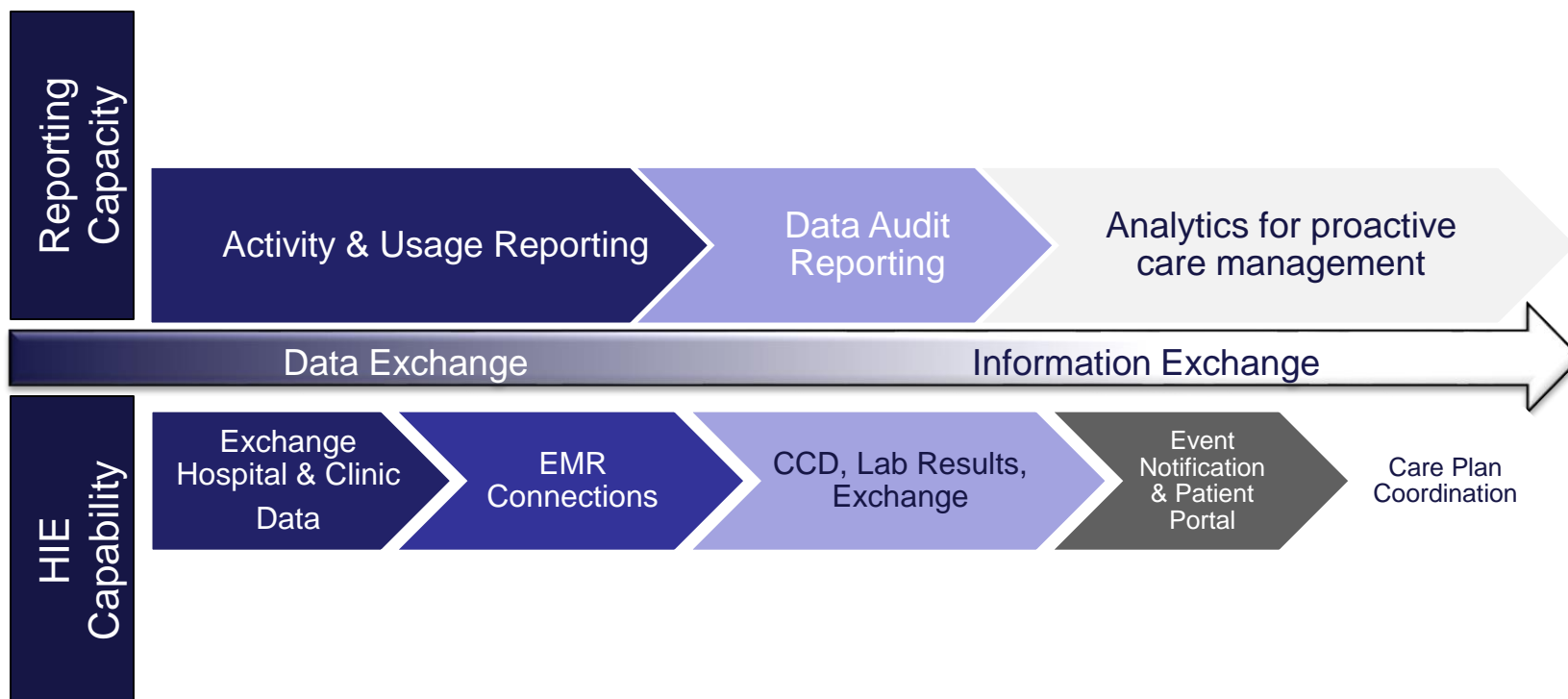
HIE market segments

- **Public**
 - Challenged with signing up participants
 - Governance
 - Sustainability
- **Private / Enterprise**
 - Participating organizations are often owned by the IDN
 - Funding typically comes from IDN operational budget
- **Regional**
- **Accountable Care Organizations (ACOs)**
- **Payors**

HIE Motivations & Current State

- **The typical primary care physician has 229 other physicians working in 117 practices with which care must be coordinated**
- **Current State**
 - ~225 HIE initiatives nationally
 - Mixed results & challenges with sustainability
- **Sustainability factors**
 - Revenue
 - Operating Expenses
 - Development costs
 - End user adoption

HIE Roadmap



POLL QUESTION #1

eHealth Initiative 2013 Survey

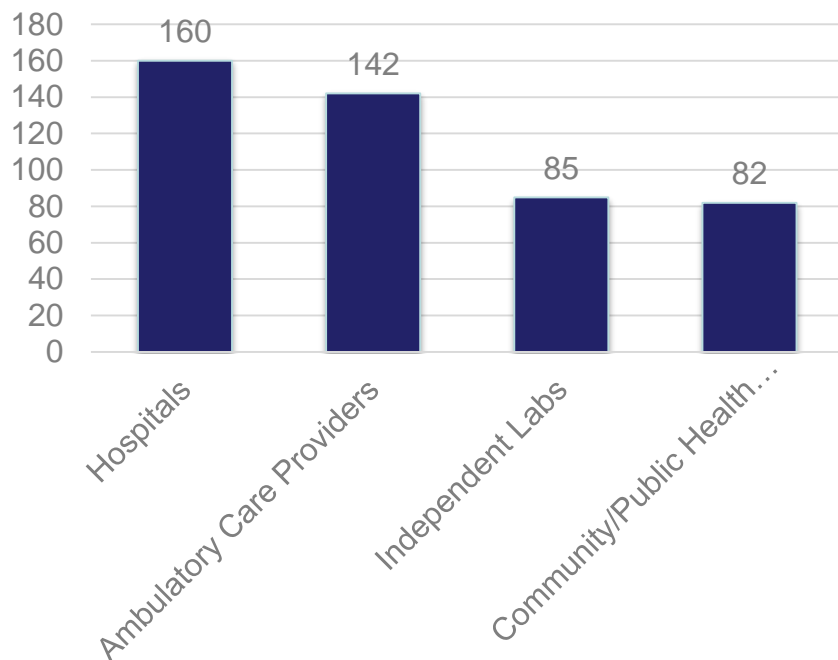
- **10th annual survey**
- **Comprehensive survey to determine the state of the field; covers governance, sustainability, operations, stakeholder participation, privacy policies, and more**
- **199 of 315 identified organizations completed the survey**
 - 90 community HIEs, 45 SDEs/state HIEs, 50 healthcare delivery organizations, others include public health, payers

eHealth Initiative 2013 Survey

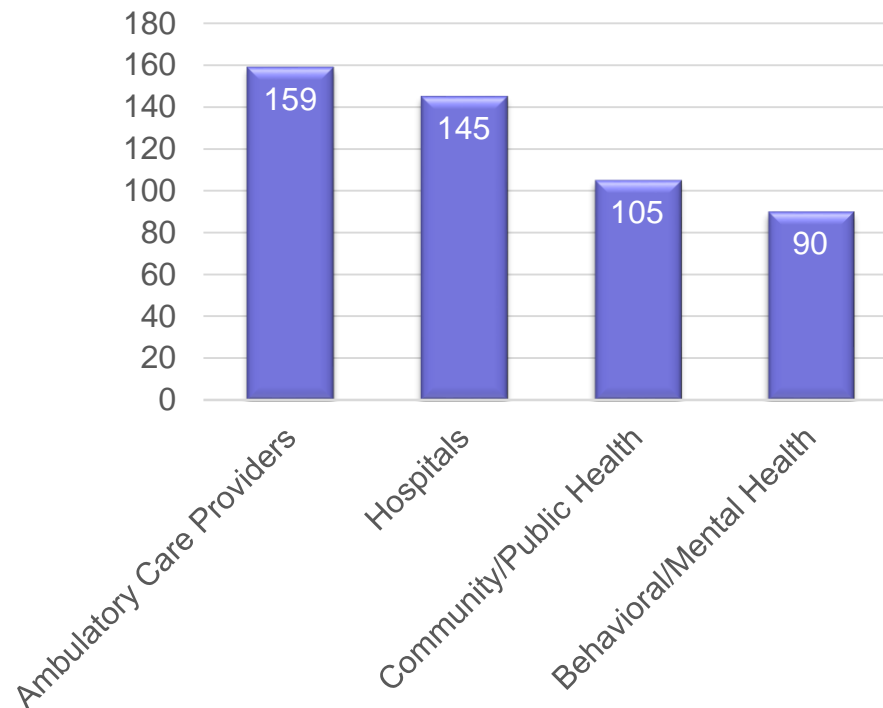
- **Interoperability is a major concern**
 - 142 respondents cited interoperability as a pressing challenge
 - 151 organizations have had to build interfaces with disparate systems (68 have had to build 10 or more; 32 have had to build 5 or more)
- **65 participate in an ACO; 65 plan to do so in the future**
- **90 currently use Direct**
 - Transitions of care is the most common use case (65)
 - 30 are NOT planning to use Direct

eHealth Initiative 2013 Survey

Who Provides HIEs with Data?

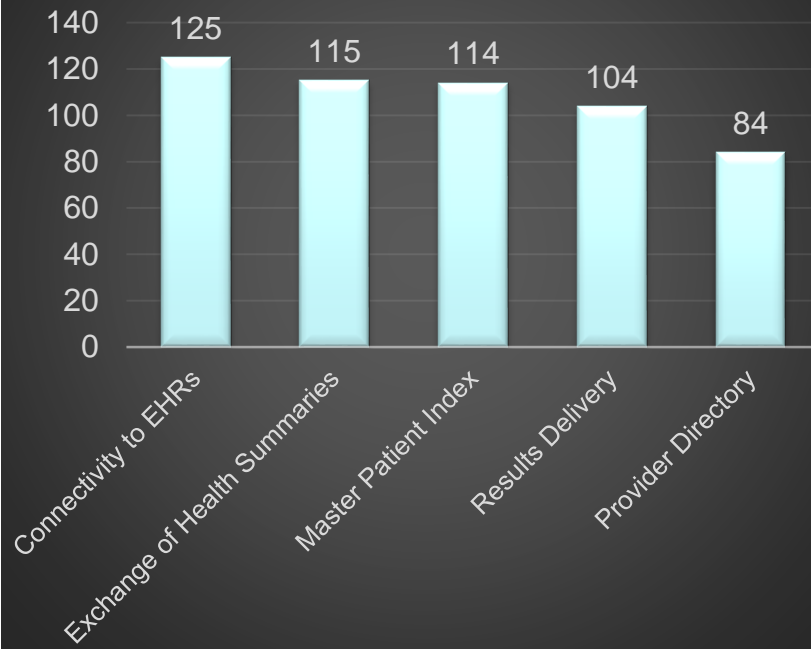


Who Accesses The Data?

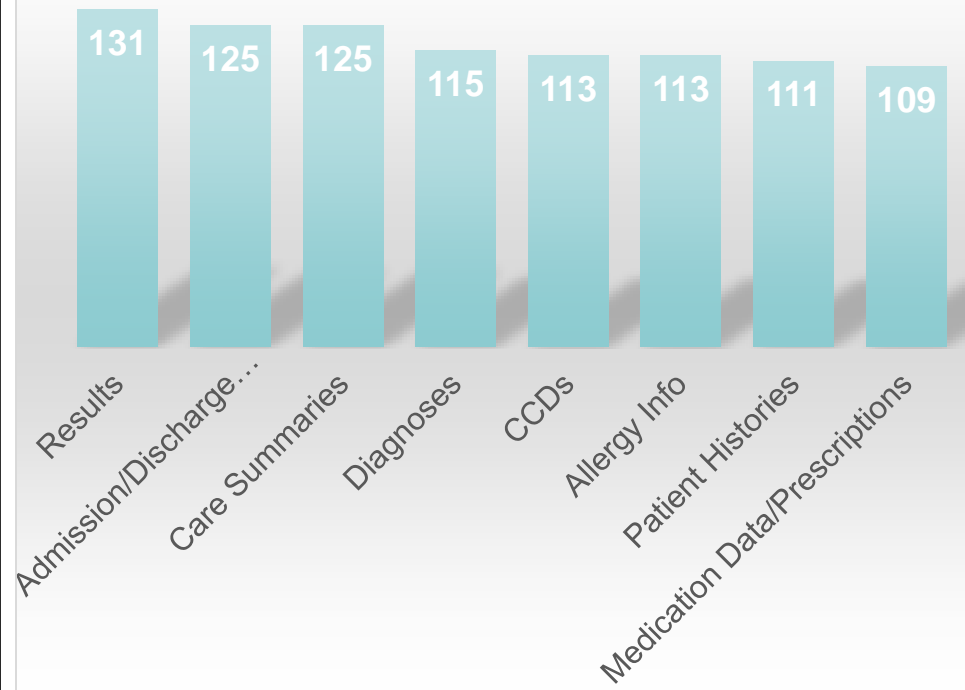


eHealth Initiative 2013 Survey

What Services do HIEs Offer?

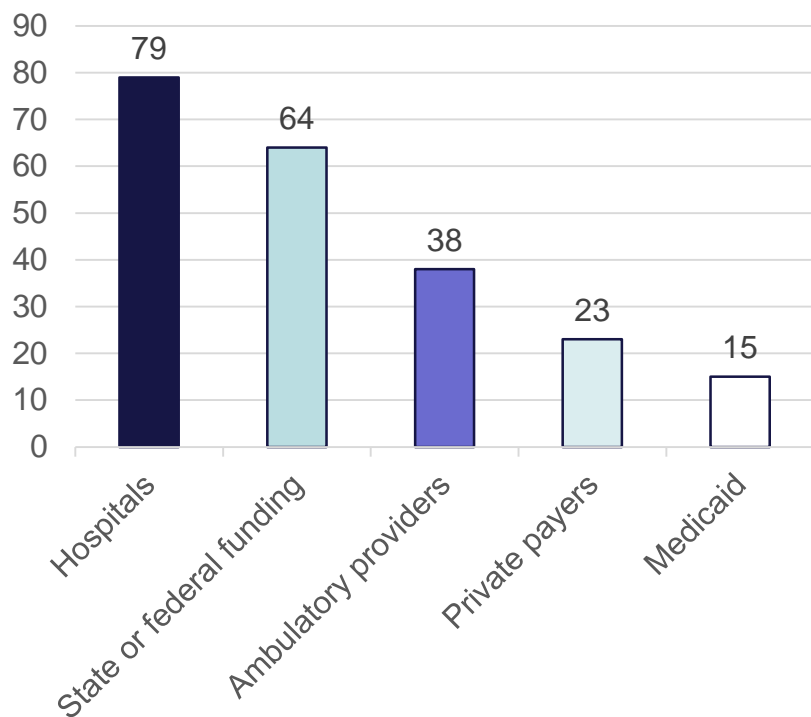


What Data Types Are Available?

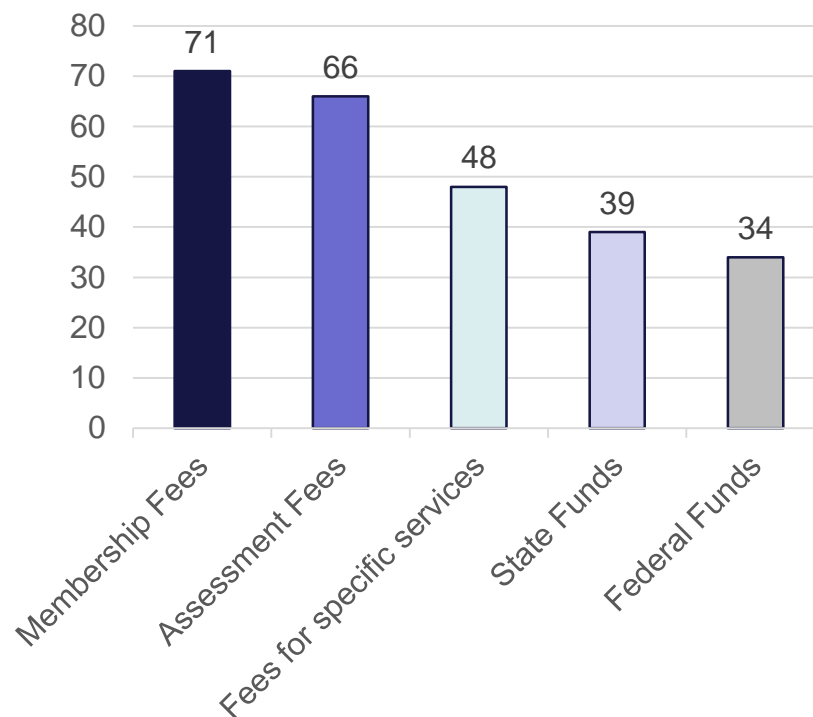


eHealth Initiative 2013 Survey

Who is Funding HIE?

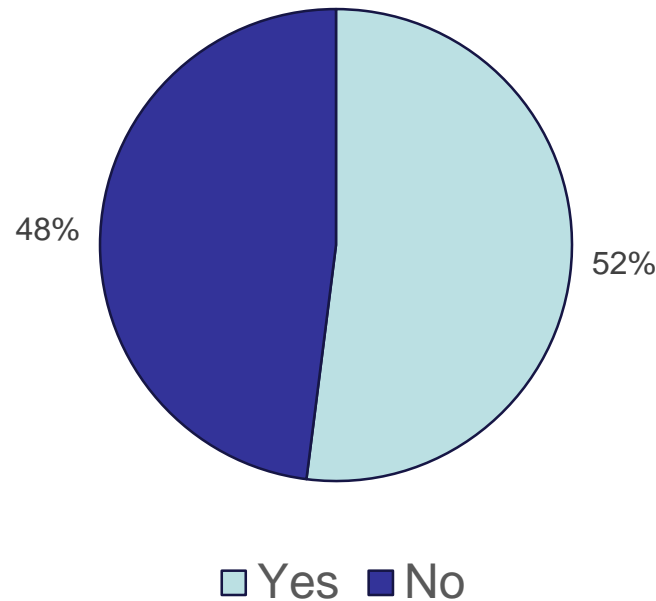


How is HIE Funded?



eHealth Initiative 2013 Survey

Receive sufficient revenue from participants to cover operational expenses



eHealth Initiative 2013 Survey

- **Opt-out is the most common consent model (115)**
- **109 organizations do not offer patients granular consent controls**
 - controls for sensitive information are most common (43)
- **Limited patient access**
 - 31 organizations offer patients access to their data
 - 102 plan to offer access in the future
 - 56 have no plans to do so

HIE by the Numbers

27%

of Hospitals are now
Participating in HIE initiatives

10%

of ambulatory practices were
engaged in one of the nation's
119 HIEs

32%

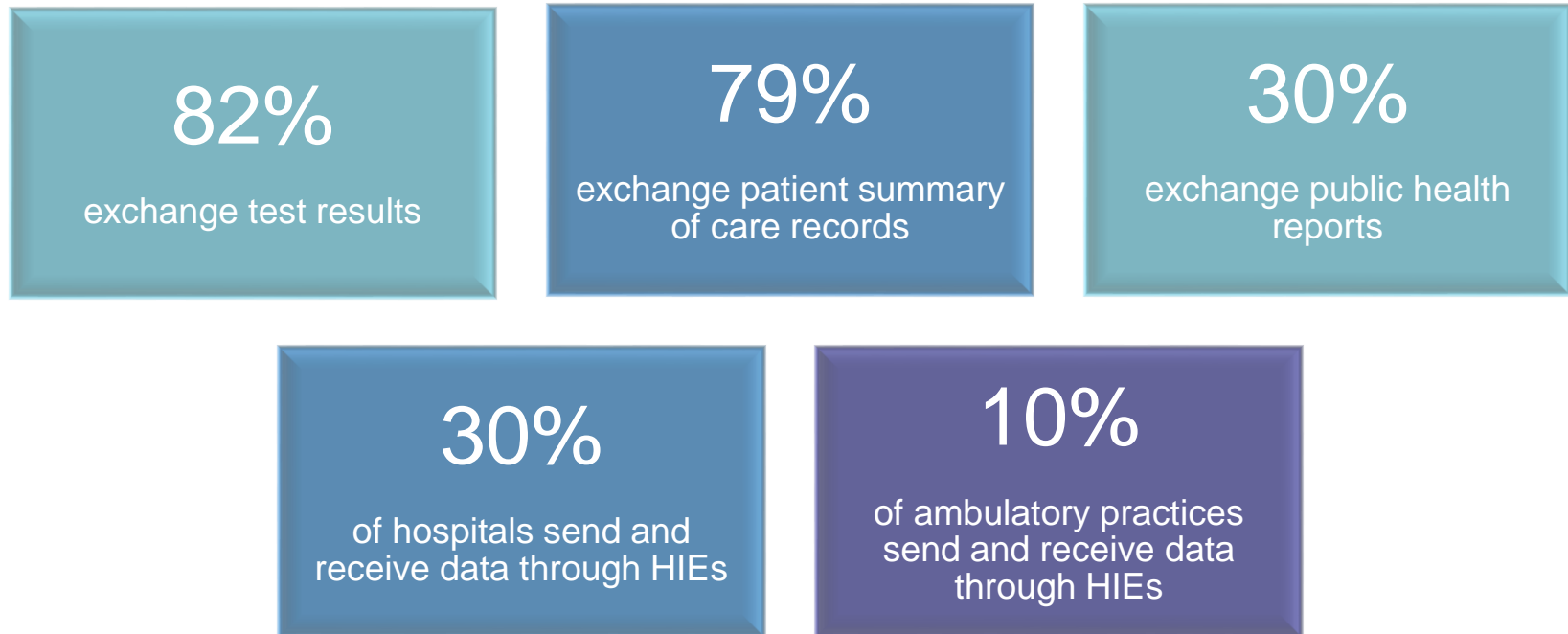
of HIEs support ACOs

45%

of HIEs are supporting
Patient-Centered Medical
Homes

Source: Corepoint Infographic: Health IT Growth in the U.S

HIE: Data Exchange Participants & %'s



Source: Corepoint Infographic: Health IT Growth in the U.S

HIE Financial Viability

74%

of HIEs say developing a sustainable business model is a barrier

Grants and contracts are the most substantial source of support for most HIEs

Source: Corepoint Infographic: Health IT Growth in the U.S

POLL QUESTION #2

Affordable Care Act Background

TABLE 4-1: HEALTH INSURANCE IN US BY GROUP (2010)

Insurance Types	People (millions)	Share	Most Recipients
Medicare	47	15%	Retirees & Disabled
Medicaid/CHIP	40	13%	Poor & Children
ER Insurance (70%-80% of premium by ER)	150	48%	Low to High Income
Private Ins/Other	27	9%	Medium to High Income
Uninsured	50	16%	Young adults, Low Income *
TOTAL	314	100%	

*includes undocumented immigrants and unsigned up
Medicaid eligibles.

ACA Background

TABLE 5-1: IMPACT OF ACA ON UNINSURED (2019)

	Without ACA	With ACA	
Uninsured	54 Million	23 Million	
Still uninsured			10 Million
Undocumented immigrants			13 Million
Now Insured		31 Million	
By Medicaid Expansion*			15 Million
By Healthcare Exchanges			16 Million
Total Americans	54 Million	54 Million	

*Assumes all 50 States participate in Medicaid Expansion.

Current Uninsured: 29% of Hispanics, 19% of African-Americans, 15% Asian-Americans, and 14% European-Americans

Ten Titles of the ACA

TABLE 1-1: THE TEN TITLES OF THE (PP)ACA

Title I	Quality, affordable health care for all Americans
Title II	The role of public programs
Title III	Improving the quality and efficiency of health care
Title IV	Preventing chronic disease and improving public health
Title V	Health care workforce
Title VI	Transparency and program integrity
Title VII	Improving access to innovative medical therapies
Title VIII	Community living assistance services and supports
Title IX	Revenue provisions
Title X	Manager's Amendments including the Reauthorization of the Indian Health Care Improvement Act

1,000 pages+, 10 titles, 67 subtitles, 500 provisions, 1000 places for regulation-writing, 44 definitions on NYS website, \$1B to administer

ACA Vision

- **Universal Coverage & Cost Control**
- **Cost control provisions relate primarily to changing the way we deliver care**
 - Payment reforms
 - New service models
- **Universal coverage provisions utilize a “three-legged stool” approach**

ACA Three-legged Stool

- 1. Insurance Market Reform (Affecting employer and individual coverage)**
 1. Reforms without reductions
- 2. Individual Responsibility**
- 3. Insurance purchase subsidies (individuals and small businesses) and public programs**
 1. Eligibility streamlining and expansion
 2. Coordinated enrollment with Exchange
 3. New marketplace (negotiating leverage for states) with tax subsidies

Goals of New Accountability Contracts

- **Root cause of quality gaps and cost problems: FRAGMENTATION**
 - Payment reform reduces fragmentation by making a single entity accountable for all care
- **Key Levers**
 - Incentives
 - Performance measurement
- **Patient-Centered Medical Homes (PCMHs) are one such concept and a building block for others including Accountable Care Organizations (ACOs)**

PCMH & ACO

- **Fee for service: Incompatible with medical home concepts**
 - Between-visit monitoring
 - Care coordination
 - Support for self management not reimbursable
- **Payers may add a care management fee**
 - Per member, per month
- **Primary care cannot fix fragmented care alone**
- **Integrated health care delivery requires payment approaches with greater accountability for total costs and outcomes**
- **A spectrum of mixed payment and risk sharing approaches are available**

Sample Payment Model

Fee-For-Service

Primary care practices continue to be reimbursed under their existing fee-for-service payment arrangements with health plans

+

Fixed “Transformation” Payment

Primary care practices receive a per patient per month fee

Practices must achieve NCQA recognition; invest a portion of fixed payment in care coordination

Incentive Payment (Shared Savings)

Primary care practices receive a share of actual savings generated by reducing total cost of care through improved patient outcomes

Practices must report on a set of clinical quality and utilization measures with requirements increasing over 3 years

How do we achieve care coordination & ?

HIE!!!!

HIE Adoption Process

- **Planning**
 - Participation from leadership and key stakeholders
 - Define objectives, identify stakeholders, document success metrics
 - Value Proposition & sustainability model
- **Governance**
 - Organization & data governance
 - Implications of private versus public
 - Interests, incentives, data use (secondary uses)
- **Consent**
 - Types (opt-in/opt-out, single/multiple provider)
 - Regulations (mental health, HIV, etc.)

HIE Adoption Process

- **Participants**
 - End-user (provider & hospital), data contributors (lab, imaging, Rx)
 - Value proposition
 - Prioritization – availability, quantity & quality of data
- **End-User Adoption**
 - Identify early adopters
 - Marketing & communication
 - Use cases
- **Policies**
 - Consent, end-user registration, information access, user authentication, enrollment

Participant On-Boarding Readiness Questionnaire

- **Key scoping metrics**
 - # of patients
 - # of physicians
 - Source vendor system(s)
 - Current interfaces
- **Data Source Questions**
 - Source system
 - Type of clinical data
 - Date first live in production
 - Volume estimates
 - Clinical data format

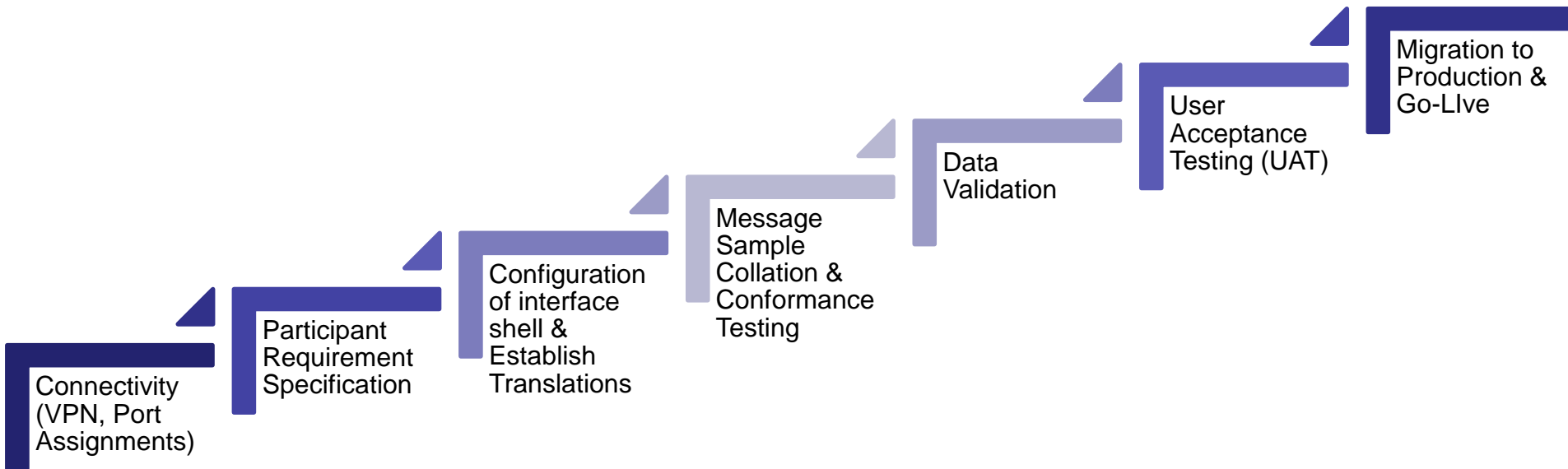
Participant On-Boarding Readiness Questionnaire Sample

Source Organization	Specific Source System	Type of Clinical Data	Date first live in production	Volume Estimates (e.g., # of unique patients)	Clinical Data Format (include terminology used, if any)	Location or region
XYZ Health System (hospital)	ADT (GE)	Admissions data, discharge summaries	Since Jan 2009	2,000,000	HL7 v2.5.1	Tallahassee
ABC Hospital	Lab (Cerner)	Lab results	Since Feb 2010	1,000,000	HL7 v2.5.1, LOINC coded	Jacksonville
St. Sam's Hospital	Transcription (XYZ vendor)	Transcribed reports: surgical notes, radiology reports	Since June 2010	1,000,000	HL7 v2.6	Lakeland

Participant On-Boarding Readiness Questionnaire

- **Security Implementation Questions**
 - Compliance with HIPAA Security Rule
 - Assessment of security risks and vulnerabilities
 - Confidentiality, integrity, availability of EPHI
- **Risk management plan**
- **Privacy Implementation Questions**
- **System Implementation questions**
 - Provision of server for connectivity to HIE
 - Hardware, security, proxy, firewalls
 - Patient look-up capabilities
- **Test & Quality Assurance**
 - Test environment in addition to production
 - Test patient data

Participant On-boarding Process Overview



Participant Onboarding - Challenges

- **Unrealistic time allocations for on-boarding**
- **Lack of clear scope definition**
- **Legal/business project boundaries vs technical scope**
- **Clearly documented API specification**
- **Lack of architectural decoupling of participant**
- **Fragmentation with multiple resources contributing over project lifetime**
- **Lack of implementation documentation**
- **Participant technical deficiencies**
 - Lack of participant SMEs
 - Reliance on application vendor or third parties

POLL QUESTION #3

Participant Onboarding – Best Practices

- **On-boarding de-coupling from core HIE function in processes & implementation**
- **Clear process and responsibility for scope management**
- **Creation of standardization in build and processes for core HIE**
- **Definition of standard API, codesets, etc.**
 - Definition of exceptions – site specific
- **Creation of standardized/template interface for participant**
- **Message Analysis interfaces for conformance testing**

Data Submission Specifications – File Transfer Example

- **File transfer process:**
 - Batch files should be sent daily before 8:00am and should contain all of the previous day's ED visits (12:00 a.m. to 11:59 p.m. of the previous day).
- **Files should be transmitted to the OPH public internet FTP site via secure SSH FTP (SFTP).**
 - Host, username, and password will be provided.
 - Facility can use any SFTP client that supports SFTP or SSH2.

Data Submission Specifications – File Format Specifications Example

- **The following HL7 format specifications outline the minimal elements required and are based on the PHIN guidelines for syndromic surveillance data.**
- **One single record or message should be sent for each patient seen in the ED.**
 - Transmission of A04 (patient registration) events only is preferred, but inclusion of A03 (patient discharge) may be considered on a case by case basis upon discussion with coordinator.
- **File naming convention should be the following:**
 - x...xYYYYMMDD.hl7, where 'x...x' is a self determined 5-15 character filename (containing no spaces, periods, etc.) that identifies the facility providing data in the file and YYYYMMDD is the year, month and day that the file was generated
 - e.g. MyHospital20060915.hl7

Resources

- [PHIN Messaging Guide for Syndromic Surveillance: Emergency Department and Urgent Care Data, Release 1.1, August 2012](#)
- [PHIN Message Quality Framework \(MQF\)](#)
 - Online testing tool that can be used to check message format against PHIN standards
- [The National Institute of Standards and Technology's HL7 Validation Tool](#)
 - Online testing tool to validate message format and is specific to syndromic surveillance messaging
- [PHIN Vocabulary Access and Distribution System \(VADS\)](#)
 - Promotes the use of standards-based vocabulary to support the exchange of consistent information among Public Health partners, including value sets specific to syndromic surveillance

Feedback Loop - Technical Scorecard

Summary:

Date Submitted: 05/21/2013

HL7 Messages Submitted: 17

HL7 Message Errors: 0

Validation Point	Description	Pass/Fail	Comments
HL7 <u>File Format</u>	Verify that the HL7 test file sent is valid and will import without error.	Pass	
File size	Should be at least 1,000 patient records.	Fail	

Demographic Data:

Total Patients (denominator): 17

Unique Patients: 7

Demographic Data	All Patients		Comments
	Count (%)	Pass/Fail	
First Name	100	Pass	
Last Name	100	Pass	
Date of Birth	100	Pass	
Middle Name	0	N/A	
Gender	100	Pass	
Race	65	Fail	Missing from 6 patients.
Medicaid	0	Fail	
Address Street 1	100	Pass	
Address Street 2	29	Pass	Not required.
City	100	Pass	
State	100	Pass	
Zip	100	Pass	
Phone Number	100	Pass	

Feedback Loop - Technical Scorecard

Vaccination Data:

Total Vaccinations: 17

Vaccinations for Children <19 years (denominator): 17

Vaccinations for Adults ≥19 years (denominator): 0

Administered Vaccination Date Range: 05/17/2012 – 05/21/2012

Vaccination Data	Children (<19 years)		Adults (≥19 years)		Comments
	Count (%)	Pass/Fail	Count (%)	Pass/Fail	
Vaccination Date	100	Pass	N/A	N/A	
CVX Code	100	Pass	N/A	N/A	
Historical Vaccine	0	Pass	N/A	N/A	No historical immunizations present.
Lot Number	24	Fail	N/A	N/A	
Manufacturer	100	Pass	N/A	N/A	
VIS Date	100	Pass	N/A	N/A	01/01/1900 hard coded for <u>for</u>

Feedback Loop - Technical Scorecard

Required Data for Children:

Total Patients <19 years (denominator): 17

Data	Children (<19 years)		Comments
	Count (Percent)	Pass/Fail	
Mother's Maiden Name	0	Fail	Not required if guardian information is supplied.
Guardian First Name	100	Pass	
Guardian Last Name	100	Pass	
VFC Eligibility Status	0	Fail	VFC codes backwards. Not recognized.

Comments:

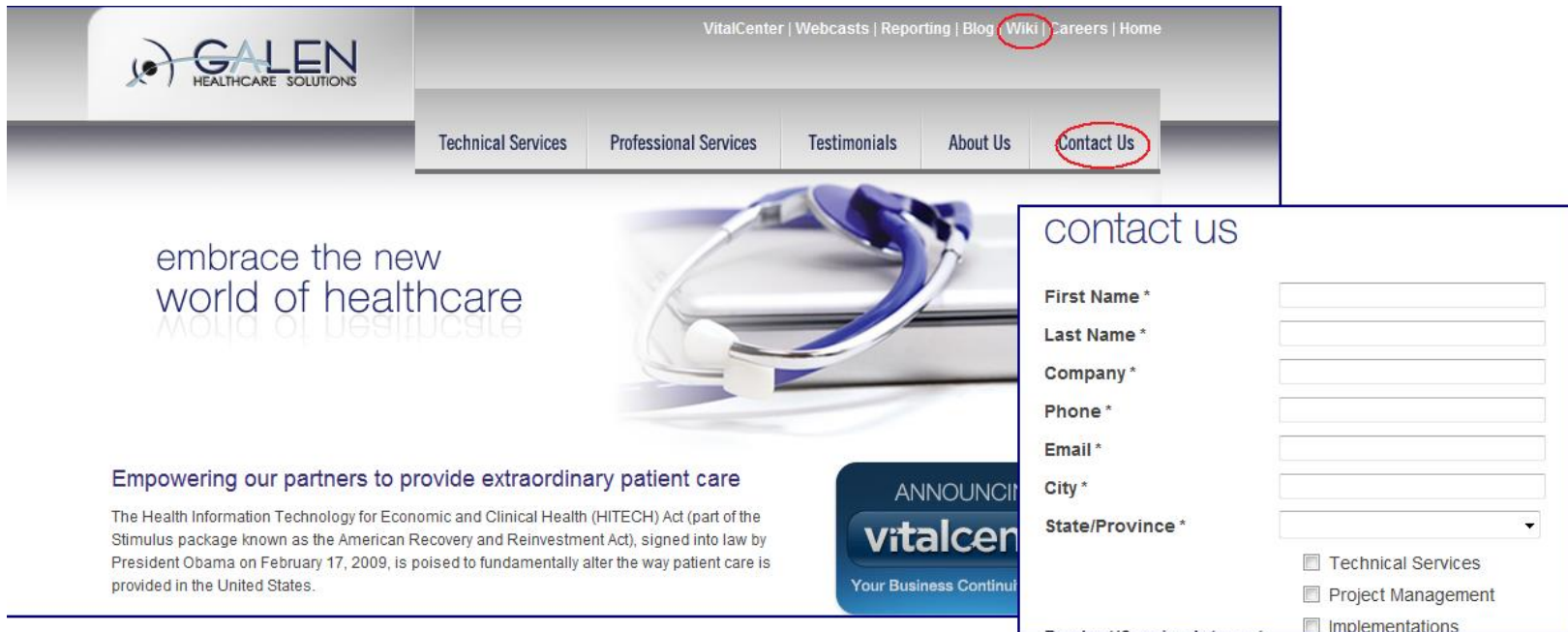
- Race is not present for 6 records (2 patients).
- Medicaid numbers are not present for Medicaid patients.
- NK1-3(guardian relationship) is hard coded to "GRD".
- PV1-20(VFC eligibility) is backwards.
- Lot numbers are missing ().
- Unknown substance manufacturers ().
- VIS date is hard coded to 01/01/1900 ().

Re-cap

- **HIE Background: Definition, Architecture & Benefits**
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Thank you for joining us today, for additional assistance....

You can contact us through our website at
www.galenhealthcare.com



The screenshot shows the GALEN Healthcare Solutions website. The header includes the GALEN logo and a navigation menu with links: VitalCenter | Webcasts | Reporting | Blog | **Wiki** | Careers | Home. Below the header is a secondary menu with links: Technical Services | Professional Services | Testimonials | About Us | **Contact Us**. The main content area features the tagline "embrace the new world of healthcare" and a stethoscope image. A text block discusses the HITECH Act. A blue box on the right says "ANNOUNCING vitalcenter Your Business Continues". A "contact us" form is overlaid on the right side of the page.

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