NV-HIE
Health Information Exchange
Supporting Clinical Integration

August 2nd, 2013
Introductions – Orion Health Team

Tristan Van Horne, Senior Sales Director

Jerry Rankin, Solution Consulting

James Date, Senior Vice President North American Sales
NV-HIE Business Drivers

• Want to partner with a vendor that has a solid reputation with the ability to execute
  – Based on budget and resources

• Optimize Clinical adoption
  – Provide considerable clinical value and ease of access

• Speed to sustainability
  – 3 Qualified Participants integrated by October 31st
  – Sustainable by February 7th, 2014
  – 75% of providers by 2015

• Select flexible technology foundation
  – Meet full breadth of requirements today and in future

• Public Health data integration
Why Orion Health

- **Ability to Execute - Most mature, global HIE vendor in the Market**
  - 20 Years experience Health Data Integration, most global EMR integration
  - Leading State HIE Vendor – Experience and Commitment
  - Fastest deployment in market
  - Most mature HIE SAAS solution on the market
  - Most advanced technology stack
  - Orion Health has widest and deepest messaging options
  - Thought Leader in State and Federal Standards
  - DIRECT “largest HISP provider in USA”

- **Clinical focus – Only way to really succeed**
  - Experienced Clinical Adoption and Change Management Experts

- **National Leader Public Health Integration**
  - 49 States Public Health Departments, CDC including Nevada

- **Extensibility: Case Management, Patient Portal, Population Health, EMR etc**
  - Value Add Services to Support Sustainability
  - Breadth and depth of solution to meet future needs

- **Trusted Partner - Great company to work with:**
  - Currently partner with NV with Pilot DIRECT project
  - Quality products, Quality people,
  - We do what we say
  - Privately owned – No allegiances
Orion Health

Company Overview
Orion Health Overview

Independent Global Health IT company
20 years 30% year over organic growth
$100M USD Revenue per annum
1000+ Customers, 5 continents, 30 countries
30+ large Health Information Exchange deployments globally
Santa Monica, CA (NA head office) and Boston, MA
Auckland, NZ (Development Center)
760 Staff
What the Analysts are Saying

July 2013, "Chilmark HIE Report"

Orion Health is the strongest independent HIE vendor in the market.

Orion Health’s easy-to-use solutions and applications improve patient care and clinical decision making by enabling the exchange of healthcare information among disparate systems and providing integrated health data in a single, unified view. (KLAS)

May 2013, "IDC Health Insights #HI240928"

Customers comment that Orion Health’s integration tools are flexible when it comes to accessing a wide variety of data sources, and the interfaces are configurable. Additionally, they report that Orion Health is an excellent partner and very responsive to customer suggestions.
HIE Customers

PUBLIC ORGANIZATIONS

- Nevada Direct, NV
- Alaska eHealth Network (AeHN), AK
- District of Columbia, DC
- Inland Empire HIE, CA
- Louisiana Health Care Quality Forum, LA
- Maine HealthInfoNet, ME
- Massachusetts, MA
- New Hampshire Health Information Organization, NH
- New Mexico Health Information Collaborative, NM
- North Carolina DHHS, NC
- North Dakota, ND
- North Texas Accountable Healthcare Partnership, TX
- Western Washington Rural Health, WA
- San Joaquin County HIE, CA
HIE customers

CANADA
- Alberta Health Services, AB
- New Brunswick Department of Health, NB
- Quebec Department of Health, QC
- Saskatchewan Department of Health, SK
- The Northwest Territories, NT
- Ministry of Health & Long Term Care, ON
- Newfoundland & Labrador Centre for Health Information, NL

EUROPE
- Greater Glasgow NHS Trust, Scotland
- IB Salut, Palma, Spain
- Health and Social Care Northern Ireland (HSCNI), Northern Ireland

AUSTRALIA
- NSW Health, Sydney, NSW
- Hunter New England Local Health District, NSW
- Dept. of Health & Ageing PCEHR, Australia

NEW ZEALAND
- Canterbury District Health Board
Orion Health HIE
Solution overview
Orion Health HIE Solution Summary

Standard HIE

- Web-based access to the longitudinal patient record (Clinical Portal)
- Clinical Messaging: HL7, CCD, XDS, Web Services (Rhapsody™)
- Storage of clinical information (CDR)
- User Subscribed Notifications
- Privacy & Consent
- Semantic Interoperability
- Enterprise Master Person Index (EMPI)
- Open APIs

Add-on Modules

- NwHIN DIRECT Secure Messaging
- eHealth Exchange Gateway (NwHIN)
- Public Health Reporting
- Case Management
- Patient Portal
- EMR
  - Diagnostic Orders
  - HIE Problem List
  - Clinical Documentation
- Web-based Imaging
- Reporting & Analytics

"[Orion Health] is one of the more complete [HIE] solution on offer”  Chilmark Research HIE Report
The Collaborative Care Timeline

- Acquisition
- Access
- Analytics
- Aggregation
- Adoption
- Action
Solution overview

**Healthcare Service Bus**

- Parsing
- Validation
- Transformation
- Routing
- Acknowledgements

**MPi**
- Demographics
- Patients
- Providers

**Normalization**
- Normalization
- Semantics
- Codeset Mapping

**Data Repository**
- Demographics
- Encounters
- Labs, Rads
- Allergies, Diagnosis
- Documents
- Medications
- Problems, Procedures

**HIE Module**
- CCD Exchange
- Notifications
- Privacy & Consent
- Index Lookups
- Notification Routing

**External Systems**
- eHealthExchange
- HIEs
- Medicare Medicaid
- Known Registries

**Source Systems**
- eHealthExchange Gateway
- HL7
- CCD

**Clinical Portal**
- Case Management
- EMR Lite
- Business Intelligence
- Web based Imaging
- Direct Secure Messaging

**Patient Portal**
- Clinical Summary
- Secure Messaging
- Health Library
- Circle of Care

**HTTPS**
- Secure Inbox
- E-Mail
- Mobile

**SSL**
- SSO
- XDS

**EMRs**
- EHRs
- Laboratory
- Radiology
- HIS

**Notifications & Subscriptions**
- Clinical Portal
- Patient Portal

**Known Registries**
- Medicare
- Medicaid
Centralized or Federated HIE

Centralized (Traditional HL7 v2 Data Feeds)
- ADT, Results, Orders
- Rhapsody Integration Engine
- Demographics
- Messaging
- Data Normalization
- Data Privacy Lookup

Federated (Sharing Documents via IHE Standards)
- ADT
- 1. Store Document
- 2. Register Document
- 3. Query for Documents
- 4. Retrieve Remote Document
- 4. Retrieve Orion Health CCD

Health Information Exchange (HIE)
- Enterprise Master Patient Index
- CDR Data Models:
  - Results
  - Encounters
  - Problems
  - Allergies
  - Procedures
  - Medications
- Terminology Services
- XDS Registry
- XDS Repository

Continuity of Care Document (CCD) Services
- Notifications (Automatic)
- Send to My EMR (Manual)
- Email, SMS, Secure Messaging
- ORU, CCD

Source Systems (EMR, HIS, LAB)
Consumer Systems
Source Systems

Orion Health HIE

EHR Integration
EHR connectivity options

• **CCD-based exchange** (standards based information exchange) between disparate EMRs
  – IHE profiles (especially PIX, PDQ, XDS, XCA, XCPD, XDR)
  – Rest APIs
  – Other EMR specific methods available

• **HL7**

• **Clinical Notifications and Subscriptions**
  – proactive decision support (clinicians don’t need to look up information)

• **Direct Secure Messaging**

• **Clinical Portal SSO** from EMR
  – One click access to HIE patient record within Clinical Portal (SSO)
EHR Integration Experience

Bi-Directional Data Integration (HL7 and CCD)

- Cerner HIS
- Epic
- McKesson
- Allscripts
- Eclipsys
- Siemens
- Healthland
- Quest Lab
- Lab Corps
- Cerner Lab
- Sunquest
- Misys Lab
- CoPath
- Dictaphone
- Nuance
- GE Centricity
- GE Imaging
- Agfa
- IDX
- Phillips
- FujiFilm
- Deio
- Omnicare
- Merge
- eClinicalWorks
- NextGen
- Misys
- Cerner EMR
- MEDITECH
- M-Modal
- LSS
- Sage
- Greenway and many more.
- Many more HL7 / CCD
EPIC Care Everywhere – “Outside Data”
“Ingesting” Data from CCD (Epic)
Example integration (Cerner)
Orion Health HIE
Demonstration
Public Health Reporting

- 49 States and CDC use Rhapsody Connect
- Rhapsody™ Connect is specifically designed for public health reporting
- Automates reporting to provide fast, secure transmission of data between providers, public health agencies, HIEs, RHIOs, and other trading partners
- Rhapsody™ Connect filters and maps the data, converting local codes, when required, and validating content before securely transmitting it to the designated public health agency.
- Unique and specialized public health reporting algorithms constantly analyze clinical data to identify possible cases that fit the rules for public health reporting.
- Preconfigured Profiles to support different public health programs including:
  - Electronic Laboratory Reporting (ELR) Profile
  - CSTE Case Reporting Profile
  - Hospital Acquired Infection Profile
  - Biosurveillance Profile
  - Immunization Registry Profile
  - Discharge Reporting Profile
  - + custom reporting
Orion Health HIE
Master Patient Index
MPI

• **Market leader in Performance and Price**
  – KLAS December 2012
    • Highest Overall Score: 89.9
    • Buy Again: 100%

• **Out of the box integration with Rhapsody/HIE**

• **Provides real-time, automated person matching across disparate source systems**
  – PIX Manager

• **Proven probabilistic matching algorithm**
  – Configurable thresholds for improved accuracy
  – Frequency-based analysis generates weights based on customer’s demographic data
  – Prevents creation of duplicate records
  – Reduces risk of accessing the wrong patient’s data

• **Creates Universal ID for patients to correlate patient data across multiple repositories**

• **Supports v2 and v3 PIX/PDQ, XDS, XCPD and IHE Profiles, JMS, web services**

• **Maximize accuracy, minimize rework**
Matching

Matching Highlights

- Probabilistic + deterministic matching algorithms
- Golden record comparison
- Source based weighting
- Source based thresholds
- Extensible architecture
Provider Directory Options

• **Industry Leadership**
  – National Association for Trusted Exchange (WSC)
  – IWG Pilots

• **Orion Health - Advanced Capability**
  – Individual Level/Entity Level
  – Extensible
  – HPD+
    • Interoperable with other systems
  – Fully Integrated

• **NextGate Provider Directory Option**
  – Also ILPD/ELPD and HPD+
Patient Privacy and Consent

• Global Experience, Flexible Solution
• Restricts access to the patient record and/or documents/sections within the patient record
  – Full access, privacy-sealed, locked, hidden

• Rules based on
  – Doctor/Patient Relationships
  – User Role/Group
  – User Location
  – Patient Information (including consent)
  – Info Level Security

• All access is audited
Controlling Access

**Authentication & Identity Management**
- Password Policy
- Biometric Policy
- User Type
- Account Policy

**Session Management**
- Password Encryption
- Inactivity Timeout
- Audit log
- Location

**Type of Access Given**
- No Access
- Locked
- View with Reason
- List More
- Full Access

**Patient Privacy**
- Patient / Provider Relationship
- Consent
- Information Sensitivity
- Record Level

**Access Control**
- User Group(s)
- Entry Points
- User Attributes
- Specialty
- Consultant
## Auditing

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<th>Time</th>
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Printer Friendly Version  Download CSV results
eHealth Exchange Gateway (NwHIN)

- **Industry Leadership**
  - Founding Member Healtheway
  - Member EHR/HIE IWG

- **Orion Health Exchange Gateway**
  - Certified 8/12

- **Healtheway Onboarding**
  - Onboarding beginning Q4
Orion Health Direct Secure Messaging (DSM)

• Leading Provider of Direct Services
  – 9 current clients and more soon to deploy
  – 6500+ Direct addresses and growing
  – Member of Direct Trust
    • HISP Accreditation (DT/EHNAC) target Q4
• Full service HISP
  – Certificate Authority/Discovery
  – Provider Directory
  – Routing, transformation, email services, webmail
• Enable Direct connectivity across ecosystem from smallest provider to fully enabled HER
• Nevada DSM: Upgrade *not Migration*
Direct Secure Messaging

- **DSM Web**
  - Basic Direct Secure Messaging
  - Web-based access
  - Email client access

- **DSM Connect** (Appliance)

- **DSM Direct** (EHR Systems)
  - Managed Direct Secure Messaging
    - Client-deployed hardware device
    - Monitored by OH Managed Services
  - Direct Secure Messaging with EHR System integration
    - Encrypted S/MIME access
    - Encrypted XDR access

- **Orion Health Trust Network**
Orion Health HIE

Why Orion Health
Why Orion Health

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Orion Health HIE

Discussion
Oral Presentation and Demonstration Agenda (90 minutes)

Product Demonstration: (55 minutes)
- Introductions & System Demonstration Overview (10 minutes)
- Demonstration (40 minutes)
- Summary (5 Minutes)

Oral Presentation: (30 minutes)
- Approach Overview
- Solution Differentiators

Evaluation Panel Questions and Answers: (30 minutes)
- Questions & Answers
## Introductions: Corporate Leadership

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
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<tbody>
<tr>
<td>Jarred Clark</td>
<td>Managing Director, Cognosante</td>
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<tr>
<td>Nevada State Account Manager</td>
<td></td>
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<tr>
<td>Dennis Dworman</td>
<td>Vice President, General Manager, Cognosante</td>
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<tr>
<td>Cognosante Health Transformation</td>
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<tr>
<td>Mike Lundie</td>
<td>HIE Practice Director, Cognosante</td>
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<tr>
<td>Cognosante HIE Practice Director</td>
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<tr>
<td>Sam Godwin</td>
<td>Vice President Sales, Strategic Accounts, HealthUnity</td>
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<tr>
<td>HealthUnity Business Development</td>
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<tr>
<td>Prem Urali</td>
<td>President and CTO, HealthUnity</td>
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<tr>
<td>Co-founder HealthUnity</td>
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## Introductions: Key Personnel

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
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<tr>
<td>Rhonda Warnack, PMP</td>
<td>Project Manager</td>
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<tr>
<td><em>HIE Project Manager, Cognosante</em></td>
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<tr>
<td>Eric McLaughlin</td>
<td>Integration/Solution Liaison</td>
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<tr>
<td><em>HIE Subject Matter Expert, Cognosante</em></td>
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<tr>
<td>Barb Filkins</td>
<td>Security Compliance Officer</td>
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<tr>
<td><em>HIE Security Expert, Cognosante</em></td>
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<tr>
<td>Carol Robinson</td>
<td>Business Development / Marketing Lead</td>
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<tr>
<td><em>Principal, Robinson &amp; Associates</em></td>
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<tr>
<td>Rick Cavazos</td>
<td>Operations Manager</td>
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<tr>
<td><em>Operations Manager, Cognosante</em></td>
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<tr>
<td>Vicki Hohner, MPA, PMP</td>
<td>Contract Manager</td>
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<tr>
<td><em>HIE Contract Manager, Cognosante</em></td>
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<tr>
<td>Rajesh Kumar</td>
<td>Senior Solution Architect</td>
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<tr>
<td><em>Senior Systems Architect, HealthUnity</em></td>
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## Introductions: Executive Advisory Group (Value Add)

<table>
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<tr>
<th>Role</th>
<th>Executive Advisory Group</th>
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<tbody>
<tr>
<td><strong>Rick Williams</strong></td>
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<tr>
<td><em>Vice President, Business Development, Cognosante</em></td>
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<tr>
<td><strong>Mark Shishida</strong></td>
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About Team Cognosante

Nevada Health Information Exchange (NV-HIE)

A Nevada non-profit corporation

NV-HIE’s mission is to improve the health outcomes and reduce the cost of healthcare, by creating a leveraged information services platform. The NV-HIE solution will operate in partnership with HIE businesses that are or will operate within Nevada, other states, as well as the national HIE.

Cognosante

Cognosante is a leading provider of IT services to health organizations nationwide. We assist our partners in developing, managing, and executing complex healthcare information programs and infrastructures. Our expertise includes HIE, HIX, Medicaid/HHS programs, PMO services, and modular system integration.

HealthUnity

HealthUnity provides an end-to-end HIE solution that is affordable, scalable, secure, and privacy aware. Providing all the pieces needed to make your HIE a reality, this solution focuses on delivering true value to participants by providing the right information to the right people at the right time.

Robinson and Associates Consulting, LLC

Robinson and Associates Consulting, LLC provides specialized consulting services to accelerate strategic initiatives and advance innovative practices, policies and technologies.
Product Demonstration

• Introductions & System Demonstration Overview (55 minutes)
  • Product Demonstration
  • Summary
• Oral Presentation (30 minutes)
  • Approach Overview
• Evaluation Panel Questions and Answers (30 minutes)
Core HIE Solution:

- Master Patient Index
- Provider Directory
- Consent Management
- Record Locator Service
- Messaging & Interoperability (Direct & IHE)
- Clinical Portal
- Performance Reporting Services
- Gateway Services
- Query-Based & Direct Exchange

Team Cognosante’s Core HIE Solution = Value and long-term sustainability

- Nearly 100% functional compliance to the RFP
- Basis for achieving sustainability
- State Level Shared Services Layer
- SOA based implementation
- Rapid availability to Qualified Participants
HealthUnity Solution Suite

- eHealth Exchange Services
- Direct Messaging
- Master Person Index
- Intelligent Analytics
- Health Information Exchange
- Patient Engagement Portal
Meaningful Use:
• Exchange clinical information
• Submit immunizations to registries
• Submit syndromic surveillance reports
• Submit reportable labs
• Submit quality metrics including PQRS registry
• Maintain Meaningful Use product roadmap

Team Cognosante’s approach to Meaningful Use enables providers and hospitals to fully meet Meaningful Use

- Measure the impact of Meaningful Use
- Support solutions that engage patients in Meaningful Use
- Provide Public Health Gateway Services
- Improve integration with clinical workflows
MU is achieved by a combination of HIE and EHR services
3. Clinical portal as a tool for physicians to view patient data from multiple sources in an intuitive and efficient manner

Team Cognosante’s Clinical Portal delivers critical insight to enhance patient care

- Enables HIE on-ramp for Nevada “white space” providers
- Send & receive patient information
- Achieve Quality Improvement through metrics
- Role based access control

Clinical Portal:
- Intuitive and efficient User Interface
- Patient Search
- Query for patient clinical information
- View patient clinical summary with data from multiple sources
- Integration with Direct Secure Messaging
- Lab result delivery
- Alerts and notifications
- Analytics integration
- Consent Management & Break Glass
- Capability for future integration of eligibility check, claims submission
4. Service-Based Approach to the Solution

Service-Based Approach:

- Software-as-a-Service (SaaS) supports State Level Shared Services (SLSS)
- Service Oriented Architecture (SOA)
- Supports CMS Seven Conditions and Standards, MITA 3.0
- Supports standards based interoperability and profiles (XCA, XCPD, XDR, XDM)

Team Cognosante’s SaaS model allows NV-HIE to focus on the business not the technology:

- Immediate access to core functionality to meet business use case
- Promotes reliability of services with standards based interoperability
- Allows participants flexibility in how they connect and exchange data
- Security HIPAA, ARRA, Business Continuity
4. Service-Based Approach to the Solution

- Point-of-care Access
  - EHR Integrated Bidirectional
  - Web-based EHR-lite
  - NwHIN/Healthway
  - NwHIN/DIRECT XDM

- Managed Care Applications
  - Population Health Management
  - Case Management
  - Utilization Management

- Patient Engagement Applications
  - Non-tethered PHR
  - Patient-generated Content
  - Patient Education and Engagement

- Public Health Access
  - Web-based Access
  - Syndromic Surveillance Integration
  - Electronic Lab Reporting Integration
  - Immunization Registry Integration
  - Cancer Registry Integration

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**Enterprise Services Bus**

- Security Services
- SSO Service
- Consent Management Services
- Network Management
- Hybrid Registry and Repository (IHE Standard)
- ETL, Datawarehouse, Analysis and Reporting Services
- Common Terminology Services (HDD Access based)
- Reference Data Services
- Master Data Services (MPI)
- Provider Directory
- Secure Messaging HISP (DIRECT)
- Image Exchange Services
- Data deid Services

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**HealthUnity**
- DIRECT
- HIE
- MPI
- iEngage
- HealthIq
- Healthway

**Claims Data**

**Data Sources**
- EHR
- PM
- LAB
- RIS/PACS
SOA Interface List – Extensive Standards Support

1. HU-MPI
2. HU-Node Server
3. HU-Node Client
4. HU-Outbound Adapter
5. HU-Inbound Adapter
6. HU-Results Delivery
7. HU-PHR Gateway
8. XDS.b Repository
9. XDS.b Registry
10. PIX Manager (PIX, PDQ and PIX notifications)
11. HIE-Analytics
12. Directory Services
13. Certificate Authority Services
14. Healtheway NwHIN Services
15. DIRECT Services
5. Direct Secure Messaging

Direct Secure Messaging:

- Full HISP capability
- Pre-built adapters to make an EHR Direct ready through
  - Web services
  - API’s
  - SMTP
- Provider Directory
- Active Directory integration
- Microsoft Exchange & Outlook support

Team Cognosante’s Direct Secure Messaging supports meaningful use, enhanced coordination of care

- Available to Qualified Participants
- HISP services (HIE-HIE)
- Convert legacy Direct accounts
- Direct services integrated within Clinical Portal or email client
6. Configuration and operation of Enterprise Master Patient Index (eMPI) services and capabilities

**Master Patient Index:**

- Probabilistic matching
- 13 point match criteria
  - Near zero false positives
  - Standards compliant
- Proven design for scalable performance
- Low Total Cost of Ownership (TCO)
  - Low deployment time and cost
  - Low runtime cost
- Administrative portal to facilitate adjustment of match rules and thresholds
- Insightful built-in reports
- Supports PID/PDQ

Team Cognosante’s eMPI provides an enterprise solution with high performance / low maintenance

- Proven component in several large scale HIE deployments
- Minimizes need for manual interaction and resolution
- Available as a service to all qualified participants
- Flexible match criteria
7. Other Components Critical to 8 Contract Elements

Eight Contract Elements:

1. Master Patient Index (MPI)
2. Provider Directory (Facilities, Individual)
3. Centralized Content Management
4. Record Locator Services
5. Terminology Engine
6. Messaging & Interoperability Services
7. Clinical Portal
8. Performance Reporting Services

Team Cognosante has included critical supporting components:

- Testing Tools
- Certificate Management
- SaaS Model
- Edge Servers & HIE Adapters
- Helpdesk Services
- Performance Reporting & Monitoring Services
- Semantic & Syntactic Normalization
- Composite CCD (de-duped)
8. Centralized Consent Management

Consent Management:
- Opt-In/Opt-Out
- Opt-Out with exceptions
- Break the glass
- Granular level control

Team Cognosante’s consent management services provide granular control to accommodate patient choice

- Complies with NV State Bill 43 (SB43)
- Flexible Consent Management accommodates policy exceptions
- Break Glass access for emergency settings
- Consent preferences configurable through Patient Portal, PHR, and at Point-of-Care
Configurable Consent Directives

Nevada Medicaid Participants cannot opt out
Only a particular specialty can access
Configurable Consent Directives

Only a named doctor can access
Configurable Consent Policy Templates

Specialized templates for implementing policies

Restrictions:
- No HIV/AIDS
- No genetic related
- No substance abuse related

- Select Consent
  
  facility Consent
  
  ge: 38 Year(s) | Address: 3158 Gracefield Road, Apt F112, SilverSpring, MD 20904, US |
9. Subscribing for notifications based on ADT transactions

Subscription Notifications:

- Available to Qualified Participants on subscription basis
- Selectable & configurable events notifications
- Logging for completeness and accuracy of data feeds during facility onboarding and production
- Customized alert notifications (SmartStream)

Team Cognosante’s solution to ADT notifications enhances patient care and reduce re-admission rates

- Alerts of hospital admission & ED discharge
- Improves coordination of care through proactive notifications
- Allows providers to control volume and frequency of alerts, reducing “alert fatigue”
- Ability to add new clinical alerts based on rules with increased complexity
- Push alerts to mobile devices and secure email
Data Validation and Interface Monitoring and Reporting

✔ Data Validation

- Syntax
  - Well formed message
  - Technology – XSD schema validation

- Semantics
  - Required fields are present and in expected format
  - Technology – Xpath validation
  - Cross field validation
  - Technology – HU proprietary, XSLT and Schematron

✔ 24/7 automated monitoring

✔ Reporting done on a daily basis (configurable)
**Sent:** Friday, May 17, 2013 4:00 AM  
**To:** undisclosed recipients;  
**Subject:** HIE Error Report: 05/17/2013 (20)

**HIE Error Report: 05/17/2013**  
**Total Errors:** 20

*Rejections are located here: \pmhhiei01a\K$\HealthUnity\Adapters\FilteredRejections*

<table>
<thead>
<tr>
<th># Errors</th>
<th>Facility</th>
<th>Node</th>
<th>Error Description</th>
</tr>
</thead>
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<tr>
<td>2</td>
<td>GSH</td>
<td>MSH_MEDCONNECT</td>
<td>(ADT^A08) PID-13: Data type error</td>
</tr>
<tr>
<td>4</td>
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<td>MSH_MEDCONNECT</td>
<td>(ADT^A08) IN1-31: Table value not found</td>
</tr>
<tr>
<td>3</td>
<td>GSH</td>
<td>MSH_MEDCONNECT</td>
<td>(ADT^A04) PID-13: Data type error</td>
</tr>
<tr>
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<td>(ADT^A04) PID-5: Missing name</td>
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<td>2</td>
<td>MPP</td>
<td>MSH_CENTRICITY</td>
<td>(ADT^A08) Patient updation failed</td>
</tr>
</tbody>
</table>

CONFIDENTIAL: The information contained in this communication, including its attachments may contain confidential information and is intended only for the individual(s) or entity(ies) to whom it is addressed. The information contained in this communication may also be protected by legal privilege, federal law or other applicable law. If you are not the intended recipient of this communication, you are hereby notified that any distribution, dissemination or duplication of this communication is strictly prohibited. If you have received this communication in error please immediately delete and destroy all copies of this message and please immediately notify us of the error by separate communication. Thank you.
Problems with intrusive alerting

- Generated when every event is notified. Hospital can have hundreds of thousands of patients
- No “go to” person to send the alert to
- Disrupts physician workflow
- Does not give a sense of completion

Resulting in...

- Alerts being turned off
- Alerts not checked and acted on

Solution

- Alerts generated when looking at patient’s record
- Generated automatically for a patient list
- Designed specifically by physicians for physicians
10. Exchanging Lab and Radiology Results

Team Cognosante’s Core HIE solution enables the exchange of lab & radiology results that lower costs and improves patient care.

- Flexible ways to connect and exchange lab & radiology results
- Providers have full access to lab & radiology data thru the Clinical Portal
- Supports Meaningful Use

Lab & Radiology Data Exchange:
- Supports both HL7 v2.x and v3.x
- Provides ability to send/receive lab (ORU) results
- Viewable via Clinical Portal
- Supports Clinical Care Summary CCD (C32)
- Supports CDA C37 Lab Document
- Supports HL7 Radiology reports with embedded link to view corresponding image (i.e. PACS)
11. Integrating medication data through use of the HIE

Team Cognosante’s Core HIE Solution captures a more complete medication history enhancing patient care

Medication Data Integration:

- Medication history available in Clinical Portal
- Medication data filters in Clinical Portal
- Ability to show active prescriptions from multiple sources in patient summary

- Supports achieving Meaningful Use thru the Clinical Portal
- Providers have full access to patient medication history through the Clinical Portal
- Future ability to add Medication Therapy Management alerts for improved patient safety
12. Sending & Receiving eHealth Exchange Data

**eHealth Data Exchange:**
- Proven Healtheway eHealth Exchange compliance
- Standards based interoperability
- Support for HL7 v2.x and HL7 v3.x
- Support for IHE Profiles and cross domain access
- Integration into DIRECT Platform
- Ability to exchange and aggregate data from across the Nevada ecosystem
- Ability to create summarized CCD “on the fly”

**Team Cognosante’s eHealth Exchange Gateway enables patient clinical data views from multiple disparate HIEs**

- Demonstrated interoperability with eHealth Exchange partners
- Low cost, rapid implementation
- Also acts as State Agency Gateway Service for Public Health
- True inter-state / intra-state, federal access and interoperability
Healtheway Architecture

ESB Gateway

- Initiating Gateway
  - PIX Manager
  - XDS Registry
  - XDS Repository

NEVADA HIE

HU Clinical Portal

Responding Gateway

HIE Service Bus

- Gateways
  - 3rd Party HIE 2
- Gateways
  - 3rd Party HIE 3

XCA Services

XCPD Services

XCPD Services

XCA Services
Lab Results Delivery for Public Health

Team Cognosante’s HIE Solution enhances Public Health reporting

- Standardizes / simplifies the reporting of lab results
- Submit reportable diseases to CDC
- Future alerting for Biosurveillance and epidemiological outbreaks (statewide)
- Supports Meaningful Use

Lab Results & Public Health:

- Nevada ELR Gateway for Qualified Participants
- State LIMS integration
- Compatible with Direct Platform
- Support for HITSP IS 02 Biosurveillance
Two Supported Delivery Models

MODEL 1

Reportable Condition
Manually Ascertained

Compose DIRECT message to “Public Health”

Result is received in DIRECT inbox

MODEL 2

Reportable Condition
Auto Detection

Automated Forwarding to “Delivery Service”

Results Delivered to one or more targets
Summary of Product Demonstration

- Core HIE Solution
- Meaningful Use
- Clinical Portal
- Service based approach
- Direct Secure Messaging
- Master Patient Index
- Other Components
- Consent Management
- Notifications
- Lab/Radiology Exchange
- Medication Integration
- Send/Receive Data
- Lab results to Public Health

- Value and long-term sustainability
- Enables providers and hospitals to fully meet Meaningful Use
- Delivers critical insight to enhance patient care
- Allows NV-HIE to focus on the business not the technology
- Direct Secure Messaging supports meaningful use, enhanced coordination of care
- Enables patient clinical data views from multiple disparate HIEs
- Provides an enterprise solution with high performance / low maintenance
Oral Presentation

- Introductions & System Demonstration Overview (55 minutes)
  - Product Demonstration
  - Summary
- Oral Presentation (30 minutes)
  - Approach Overview
  - Evaluation Panel Questions and Answers (30 minutes)
1. Consent Management Approach and Processes

✓ Step One: Address governance and harmonization thru use cases
  ▪ Primary – best for Nevada --> Nevada (HIPAA/SB 43)
  ▪ Secondary – look at any major State program exception
  ▪ Tertiary – look at neighboring states & harmonize
  ▪ Eventually – incorporate patient preferences

✓ Step Two: HU technical architecture enables implementation
  ▪ Consent management terminology (templates, directives, status)
  ▪ Development of policy rules/directives
  ▪ Access methods to consent registry (e.g., modeled after BPPC)
  ▪ Paperless consent contract capture (digital signature)

✓ Step Three: Develop Nevada toolkit
  ▪ Develop list of statewide policies
  ▪ Document primary use cases with diagrams
  ▪ Cover rules of use, scope, provider training → Patient Consent Education and Awareness Plan
2. EMPI Configuration and Operation

- Built and optimized for healthcare
  - Near zero false positives
  - Standards compliant
- Designed for scale and performance
- Low TCO
  - Low deployment time and cost
  - Low runtime cost
- Time tested and scale tested in the real world
- Insightful built-in reports
- SaaS ready

HealthUnity services customers in both the public and private HIE setting, and they have continued to add new HIE customers over the past year. *Clients like the ease of implementations and note a strong EMPI.* Customers view HealthUnity as a flexible partner that works to help them meet their needs.

2012 KLAS Performance Report
3. Provider Directory Configuration and Operation

- Built on a standards-based LDAP directory
- Model entire network at one place
  - Manage provider registration
  - Manage node registration
  - Manage services registration
- Real time sync with your existing provider directory
- Standard based API to search and manage providers
- Provides the foundation for future Statewide Provider Identity Management Services
4. Migration of Nevada Direct Messaging Capability

- Migration of existing Nevada Direct Messaging capability to HIE Contractor’s platform (i.e. Direct addresses, user credentials, certificates, message history, etc.). Confirmation that migration costs will not be charged to NV-HIE.

1. **Preferred approach** – For each mailbox, all legacy mails are exported into a PST file that is encrypted and password protected after it has been created on a secure server.

2. **Alternate approach** – Use Microsoft Outlook .msg file format for messages. Create a folder per mailbox and export each message as a .msg file into the folder. Zip the root folder and encrypt the entire zip file on a secure server.

3. Vendor agrees to a deadline by which they provide this exported data. Deadline will be set by NV-HIE.

4. Vendor agrees to compliance to above standards before conversion.
5. Hospital and eHealth Exchange Integration

- Enables ability to connect to other HIEs such as “Statewide HIE”
  - Share data with multiple external HIEs simultaneously
  - Pull data from multiple external HIEs simultaneously

- ESB Gateway service extends XCA/XCPD capabilities
  - Single end point for interaction with multiple HIEs
  - Control data sharing between HIEs
  - Provides Instrumentation and extended audit logging

- Monitoring reports
  - Usage reports
  - Availability reports
  - SLA reports

- Standard based interfaces
- Cloud based, SaaS ready
6. Differentiators and Strategic Advantages – “Best Fit” HealthUnity

- Robust eMPI
- Record Locator Service
- Provider Directory (Individual, Org)
- Centralized Consent Management
- DIRECT HISP Services

- Provider Portal Access
- Consolidated Clinical View
- Messaging and Interoperability – IHE Support
- Syntactic & Semantic Normalization
- Performance Reporting / Monitoring

Proven HIE Solution
Phased Approach
Experienced Team
HIE Program Support
Education, Outreach Training

Proven HIE Solution ★ Industry Standards ★ Lessons Learned ★ Technical Advisory Group
HIE Best Practice ★ HHS/Medicaid Expertise

Cognosante Project Management, Communication Management, Risk and Issue Management, Governance Support, Quality Management, Status Reporting, Stakeholder Management
6. Differentiators and Strategic Advantages – Approach

**Program Phase 1**
“Open for Business”

Deliver Core Solution:
- Programmatic
- Technical
- Operational

**Program Phase 2**
“Grow the Business”

- Expand the basic core services to more qualified participants
- Provide enhanced Core Services such as SmartStream

**Program Phase 3**
“Mature the Business”

- Expand Enhanced Core Services plus Value-Add

Sustainability plus Revenue

Contract Award: Oct 31, 2013, Jan. 31, 2014, Year 2, Year 3
6. Differentiators and Strategic Advantages – “Open For Business”

Core Services by October 31, 2013

- Business Development / Support
- Solution Implementation / Configuration
- Privacy / Security, Consent Establishment
- Integration Services

Scope of Program - Phase 1 thru 1/31/14

- 10 Qualified Participants
  - 700 DIRECT Accounts
  - 7 Clinical Portal Access Only
  - Data Feeds for 3 Qualified Participants
    - 1 ADT, Clinical Feeds (CCD, or HL7 Medication, Lab, Radiology)

Proven HIE Solution ★ Industry Standards ★ Lessons Learned ★ Technical Advisory Group
HIE Best Practice ★ HHS/Medicaid Expertise

Cognosante Project Management, Communication Management, Risk and Issue Management, Governance Support, Quality Management, Status Reporting, Stakeholder Management
6. Differentiators and Strategic Advantages – “Grow The Business”

- Continued Operational Support
- Expanded Connectivity
- Transition to Self Sufficiency
- Clinical Decision Support
- Statewide Adoption - Centralized Consent Management

✓ Introduction of HIE intelligent Notification/Routing Services (SmartStream)
  - Integration with Telehealth
  - Emergency Room Notification

✓ Statewide Identity Management, Proofing, Brokering Services

Proven HIE Solution
Phased Approach
Experienced Team
HIE Program Support
Education, Outreach Training

Proven HIE Solution ★ Industry Standards ★ Lessons Learned ★ Technical Advisory Group
HIE Best Practice ★ HHS/Medicaid Expertise

Cognosante Project Management, Communication Management, Risk and Issue Management, Governance Support, Quality Management, Status Reporting, Stakeholder Management
6. Differentiators and Strategic Advantages – “Enhance The Business”

- “Ease Administrative Burden of Provider”
  - Eligibility Check
  - Claims Submission
  - Prior Authorizations

- Population Monitoring
  - Quality Metrics
  - Notifications

- Patient Portal

- Nevada State Based Insurance Marketplace Integration

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Proven HIE Solution ★ Industry Standards ★ Lessons Learned ★ Technical Advisory Group
HIE Best Practice ★ HHS/Medicaid Expertise

Cognosante Project Management, Communication Management, Risk and Issue Management, Governance Support, Quality Management, Status Reporting, Stakeholder Management
6. Differentiators and Strategic Advantages – Experienced Team

- Highly qualified Team
- Established processes for managing and selecting sub-contractors
- In-depth knowledge of healthcare programs and systems – including HIE, MMIS, Medicaid, Eligibility, HIX, MITA
- HIE Experience in - OR, CA, OK, AK, AL, NY, KY, AZ, MD

- Unique HIE Vendor Viewpoint
  - In depth experience
    - SI, Implementation, IV&V
    - Aetna (Medicity), Orion, Optum Insight (Axolotl), ACS, dbMotion, Covisint, HealthUnity, Mirth

- Lessons Learned

Proven HIE Solution ★ Industry Standards ★ Lessons Learned ★ Technical Advisory Group
HIE Best Practice ★ HHS/Medicaid Expertise
Cognosante Project Management, Communication Management, Risk and Issue Management, Governance Support, Quality Management, Status Reporting, Stakeholder Management
6. Differentiators and Strategic Advantages – HIE Program Support

- Complimentary set of consulting services and technology solutions
  - Developed and refined over the past 26 years in 48 states
- Realistic Approach for Sustainability
- Innovative Risk/Reward Strategies
- Award-winning Customer Support

- HIE “Best Practices”
- Refined HIE on-boarding strategies
- Value-added services (e.g. SmartStream, Clinical Decision Support, Real-Time Business Intelligence)
- State-level stakeholder consensus building

Proven HIE Solution ★ Industry Standards ★ Lessons Learned ★ Technical Advisory Group
HIE Best Practice ★ HHS/Medicaid Expertise

Cognosante Project Management, Communication Management, Risk and Issue Management, Governance Support, Quality Management, Status Reporting, Stakeholder Management
6. Differentiators and Strategic Advantages — Education, Outreach and Training

**Strategic** Outreach Support
- Research-based
- Use limited resources wisely
  - Build the brand with champions
  - Build the value with use-cases
  - Build the trust with quality
  - Create network effect

**Quality** Education and Training
- Know the audiences
- Target the messages
- Provide a variety of education and training tools
- Train-the-trainer

Proven HIE Solution ★ Industry Standards ★ Lessons Learned ★ Technical Advisory Group
HIE Best Practice ★ HHS/Medicaid Expertise

Cognosante Project Management, Communication Management, Risk and Issue Management, Governance Support, Quality Management, Status Reporting, Stakeholder Management
Team Cognosante Differentiators

**Nevada First** – As your System Integrator Cognosante we are focused on providing more than HIE solution - we bring an approach, team and services needed for success

**“Best Fit” HIE Solution** – HealthUnity HIE Solution is designed for easy, low cost implementation and provides the components you need to establish a solid HIE foundation

**Value Driven Implementation** – We will implement the Core HIE with an emphasis on delivering value for Participants

**Focus on Sustainability** – A robust education, outreach and training approach will foster long-term participation

**Quality Customer Support** – We listen to the voice of the customer to meet your needs and exceed your expectations

**Risk/Reward Partnership** – We offer value-added services and will seek innovation for sustainability
Evaluation Panel Questions and Answers (30 minutes)

• Introductions & System Demonstration Overview (55 minutes)
  • Product Demonstration
  • Summary
• Oral Presentation (30 minutes)
  • Approach Overview
• Evaluation Panel Questions and Answers (30 minutes)