Cutting the Cost and Time to Interface Your LIS with Doctors’ EHRs, SmartPhones and iPads

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Focus of Presentation

Among other topics, this presentation will specifically addresses:

- Market Drivers
- EHR Integration
- CPOE
- Clean Orders
- LOINC
- Mobile Solutions
About Halfpenny Technologies

- Founded in 2000, Headquartered in Philadelphia
- Specializing in facilitating LIS to EHR connectivity
- 75 clients
- 120 connectors to EHR systems
- Halfpenny has completed over 2,500 connections to physician EHR systems in the last 27 months
- We are experiencing fast growth
- Ongoing projects with several state HIEs
- Robust, proven SaaS-based technology platform

Rate of EHR/EHR Adoption


Note: The 2016 data are preliminary estimates for changes included in the functional categories for functional systems. Fully functional systems represent systems that contain prescription drug data, laboratory test results, and electronic or paper-based radiology images. Basic systems represent systems that do not contain prescription drug data, laboratory test results, or electronic or paper-based radiology images.


http://aspe.hhs.gov/adlns/16qhs/2016/16qhs16e.pdf
EHR Connector Library - Experience

- 80 Vendors Added in last 5 years
EHR Connector Library

40 Vendors Added in last 2 years!

EHR Connectors ...

Halfpenny Technologies is a leading provider of healthcare connectivity and integration solutions for clinical data exchange.
Competition in Lab Industry

- The laboratory services market is highly competitive with a diverse group of players including:
  - Nationals Labs
  - Regional Labs
  - Hospital Labs
  - Anatomic Pathology Labs

*Well organized labs are now using EHR connectivity to protect and grow market share.*

Drivers of Change

**Industry Drivers**
- Changing reimbursement
- Outcomes measures
- Collaborative care
- Increasing competition
- Reduced utilization
- Convenient/Urgent care
- Margin erosion, capital budgetary constraints

**Regulatory Drivers**
- ARRA HIT/C
- EMR adoption (MU)
- Regional Extension Centers
- IHE funding
- PPACA
- Accountable Care Org.
- LOINC
- ICD-10, 5010 standard
Why Invest in EHR Connectivity

- First movers can differentiate
- A connected account is more likely to be a long term account
- An unconnected account is an invitation to your competition
- Clean orders have a measurable return on investment

_EHR adoption is a train that has left the station!_

Challenges of EHR Integration

Ordering
- Acquiring clean/compliant orders from an EHR
- Reliable workflow which incorporates best practices
- Registration
- Billing

Result Reporting
- Final Results Bundling
- Discrete vs. PDF Use of images
- LOINC Mapping
### Patient Registration Challenges

- Most hospital lab outreach programs require a patient registration prior to accepting an electronic order in the laboratory system.

- This registration is required to:
  - Link to an enterprise medical record number
  - Prevent duplicate medical record numbers
  - Facilitate billing processes

- LIS systems often cannot receive an order without a registration number and a medical record number.

- Typically the HIS does not offer an EDI transaction set for registration.

- Outreach clients have no access to the hospital’s registration system.
What are the Options for a Lab

• Do nothing
• Continue or start in-house development
• Try your portal vendor’s solution
• Partner with LIS vendor
• Partner with HIE or RHIO
• Partner with a national lab
• Partner with an vendor specializing in EHR integration

Questions to Ask

• Scope of connector library?
• Number of EHR integration projects completed?
• Turnaround time?
• Is it EHR vendor neutral?
• What methodology is employed?
• What are the skill sets and experience of the people?
• Is EHR integration a focus?
• How is LOINC normalization delivered?
• How does solution address integration needs beyond EHR?
• Relationships with EHR vendors?
• Strength of technology tools?
Recipe for Success

- People
- Process
- Technology
Recipe for Success

• People – Getting the Right People on the Team
  – Medical Technologists
  – Project Managers
  – HL7 Analysts
  – Software Engineers
  – QA Specialist
  – Installation Technicians
  – Network Engineers
  – Customer Support

• Process
• Technology

Recipe for Success

• People
• Process - Follow Good Manufacturing Processes
  – Project Control
  – Time Lines
  – Quality Assurance
  – Frequent Audits by Clients
• Technology
Recipe for Success

• People
• Process
• Technology - Specifically designed for the task at hand
  – Built on the current technology
  – Proven successive versions in the field
  – Smoothly handles transition from test to live
  – Open architecture
Halfpenny Has the Solutions

• By leveraging our proven technology, project management skills and clinical data services, Halfpenny is able to lessen the impact of implementing complex EHR interfaces.

• Now hospitals and laboratories can easily remain competitive in the rapidly-evolving healthcare environment.
Halfpenny Solution Suite

**ITF-Hub®** Integration Technology Framework
Clinical Departments, EHR/EMR, PHRs, LIS, RIS, PH...

**ITF-SecureConnect®** – Connectivity, Result Printing, ABNs

**ITF-Portal®** – Result Delivery, Order Entry

**ITF-GoDoc®** – Mobil Order Entry, Results Reporting, and Critical Results Alerts & Delivery

LOINC Mapping, Test Dictionary Compendium Management, Data Analytics

Mobile Access to Clinical Data

Leverages existing integration technology. Compliments EHR connectivity solutions.
Mobile CPOE on iPad

Why Partner with Halfpenny

• EHR Integration Focus
• 44 day average turn around
• 120 EHR connectors in library
• Multidisciplinary Team
• Proven Technology Platform
• Vendors knows our team / We know the vendor’s team
• Relationships with Vendors
• A partnership with Halfpenny ensure that hospitals and laboratories will easily remain competitive in the rapidly-evolving healthcare environment.
Thank You

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MU & Lab Data – Specific Challenges

• MU requires CPOE and structured lab results as discrete data.
• Stages 2 and 3 pose even higher threshold.
• Various factors drive routing of orders to different labs (Patient insurance, Physician preference).
• Despite certification capabilities of EHRs vary widely, many deficiencies exist.
• Disparity of test coding and methodologies among lab providers. Virtually no lab has mapped their test code dictionary to the LOINC standard.
• Multiple interfaces: physician-lab: avg. 3, lab-EHR: avg. 7.
• Limited IT capability and resources: physicians, labs, hospitals.
• Economic sustainability.
The Path to Meaningful Use

- There is no doubt that physicians will eventually widely adopt EHRs.
- However, the rate of adoption, until recently, was too slow to support ongoing initiatives.
- Financial incentives and the threat of penalties are strong motivators.
- Realizing that without a significant user base the HITECH initiative would fail, the government is offering bonus payments that can exceed $60,000 for eligible providers who attest to their “Meaningful Use” of EHR technology.
- The MU incentive initiative is a staged approach that encourages eligible providers (and not just physicians) to use HIT in a manner that is expected to lead to improvements in the coordination, delivery, and quality of care.

Meaningful Use Stages

- Stage 2: 2013
  - Actions will require providers to demonstrate support for:
    - Health information continuity of care
    - Registry reporting and reporting to public health
    - Preventive health
    - CPIC robust center reporting
    - Clinical decision support
    - Clinical condition management
    - Core measures support: medication, smoking

- Stage 3: 2015
  - Improving outcomes for:
    - Blood pressure control
    - Clinical condition management
    - Core measures support: smoking, diabetes, alcohol
    - Preventive care
      - Screening: cholesterol, alcohol, tobacco
    - Quality improvement efforts
      - Using healthcare data
      - Improving patient outcomes
Lab Hub Benefits

• A lab hub solves several requirements of meaningful use:
  – Decreases the hurdle for physicians to achieve CPOE.
  – Facilitates delivery of high percentage of data in discrete result format.
  – Enables lab and hospital providers to support physician EMR CPOE and discrete results.
  – Eliminates inefficiencies of point to point connections.
  – Neutrality of third-party lab hub diffuses concerns from:
    • Competing labs.
    • Competing EMR system vendors.
    • Competing Lab and hospital systems vendors (LIS, HIS, other clinical systems, and interface engines).

Value per Constituently – Labs

• Laboratories pay the freight here’s what they get!
• They don’t have to connect to every physician client directly!
• Results/Reports delivered to their clients fast and in the right format.
• Inbound Orders that fit their receiving work flow.
• Reduces manual data entry and errors.
• Increases profitability.
• Account and Financial data sent to billing system.
• Reduces manual data entry.
• Decreases denials, increases profitability.
• Ability to send clinical alerts if they so choose.
• Ability to receive and send to non-EMR clients.
• The opportunity to serve their clients via an open highway!
Value per Constituently – Physicians

- Connectivity for their EMR/EHR.
- Result delivery – fast, discrete, formatted.
- Order Entry - Split requisitions, ABNs, AOE.
- Compliance with meaningful use criteria.
- More connections than where otherwise possible.
- An economic model and technology platform that promotes access to data.
- An open highway from which to make, ‘Best in Service Choices’ for lab, and ‘Best in Solution Choice’ in EHR/EMR for their specialty!

Value per Constituently – Payors

- Open highway for all its constituents.
- Complementary to HIE.
- Will not have to broker turf wars or ill-will.
- Fastest path to Meaningful Use for Physicians (Orders/Results).
- EHRs in use containing 94% of the data needed.
- A partner with the experience and technology to deliver now.
- Population based data analytics.
**Patient Registration Solutions**

- ITF-Hub offers a number of approaches to facilitate the registration process including:
  - Work with an existing EDI capability of the HIS to do an HL7 A04 transaction.
  - 2D Barcode encoding of patient demographic and insurance.
  - Emulation of screen-based patient registration user interface.
  - Web-based registration work list presentation for manual registration.
- Halfpenny has developed these various alternative approaches to overcome the challenges presented by HIS systems with limited support for external registrations.
- Halfpenny has partnered with PatientSecure for patient identification.

**EDI Registration**

- Patient registration via an EDI transaction set supported by the HIS is by far the best approach.
- We find that many HIS systems do not support this EDI approach.
- Some systems are implementing EMPI systems that will eventually support true EDI registration interfaces.
2D Barcode

• The ITF-Hub allows for an order from an EMR to be processed immediately after order is saved in EMR.
• The ITF-Hub can use this order information to create a paper requisition in a format specified by the laboratory. This format can include a 2D barcode with demographic and insurance information encoded along with legacy system keystroke information.
• ITF-Hub, in conjunction with ITF-SecureConnect, can facilitate the printing of this lab formatted requisition in the practice within a minute of committing the order in the EMR.
• When the paper order requisition arrives with the specimen in the lab, it can be scanned with a keyboard in-line reader configured to perform some of the data entry associated with patient registration.
• Although imperfect, this solution has been employed by many successful outreach programs.

Web-based Registration Work List

• “Screen-scraping” with the human touch or “Swivel chair integration!”
• Laboratory or registration staff are able to view the work list via a web-browser interface.
• The staff uses the detailed information presented in the work list to perform a manual lookup and registration of the patient in the HIS.
• The patient MRN and Registration Number returned is then keyed into designated data entry fields in work list presented in the web-browser or transmitted via and HL7 A04 message.
• This MRN and registration data is then used by ITF-Hub to populate the queued order.
• The fully populated order is then released to the inbound orders interface of the LIS or interface engine.
• This method is an effective interim step until a EDI solution is available.