LIS Implications and Considerations in a Hospital to Hospital Integration

The Impact to LIS Operations in a Hospital Acquisition or Health System Merger
How do you Integrate your LIS in a Health System Merger?

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DISCLOSURE

In the past 12 months, I have not had any significant financial interest or other conflicting relationship with the manufacturers of the products or providers of the services that will be discussed in my presentation.
Objectives

• Discuss the audience’s needs and experiences as relates to health system mergers/integrations and LIS
• Understand the environmental considerations and implications in a health system integration relevant to LIS
• Define the goals and objectives for a typical LIS integration
• Understand the architectural approaches to LIS integration
• Describe challenges in a typical LIS integration project including both anatomic and clinical pathology LIS
Audience Participation

Audience’s needs and experiences?
Audience’s needs and experiences?

• Have you had to do this before?
  – If so what was hardest to accomplish?
  – What went well?
• Do you have to do this soon?
  – What concerns do you have?
• Will you have to do this in the future?
• Is this the time to change, consolidate or move to a new vendor partner?
Environmental Considerations and Implications

What world do you live in?
Environment Considerations and Implications

• Political
• Cultural
• Fiscal
• IT Environment
• Technical
• Operational
Political Considerations

- Lab Leadership
- IT Leadership
- Clinical Leadership
- C-Suite
- Organizational Alignment
- This is a multi-year initiative
  - Goals and gains need to be staged
Cultural Considerations

• Organizational culture
  – Tertiary Care vs. Academic vs. Community
  – Outreach
  – Special services
• Same LIS Vendor vs. Different vs. New
  – Direction of migration
• EHR Vendors, technical suppliers
  – Ibid...
Fiscal Considerations

• Who owns the LIS Budget?
  – Service line budget versus separate operating units
• How is capital Allocated?
• Operational vs. Capital Costs
• Project budget process
• Cost savings
  – Consolidation
  – Simplification
IT Environmental Considerations

• Infrastructure
  – Network
  – Storage
  – Security
  – User appliances
  – Remote Access
• IT Leadership
• EHR environment
LIS Technical Considerations

- One LIS vendor
- More than one LIS Vendor
- Design Choices
- Project Components
- Multimonth, Multivendor, Multi-team project
Operational Considerations

• Team design
  – Leadership
  – Organization, reporting structure
• Content ownership
• Security
• Variations in workflow versus standard work
  – Instrument platforms
  – Test dictionaries
  – EMR lexicon
Goals and Objectives for an LIS Integration

What do you hope to accomplish?
Goals and Objectives for Integration

• Political connectedness will determine goals as will finances
  – Manage expectations
  – Create cross institutional teams
• Set clear goals and objectives
  – Common test menu or not?
  – Standard instrument platforms or not
Goals and Objectives for Integration

- System integration
- Operational efficiency
- Work standardization
- Leveraging infrastructure
- Growth support
  - Repatriation of testing
  - Increased capacity
- Total cost reduction
Understand the Architectural Approaches to LIS Integration

There’s more than one way to skin a cat!
Architectural Approaches to LIS Integration between Health Systems

Health System A

Expensive

EHR

Health System B

Middleware

Lab System 1

Lab System 2
Architectural Approaches to LIS Integration between Health Systems

Health System A

Limited

EHR

Limited

Health System B

Middleware

Lab System 1

LIS

Lab System 2
Architectural Approaches to LIS Integration between Health Systems

Health System A

NIGHTMARE

Health System B

EHR

Middleware

Lab System 1

LIS

Lab System 2
Architectural Approaches to LIS
Integration between Health Systems

Integrated Health System

Nirvana

EHR

Middleware

LIS

Unified Laboratory Data System
Typical LIS Integration Project for AP and CP LIS

Is there anything typical about any project?
Managing the Project

- Scope
- Time
- Money
- Quality
- Communications
- Human Resources
- Procurement of materials and services
- Risk awareness and mitigation
- Coordination and management
The Project Life Cycle

• Initiating the project
  – Design agreement is critical now!
  – Leadership approval and support
  – How have you done politically?
• Planning
  – Includes capital financial and resource allocation
• Execution
  – Monitor and control
  – Iterative cycle of effort
• Project closure
  – Training, Operations, Support
The Iron Triangle
You can have it:

- Good
- Fast
- Cheap

Pick two
LIS Integration Team

• Health System leadership
  – Get the chairman involved!
  – Kick off speech
• Pathology Informatics teams
• IT teams: IT steering committee? IT Integration Committee?
• Pathologists and Medical technologists
  – Participants can drive data collection from other personnel
  – Not every person needs to be on the team
• Clerical staff
• Lab administration
• Consultant
• These are big disruptive projects
Project Caveats and Challenges

• Establish effective communication
• Infrastructure
• Data conversion
• Interfaces, and integrated systems
• Training
• Testing
Project Caveats and Challenges

- Establish effective communication
  - Start planning teams early
    - Members need to be cross system
  - Have a rationale meeting plan
    - Beware of top heavy large team meetings
      - Focus team meetings topically
    - Have a leadership/administrative meeting
  - Communicate to system leadership consistently, transparently
Project Caveats and Challenges

• Infrastructure
  – Network
  – Storage
  – Servers
  – End user
  – Security
  – Printing and faxing
Project Caveats and Challenges

• Data conversion
  – CP
    • Historical load
      – Usually 2-3 years
      – Origin???
  – AP
    • Data conversion
      – At least ten years
      – Usually all data
      – Foreign versus Native database conversion
    • Huge volume of data
      – Lengthy project
Project Caveats and Challenges

• Interfaces, and integrated systems
  – EMRs
  – Instruments
    • CP
    • AP
    • Testing
  – Integrated Applications
    • Outreach
    • Imaging systems
    • POCT
    • Faxing
Project Caveats and Challenges

• Training
  – Often a last minute thought
  – Training needs to be just in time and effective
    • LIS workflow change is hard to anticipate far in advance
    • More than LIS training
  – EMR training for laboratory is critical
Project Caveats and Challenges

• Testing
  – Can be difficult to move instruments between environments
  – Requires end user engagement
  – End to end, integrated testing EMR->LIS->EMR is required
    • EMR environments must be staged
    • Users trained
  – True interface load testing is impossible in a test environment
    • Have a plan at a go live
Summary
Summary

• Integrating hospitals or health systems will impact laboratory operations
• Integration of LIS and EMR platforms can provide standardization, efficiency, and cost savings
• Managing laboratory expectations while addressing organizational priorities is a challenge
• These projects are highly impactful on overall health system integration success
• The complexity of such a project may not be appreciated by leaders, users or customers
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Questions?

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