Leveraging the Clinical Laboratory in the Accountable Care Era

James M Crawford, MD, PhD
Senior Vice President for Laboratory Services
North Shore-LIJ Health System
Chair, Department of Pathology
Hofstra North Shore-LIJ School of Medicine
Manhasset, NY
Leveraging Clinical Laboratory Data in the Accountable Care Era

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Association of American Medical Colleges (AAMC)  
2009-2013 Chair sequence, Council Acad Societies

Association of Pathology Chairs (APC)  
2010- “anything that moves”: ACO, Health IT

College of American Pathologists (CAP)  
2010- “anything that moves”: ACO, Health IT

Biomedical Research Alliance of New York (BRANY)*  
2009- Vice Chair, Managing Committee

*CRO for Clinical Trials
Drivers of Healthcare Reform


3/2010: Patient Protection and Affordable Care Act

6/2012: Supreme Court

2009 2010 2011 2012 2013...

Electronic Health Records, Meaningful Use

Physician Network Consolidation: ACOs PCMH

Private Payers, Employers...

Shared Risk → Full Risk
The Changing Healthcare Delivery Landscape

...From...To

Provider Centric | Patient Centric / Consumer

Value Blind Reimbursement | Value-based Reimbursement & Accountability

Episodic Fragmented Care | Continuous & Coordinated

Inpatient- Focused | Ambulatory /Office / Home Focused

Individuals | Population Based

Disease and Treatment | Health/Wellness & Prevention

Functional and Departmental | Team-based & Service Line

FOCUS

VALUE

PATIENT FLOW

DELIVERY SETTING

APPROACH

OBJECTIVE

ORGANIZATION
The Changing Healthcare Delivery Landscape

...From

Provider Centric
Value Blind Reimbursement
Episodic Fragmented Care
Inpatient- Focused
Individuals
Disease and Treatment
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How is Pathology going to play a role?
NSLIJ: The Road to Success
NSLIJ Labs: The Car-in-Front
Hospitals (26% of market)
Reference laboratories
Network of SNFs
200+ practice locations
Centralized Laboratory Network
Current (CLN)

Core Lab

Huntington
Forest Hills
Clinical Trials BARC

SIUH North
SIUH South
NJ, Brklyn, SI Physician’s Offices
Nursing Homes
Non-System Hospital Reference Testing

Outreach
Hospital Lab
RRL

Plainview
Southside
Syosset
LHH
Manhasset
LIJ
Glen Cove
Franklin
Physician’s Offices
Nursing Homes

Staten Island Lab
Centralized Laboratory Network Current (CLN)

- Core Lab
- Clinical Trials BARC
-SIUH North
- SIUH South
- NJ, Brklyn, SI Physician’s Offices
- Nursing Homes
- Non-System Hospital Reference Testing
- Outreach
- Hospital Lab
- RRL

Locations:
- Plainview
- Southside
- Huntington
- Forest Hills
- LIJ
- Glen Cove
- Franklin
- Physician’s Offices
- Nursing Homes
NSLIJ Pathology and Laboratory Medicine

Surgical Pathology Cases/year: 2012

North Shore-LIJ

Mount Sinai Medical Center – New York

Mayo Clinic

The Ohio State University

The Cleveland Clinic

University of Pittsburgh

SIUH

Community
NSLIJ Pathology and Laboratory Medicine
Clinical Laboratory Tests/year: 2012

North Shore-LIJ

Mayo Clinic
Henry Ford
The Cleveland Clinic
### Your “Value” as a Laboratory

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North Shore LIJ Laboratories
## The Costs of Healthcare: 2010

<table>
<thead>
<tr>
<th>Service</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>$2.5 T</td>
</tr>
<tr>
<td>Hospital care</td>
<td>$661 B</td>
</tr>
<tr>
<td>($44B Hospital Lab)</td>
<td></td>
</tr>
<tr>
<td>Physicians</td>
<td>$320 B</td>
</tr>
<tr>
<td>Drugs</td>
<td>$235 B</td>
</tr>
<tr>
<td>Dentists</td>
<td>$ 94 B</td>
</tr>
<tr>
<td>Outpatient Care Centers</td>
<td>$ 43 B</td>
</tr>
<tr>
<td>Physician Imaging</td>
<td>$ 38 B</td>
</tr>
<tr>
<td>Outpatient Hospital Imaging</td>
<td>$ 25 B</td>
</tr>
<tr>
<td>Medical and Diagnostic Labs</td>
<td>$ 18 B</td>
</tr>
<tr>
<td>(“In Vitro Dx”)</td>
<td></td>
</tr>
<tr>
<td>Dental Labs</td>
<td>$  4 B</td>
</tr>
<tr>
<td>Behavioral Health</td>
<td>$  2 B</td>
</tr>
<tr>
<td><strong>Research</strong></td>
<td>$ 44 B</td>
</tr>
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</table>
National Laboratory Market = $62B*

- Hospital Labs: 62%
- Independent & Physician Office Labs: 12%
- LabCorp: 8%
- NSLIJ Labs: 10%

*Laboratory Industry Outlook 2011, G-2 Report
<table>
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<tr>
<th>Category</th>
<th>Total</th>
<th>POLs</th>
</tr>
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<tr>
<td><strong>Laboratories Registered</strong></td>
<td>232,996</td>
<td>116,634</td>
</tr>
<tr>
<td>Waiver</td>
<td>153,568</td>
<td>66,903</td>
</tr>
<tr>
<td>Provider Performed Microscopy</td>
<td>37,299</td>
<td>29,875</td>
</tr>
<tr>
<td>Compliance (CMS surveys)</td>
<td>19,354</td>
<td>12,597</td>
</tr>
<tr>
<td>Accreditation</td>
<td>15,658</td>
<td>5,704</td>
</tr>
<tr>
<td>COLA*</td>
<td>6,463</td>
<td></td>
</tr>
<tr>
<td>CAP</td>
<td>5,728*</td>
<td></td>
</tr>
<tr>
<td>The Joint Commission</td>
<td>2,380</td>
<td></td>
</tr>
<tr>
<td>AABB</td>
<td>122*</td>
<td></td>
</tr>
<tr>
<td>American Osteopathic Assoc</td>
<td>128</td>
<td></td>
</tr>
<tr>
<td>American Soc Soc Histo Immuno</td>
<td>122</td>
<td></td>
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*Commission on Laboratory Accreditation  
*our “universe”
Downstate New York Outreach Market = $1.2B

- **Quest**: 40%
- **Bioreference Lab**: 30%
- **LabCorp**: 10%
- **Sunrise (Sonic USA)**: 6%
- **NSLIJ Labs**: 6%
- **Enzi**: 4%
- **Other**: 5%

$104M (9%)
## Managed Care

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<td>Contribution to Health System</td>
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<td><strong>Costs</strong></td>
<td>Hospital savings</td>
</tr>
<tr>
<td></td>
<td>Cost-per-Test</td>
</tr>
<tr>
<td><strong>Client Service</strong></td>
<td>Patient Experience</td>
</tr>
<tr>
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<td>Physician Satisfaction</td>
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<td><strong>Support of ACO</strong></td>
<td>Coordinated Care</td>
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<td>Patient Outcomes</td>
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<td><em>Overall cost of Healthcare</em></td>
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Cost-per-Test

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Cost-per-Test

Salaries and Benefits
Reagents
Rent and Utilities
Repairs and Maintenance
Depreciation
Other

VOLUME → Productivity → Efficiency
Lab Revenue vs. Cost

Fee-for-Service system  Revenue opportunity
Shared Risk/Full Risk  “Medical Loss Ratio”

*Cost and Utilization Management applies regardless of Payment Model*

(you also have to manage Revenue Cycle during the transition)
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# Lab-run Phlebotomy

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<th>Item Addressed</th>
<th>Hospital Management</th>
<th>Laboratory Management</th>
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<tbody>
<tr>
<td>Walk-in Blood Draw</td>
<td>8:00am – 5:00pm</td>
<td>6:30am – 7:00pm</td>
</tr>
<tr>
<td>Wait Time</td>
<td>Complaints: &gt; 20min</td>
<td>&lt;5min</td>
</tr>
<tr>
<td>Off-tower AM Draws</td>
<td>11am – 1pm</td>
<td>By 9:00am</td>
</tr>
<tr>
<td>Off-tower INR Results</td>
<td>Complaints</td>
<td>By 11:00am</td>
</tr>
<tr>
<td>Staffing</td>
<td>4 Phlebomists</td>
<td>4 + 114* “flex”</td>
</tr>
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*32 Patient Service Centers around region
NSLIJ Core Laboratories: HOME PHLEBOTOMY DRAWS

200 per day @ 2.4 Tests/draw = ~ 500 tests/day →
>100,000 Tests / year on 40,000 patients
= 2% of our population of 1.6M unique patients
To what end, and with what benefit?
# 2012 Physician-Engagement Survey

<table>
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<th>1380 Physicians (16%)</th>
<th>16 hospital sites</th>
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<td>300 Ambulatory sites</td>
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*Pathology Services*

Highest ranked Ancillary service
Both “Client Service” and “Quality”
AP and CP
Laboratory Data Interoperability

Enterprise EHR - Hospital

Enterprise EHR - Ambulatory

Non-Enterprise EHR - Inpatient-Ambulatory
Laboratory Data Interoperability
Laboratory Data Interoperability

*Health Information Exchange

*Laboratory Information System
First: “Mobile Health”

Am J Public Health 1930; 20: 80-84

PUBLIC HEALTH ENGINEERING

ARTHUR P. MILLER, C. E.

ILLINOIS MOBILE WATER AND SEWAGE LABORATORY

ANSELMO F. DAPPERT AND HARRY F. FERGUSON, F. A. P. H. A.
Assistant Engineer and Chief Engineer,
Illinois Department of Public Health,
Springfield, Ill.
PCMH vs ACO

PCMH Practices

Pharmacy, Laboratory, Imaging

Mobile Health

Living at Home

Hospitals
Emergency
SNF, Rehab
Objectives:

Healthcare Providers

- Mobile “Apps”
  - Synchronize smoothly with EHR
  - Capture all billable events
  - Capture all biometrics and medications
  - CPOE for Lab Testing
  - “Push” Lab Values out
  - Upload “right information” at “right time”
  - on “right patient” to “right provider”
  - Do not degrade patient-centered focus
  - Are secure
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ACO: Population-based Healthcare Outcomes

Laboratory Data

ACCESS + Care Coordination

MEDICAL SCIENCE

Patient Centered Medical Home

HIT

Personalized Medicine

Personalized Medicine

Patient Centered Medical Home

HIT

Laboratory Data
Integrated Data: the Patient

Data Interoperability
  current: Ambulatory EHR, Inpatient EHR, Laboratory, Claims, Medications
  future: Emergency (EDIS), Imaging (PACS), Pharmacy, Dentistry

  *Laboratory must take initiative in driving interoperability.*

Data Completeness
  EHR = “structured data” → “meaningful use”

Data Access: Information at the point-of-care
  *Includes “Mobile Technologies” for laboratory data.*

EXECUTION: *The Care Plan*
  Access and input: multiple providers
  Critical Pathway: the chronological order of execution
Integrated Data: the Population

Population Segmentation
  by disease condition
  by beneficiary coverage (contracts)
  *by Care Plans: What do your patients need, when, and in what order?*

Population Reporting
  Patient Registries
  Population Metrics

*How does our Laboratory Data inform Population Outcomes?*

**THE LEARNING HEALTHCARE SYSTEM**

*The best data is your own*
  Monitor your practice patterns and outcomes
  Modify, innovate, improve
The Race to the Bottom

Declining payments for Laboratory Services

Volume-based unit cost reduction*

= Margin
Rebalancing

“Shared Risk” for valuation of lab testing

Efficient costing of laboratory services

= Margin

Utilization
Interpretation
Care Coordination
Managed Care

Fee-for-Service
Strong incentive for utilization

Shared Risk
Utilization is a “cost”

We will have to justify Utilization of our services,
And “Valuation” thereof.

BUILD YOUR OWN STORY
James M Crawford, MD, PhD
jcrawford1@nshs.edu