Lab Strategies
In an Era of Health Care Reform

Brian Jackson, MD, MS
Director Medical Informatics

Joe Miles, MT(ASCP), MHS
Sr. Consultant Outreach Development
Agenda

A look back at healthcare reform

Healthcare reform today

Impact on labs

Lab opportunities

Strategies that create greater clinical value
Fee For Service

Health Maintenance Organizations

Preferred Provider Organizations
Fragmented Care
Referral Networks
Fee for Service

Integrated Services
Accountable Care
Bundled Payments
National Health Spending, 1960–2010*

IN BILLIONS

1960: $28  
1970: $75  
1980: $253  
1990: $714  
2000: $1,353  
2005: $1,983  
2007: $2,240  
2008: $2,339  
2009P: $2,472  
2010P: $2,570

*Selected rather than continuous years of data shown prior to 2007. Years 2009 forward are CMS projections.
Source: Centers for Medicare and Medicaid Services (CMS), Office of the Actuary.

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UNIVERSITY OF UTAH SCHOOL OF MEDICINE  Department of Pathology
Figure 3: Projected Annual Total Compensation and Compensation Net of Health Insurance Premiums

Projected
Estimated average total compensation

Estimated average total compensation net of health insurance

Real 2008 dollars

Source: CEA calculations.
Cumulative Impact of Growth Rates, 1970—2008*

Times More Expensive Than in 1970

NHE Per Capita
Health spending in 2008 was more than 21 times 1970 levels.

Consumer Price Index
Consumer prices in 2008, as measured by the CPI, were 5.5 times 1970 levels.

*Selected rather than continuous years of data shown prior to 2005.
<table>
<thead>
<tr>
<th>Model</th>
<th>Current Examples</th>
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<tbody>
<tr>
<td>Integrated delivery systems/networks (IDN)</td>
<td>Geisinger Health System</td>
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<tr>
<td></td>
<td>Kaiser Permanente</td>
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<td>Veterans Health Admin</td>
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<td>Fairview Health System</td>
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<td>Multispecialty group practices</td>
<td>Cleveland Clinic</td>
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<td>Mayo Clinic</td>
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<td>Billings Clinic</td>
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<td>Virginia Mason Clinic</td>
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<td>Physician-hospital organizations (PHO)</td>
<td>Catholic Healthcare – Summit Medical Group</td>
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<td>Intermountain Health Care</td>
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<td>Kettering Health Network</td>
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<td>Methodist/LeBonheur Healthcare</td>
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<td>Atrius Health</td>
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<td>Hill Physicians Group</td>
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<td>Monarch HealthCare</td>
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<td>Independent practice associations (IPA)</td>
<td>Community Care of North Carolina</td>
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<td></td>
<td>North Dakota Cooperative Network</td>
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<td>Quality Health Network of Colorado</td>
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<td>Virtual physicians organizations</td>
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</table>
Engagement of primary care physicians and effective specialty referrals

Practice medicine according to scientific and evidence-based protocols

Coordination of care within and throughout the health system

Share electronic medical records and performance data

Commitment to control costs and reduce waste and inefficiencies

Alignment of financial incentives for all constituents

Focused attention on the management of chronic illnesses

Deliver care in ambulatory settings wherever possible

Patient-centered culture at all levels
Clinical Integration: Paving the Path to Accountable Care

1. Establish Structure & Network
2. Clinical Integration Program
   - Clinically Integrated; can begin contracting
3. Delivery System Improvement
4. Financial Management and Accountability
5. Population management: Accountable Care Organization; Bundled Payments

Progression to the New Models

Information Technology

Start
6-9 months
12 months
18-24 months and beyond
HITECH Interoperability, Meaningful Use, CDS

PPACA Health Insurance Exchanges, MLR, ACO
Lab Opportunities

Pre-Analytical

CLINICAL DIRECTION
- CPOE
- CDS
- Clinical pathways

Analytical

GENERATOR/DISTRIBUTOR
of clinical information

Post-Analytical

ANALYTICS
- Analysis of aggregate clinical data

Integrator of clinical data
Strategies to Strengthen Labs

- Watch the Competition
- Tell the Story of Your Lab’s Value
- Develop Outreach
Build Connectivity

Lean Processes

Create Cost Effectiveness
Understand the Big Picture

Engage pathologists

Develop Utilization Management Tools
Brian Jackson, MD, MS
Medical Director, Medical Informatics

Lab Strategies to Create Clinical Value
Lab Strategies to Create Clinical Value

• “But we’re already creating clinical value!”
  – How we can and need to do better

• Lessons from other disciplines
  – Bookselling
  – Digital music
  – Pharmacy

• Bringing it all together
  – Clinical leadership
  – Analytics
  – Decision support
Clinical Value

- Accurate Dx & mgmt
- Minimize total cost of care
Diagnostic Cycle

1. MD orders test
2. Lab performs test
3. MD interprets and applies result
4. Lab sends report to MD
5. Order and specimen submitted
Diagnostic Cycle

MD orders test

MD interprets and applies result

Lab performs test

Lab sends report to MD

Order and specimen submitted

Traditional Focus of Laboratories
Diagnostic Cycle

Primary Opportunities

1. Order and specimen submitted
2. MD orders test
3. Lab performs test
4. MD interprets and applies result
5. Lab sends report to MD
How Effectively do Doctors Use Laboratory Tests?

• HPV as a prototypical example
HPV Guideline from ASCCP

- Women under 21
  - HPV testing is contraindicated
- Women 21 to 30
  - HPV testing should not be used in primary screening
  - HPV testing may be used for evaluating certain cervical lesions (ASC-US)
- Women over 30
  - HPV testing may be used for evaluating cervical lesions and for screening
  - If HPV and cytology negative only screen every 3 years
HPV Order Volumes by Age (National sample)

Source: Shirts and Jackson, J Pathology Informatics
Time to Repeat HPV Test following Negative Test

Number of tests

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
## HPV, Back-of-Envelope Modeling

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Annual Cost (Rough estimate)</th>
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<tbody>
<tr>
<td>Annual Pap alone</td>
<td>$150/year</td>
</tr>
<tr>
<td>Annual Pap w/HPV</td>
<td>$250/year</td>
</tr>
<tr>
<td>Pap w/HPV, 3-year intervals</td>
<td>$83/year</td>
</tr>
</tbody>
</table>
Diagnostic Cycle

Primary Opportunities

MD orders test

Order and specimen submitted

Lab performs test

Lab sends report to MD

MD interprets and applies result
Example: Music Retailing
Example: Book Retailing
Pharmacy

1980’s

• Factory mindset
• Receive orders, process and distribute meds

2000’s and beyond

• Professional mindset
• Active clinical role
• Oversee formularies
• Optimize individual med management
• Educate clinicians
Diagnostic Cycle

- Lab performs test
- Lab sends report to MD
- Easy to put test in context and interpret
- Diagnostic decision support
- Fully formatted reports
- MD interprets and applies result
- MD orders test
- Order and specimen submitted
- User-friendly menus
- Analytics to detect inappropriate orders
- Lab Formulary Committee

User-friendly menus

Analytics to detect inappropriate orders
How Labs Can Add Clinical Value

- Clinical leadership
- Analytics
- Decision support
Clinical Leadership

• “Laboratory Formulary” Committees

• Visible Clinical Pathologists
Analytics

• Need to understand your doctors’ ordering practices

• Compare to:
  – Peers
  – National/local guidelines
• Doctors have questions about lab tests.

• Are we making it easy for them to get the answers?
Clostridium difficile Toxins (A & B) by EIA 0065146

Ordering guidance:
No longer recommended for evaluation of C. difficile; PCR is preferred test.

Qualifiers:
C. difficile produces two toxins – A (enterotoxin) and B (cytotoxin). This EIA detects both toxins, but is less sensitive (70-90%) than the recommended PCR. False-negative results are common.

Results:

<table>
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<tr>
<th>RESULT</th>
<th>INTERPRETATION</th>
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<tbody>
<tr>
<td>POSITIVE</td>
<td>Evidence of C. difficile infection.</td>
</tr>
<tr>
<td>NEGATIVE</td>
<td>No evidence of C. difficile infection.</td>
</tr>
</tbody>
</table>

Additional information:
- Clostridium difficile
- Clostridium difficile-Associated Disease (CDAD) Testing Algorithm
Summary

• In an ACO world,
  – Clinical Value = Best Dx at Low $
  – Become clinical enterprise, not order-filling factory
  – Need to integrate across the end user (physician) experience