The Value of the Laboratory

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Learning Objectives

1. discuss the state of healthcare in the U.S.
2. understand trends driving interest in outsourcing
3. identify various laboratory models
4. evaluate benefits and risks of outsourcing
5. identify the laboratory’s most important asset
6. leverage this asset to demonstrate lab value, contain cost, and improve outcomes
7. define the steps to develop a laboratory value proposition
8. communicate your lab’s value
The State of Healthcare in the United States

The US spends **$3.8 trillion** on healthcare **ANNUALLY**

The US is **37th** in world-wide health care
**Healthcare Industry Trends**

**Medicare Price Cuts to the CLFS**

- Price reduction scheduled to start
- Potential price reduction of 30%
- Additional potential price reduction of 45%

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**Shrinking Reimbursement**

Example of a lab test reimbursed at $10 in 1984 has decreased to $7.05 in 2012

**Healthcare Consolidation**

Independent physicians dropped from 57% to 36%

**ACO Growth**

14% of the US population is served by an ACO
The **Value** of the Laboratory

*Life-Saving Medicine Starts Here*

Love it or Leave it?
Laboratory Models
In an outsourced model, the commercial lab generally performs about 30% of the tests usually performed in a hospital lab.
Primary driver of outsourcing is **economics**

“Hospital budgets are becoming increasingly constrained as a result of declining Medicare reimbursements, less funding and a struggling economy. Because of these dynamics and in efforts to **protect their bottom line**, many hospital CEOs are turning to outsourcing various services.”

How does outsourcing impact hospital operations?

Quality of services

Table 1 Examples of Errors Committed at Outsource Laboratories and Their Consequences

<table>
<thead>
<tr>
<th>Test Ordered</th>
<th>Outsource Laboratory Report</th>
<th>Consequences of the Error and/or Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any blood or urine test</td>
<td>Specimen improperly collected, inadvertently discarded, request overlooked, and results not communicated in timely fashion</td>
<td>Commonplace mistakes; these errors lead to repeating the test, cancellation of a scheduled outpatient visit, and/or delaying or interfering with therapy</td>
</tr>
<tr>
<td>Specific examples</td>
<td></td>
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<tr>
<td>Viral culture for Herpes simplex</td>
<td>Collection date not noted at outsource laboratory site, therefore, culture discarded</td>
<td>Lesion disappeared and consequently there was no definitive diagnosis</td>
</tr>
<tr>
<td>Brucella serology</td>
<td>Test not performed; inappropriate specimen</td>
<td>Patient never had the test performed; refused to drive 90 miles to repeat it</td>
</tr>
<tr>
<td>HIV-1 RNA</td>
<td>Wrong test performed; sometimes HIV-1 DNA or HCV RNA are erroneously performed</td>
<td>Physician must recognize the problem and reorder the test</td>
</tr>
<tr>
<td>Nitroblue tetrazolium assay</td>
<td>Test not performed; technician unfamiliar with test and unable to identify test code</td>
<td>Diagnosis of chronic granulomatous disease delayed by 2 months due to inability to perform tests at outsource laboratory (test finally performed elsewhere)</td>
</tr>
</tbody>
</table>

According to hospital consultants and market analysts, outsourcing reduces lab costs up to 20%.

Outsourcing lab services can save money, but it's not that simple. 2014.
/www.modernhealthcare.com/article/20140830/MAGAZINE/308309895
Will outsourcing produce anticipated cost savings?

“What labs need to do is take the next step. Right now, we often just throw results over the wall, whereas if we take that continuum of data, transform that data into knowledge, and that knowledge into actionable intelligence, then we have a new product. The hard thing is convincing folks that hospital labs should do this, rather than just scooping up those results and letting someone else do it for them.”

Michael Snyder, principal of Clinical Lab Business Solutions

From Outreach to Outsourcing: Are Hospital Outreach Programs Vulnerable to Buyouts?. www.aacc.org/publications/cln/articles/2013/february/outreach
What’s the downstream impact on patient care?

Right test at the right time on the right patient
What is the lab’s most important asset?

- A. Revenue
- B. Skilled Medical Technologists
- C. Test Data
- D. Customer Service
- E. Outreach Operations
The Value of Lab Data: Test Utilization Management

5 The five ‘I’s of value

Informational: Appropriate Test Ordered
Interpretive: Interpreting data from lab test results
Integrative: Assimilating multiple test results
Interactive: Share knowledge and answer clinical questions
Innovative: Improve patient outcomes

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The Value of Lab Data: Public Health

At higher blood levels, lead can damage:
- the kidneys
- blood and nervous system
- lead to coma
- convulsions or death

Almost $51 billion in lost economic productivity in the U.S. from children’s preventable exposure to lead.

[Image: A baby suffering from lead poisoning]
The Value of Lab Data: Public Health

According to the CDC, “no safe blood level of lead in children has been identified” and exposure to lead poisoning “can affect nearly every system in the body.”

Data from the 1976–1980 cycle indicated that an estimated 88% of children aged 1–5 years had BLLs ≥10 µg/dL.

Since then, the percentage has fallen sharply to:
- 4.4% during 1991–1994
- 1.6% during 1999–2002
- 0.8% during 2007–2010

1971

250,000 children identified with lead poisoning

1981

Lead-Based Paint Poisoning Prevention Act is transferred to the Office of maternal and Child Health, limited emphasis is placed on data collection and analysis.

1988

CDC increases emphasis on data collection and analysis and impact of interventions. Data must now be collected on all children screened, not just those screened through the prevention program.
“From early detection and diagnosis of disease to individualized treatment plans based on a person’s unique genetic makeup, clinical lab testing is key to improving healthcare quality and containing long-term health costs.”

Alan Mertz, President, American Clinical Laboratory Association
Chronic Kidney Disease

26 million
American adults have CKD and millions of others are at increased risk

- Early detection can help prevent the progression of kidney disease to kidney failure.
- Heart disease is the major cause of death for all people with CKD.
- Two simple tests can detect CKD: blood pressure, urine albumin and serum creatinine.
- Persistent proteinuria (protein in the urine) means CKD is present.

Guide to CKD Testing Frequency

This heat map grid highlights in numbers and increasing color intensity (from green to deep red) how many times per year CKD patients should be tested for GFR and albuminuria.

<table>
<thead>
<tr>
<th>Persistent albuminuria categories</th>
<th>A1 Normal to mildly increased</th>
<th>A2 Moderately increased</th>
<th>A3 Severely increased</th>
</tr>
</thead>
<tbody>
<tr>
<td>GFR categories in mL/min/1.73m² Description and range</td>
<td>&lt;30 mg/G</td>
<td>30–300 mg/G</td>
<td>&gt;300 mg/G</td>
</tr>
<tr>
<td>G1 Normal or high</td>
<td>1 if CKD</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>G2 Mildly decreased</td>
<td>1 if CKD</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>G3a Mildly to moderately decreased</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>G3b Moderately to severely decreased</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>G4 Severely decreased</td>
<td>3</td>
<td>3</td>
<td>4+</td>
</tr>
<tr>
<td>G5 Kidney failure</td>
<td>4+</td>
<td>4+</td>
<td>4+</td>
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</table>

Reprinted with permission from Kidney international Supplements.
The Value of Lab Data: Personalized Medicine

“It’s far more important to know what person the disease has than what disease the person has.”

-Hippocrates
How many of you believe your lab provides value?

have a lab value proposition?

think of your lab as a business?

run your lab as a business?
The Laboratory **Value Proposition**

“**In God we trust, all others bring data.**”

Dr. W. Edwards Deming
American Statistician
The Ten Commandments for Building a Value Proposition

Commandment #1
Thou shalt not crash and burn when asked, “What do you do?”

Commandment #2
Thou shalt not think of thy value proposition as a statement.

Commandment #3
Thou shalt focus on the outcomes, not the mechanics.

Commandment #4
Thou shalt stop thinking about and positioning thyself as a commodity.

Commandment #5
Thy value proposition shall resonate.
Commandment #6
Thy value proposition shall differentiate.

Commandment #7
Thy value proposition shall substantiate.

Commandment #8
Thou shalt craft value proposition positioning statements.

Commandment #9
Thou shalt remain true to thyself.

Commandment #10
Thou shalt get thy value proposition on the agendas of decision makers.
Value Proposition Template

**Headline.**
What is the end-benefit you’re offering in one or two attention-getting sentences.

**Sub-headline or a 2-3 sentence paragraph.**
A specific explanation of what you do/offer, for whom and why is it useful.

**3 bullet points.**
List the key benefits or features.
Example Value Proposition

Headline
We help large companies reduce the cost of their employee benefits programs without impacting benefit levels. With the spiraling costs of health care today, this is a critical issue for most businesses.

Sub-headline
Recently we worked with a large manufacturing company similar to yours. They were struggling with how to reduce spending in this area. We saved them over $800,000 in just six months. Plus, they didn’t cut any services to their employees, nor did their employees have to pay more.”

Bullet Points
• Substantial cost savings
• No cut in employee services
• No increase in employee expenses
Visual Value Proposition

- Without Intervention: 8% decrease/month, 37% overall decrease in spending, $800,000 savings
- With Intervention: 0 employees cut, 0% increase for employees

$800,00 savings

- 37% overall decrease in spending
- 8% decrease/month
- 0% increase for employees
- 0 employees cut
The **Value** of the Laboratory

- Education of others
- Support optimal clinical outcomes
- Cost-effectiveness
- Clinical-effectiveness
- Novel applications
- Innovation
- Evidence-based practice

Adding value to laboratory medicine: a professional responsibility. Clinical Chemistry and Laboratory Medicine. Volume 51, Issue 1, Pages 221–227, ISSN (Online) 1437-4331, ISSN (Print) 1434-6621, DOI: [10.1515/cclm-2012-0630](10.1515/cclm-2012-0630), October 2012
Communicating **Value**

“The problem with communication... is the illusion that it has been accomplished.”

George Bernard Shaw