APC/PDAS 2009 Annual Meeting

Top Strategies for Managing During an Economic Downturn

July 17, 2009

Wayne D. Mercer, PhD
Senior Consultant, Operations Management
“Wisdom lies somewhere between hunkering down and hoping and full-out panic.”

- Anonymous
Presentation Objectives

- Describe some key concepts of managing in difficult economic times.
- Outline the use of Lean tools to improve operational efficiency.
- Describe system approaches (consolidation, workstation standardization, automation) to improving efficiency.
- Present a case study of outreach profitability improvement.
Our Job Is Complicated

- Diverse activities in a single department
- Meet service requirements
- Meet quality and regulatory requirements
- Meet financial goals
Key Strategies for Managing in Difficult Economic Times

- Identify the key issue(s)
  - Revenue.
  - Expense.
  - Profitability.
- Develop a balanced, timely plan to address the key issue(s)
  - Set balanced goals with specific metrics.
  - Identify opportunities/solutions to meet the goals.
  - Develop a high level schedule.
  - Develop an effective communication plan.
- Execute the plan!
Issues - Revenue

- Was revenue goal realistic?
- Reduced patient census.
- Case mix.
- Lower payments.
- Lost to competitor.
Solutions - Revenue

- Improve access to outpatient testing services:
  - Easy access to patient service centers at clinics.
- Renegotiate capitated contracts based on utilization & cost.
- Introduce new services (e.g., FNA, Molecular Diagnostics).
- If you don’t have outreach, consider investing in it.
- If you have an outreach program:
  - Make sure it’s profitable.
  - If it’s profitable: Try to grow it or consider selling it.
  - If it’s unprofitable: Execute a turnaround or consider selling it.
  - Capture internal referral work/renegotiate managed care contracts.
Issues - Expense Management

- Was budget realistic?
- Identify what cost centers/expense categories are problems.
- Is it due to unexpected price increases?
- Is it due to increased use of new/expensive services?
Use benchmarking to identify opportunities.
Lean out work processes.
Review staff mix/develop flexible staffing model.
Use autoverification.
Go paperless.
Consider system consolidation.
Consolidate/redesign workstations.
Evaluate automation.
Evaluate all contracts.
Analyze test utilization and review/reduce referral testing.
Conduct make vs. buy analysis.
Think beyond the lab (e.g., decreased TAT may lower hospital’s overall cost).
Staff /salary & benefit reduction
Execution Strategy

- Balanced approach with specific metrics:
  - *Anybody can do across-the-board cuts.*

- Consider the “time” value of money:
  - Waiting makes the problem worse; possibly unrecoverable.

- Develop a realistic schedule
  - Clear, communicable strategy.
  - Plan must enable goals to be met.
  - Plan must clearly resolve key issues.
Balanced Scorecard Approach to Metrics: Cost Is Important and So Are Other Factors!

**Strategy**
- System Strategic Care/Business Plans
- Maintain/Improve Service Quality
- Master Facility Plan

**People**
- Institutional Culture
- Effective Utilization of Human Resources
- Work Environment and Safety
- Staffing Shortages in the Lab Industry

**Service**
- Test Menu Standardization and Completeness
- Leverage Use of New Technology
- Meet Service Requirements of Medical Staff

**Financial**
- Opportunity for Expense Reduction
- Optimal Use of Available Capital
- Minimize Project Risks
Balanced Scorecard Approach to Metrics:
Cost Is Important and So Are Other Factors!

Strategy
Outreach growth of 5% per year

People
Eliminate Unnecessary Activities
MT To MLT/Lab Asst = 1:2

Service
Absolute TAT = 30 Minutes
Open 2 PSCs

Financial
Reduce Referral Expense
by 25 %
Target CPR = $ 7.50
## High Level Schedule

<table>
<thead>
<tr>
<th>Activity</th>
<th>Qtr 1</th>
<th>Qtr 2</th>
<th>Qtr 3</th>
<th>Qtr 4</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop Instrument Printouts</td>
<td>● ● ●</td>
<td></td>
<td></td>
<td></td>
<td>FTE Paper &amp; Storage Cost</td>
</tr>
<tr>
<td>Revise Delta check criteria</td>
<td>● ● ●</td>
<td></td>
<td></td>
<td></td>
<td>Improve TAT</td>
</tr>
<tr>
<td>Implement autoverification</td>
<td>● ● ●</td>
<td>● ● ●</td>
<td></td>
<td></td>
<td>FTE Improve TAT</td>
</tr>
<tr>
<td>Reduce Referral Testing</td>
<td></td>
<td>● ● ●</td>
<td>● ● ●</td>
<td>● ● ●</td>
<td>Referral Expense Improve TAT</td>
</tr>
</tbody>
</table>
Lean Opportunities in the Lab: Identification of Waste/Use of 5S

- Waiting: Specimens in receiving area awaiting sorting.
- Overprocessing: Taking requisitions in/out of bags.
- Transportation: Unnecessary walking to deliver specimens.
- Overproduction: Process/sort several items before passing on.
- Inventory: Buildup of specimens due to batching.
- Moving: Back/forth physical movement due to poor workstation layout.
- Fixing Defects: Mislabeled/improperly labeled tubes.
- Knowledge: Not matching skill level to task level.

- 5S (Sort, Straighten, Shine, Standardize, Sustain).
Operations Review: Overprocessing

First member of processing staff removes requisition from specimen bag.

Same staff member returns requisition to specimen bag. Next processor has to repeat removal.
## Typical Results

<table>
<thead>
<tr>
<th>Item</th>
<th>Current</th>
<th>New Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of steps before specimen is available for testing</td>
<td>34 steps</td>
<td>20 steps</td>
</tr>
<tr>
<td>Time to process 10 requisitions before testing</td>
<td>25 minutes</td>
<td>6 minutes</td>
</tr>
</tbody>
</table>

- Effective use of triage
- Elimination of unnecessary/redundant activities
- Change in order of processing steps
- Putting problem requisitions aside
- Performing patient registration in billing area
Operations Review:
Specimen Storage and Retrieval

Use of bar code-based software system for specimen storage and retrieval
Operations Review:
Identification of Inefficient Processes Due to Design and Organization

- Differential area is >60 feet away from automated hematology area.
- Manual testing reported to a different supervisor than the automated testing areas.

- You may have to consider changing organizational reporting structures.
Operations Review: Use of Techniques to Improve Efficiency/TAT

- Development of paperless systems
- Use of auto-verification
- Revision of delta criteria

This laboratory went from less than 30% of Chem Panel results within 60 minutes to more than 90% in 30 minutes or less without track-based automation systems!
Use Lean Strategically!

A total of eleven different ways of sorting:
- Sorting and time stamping = Key non-value added steps
- Duplication of functions = Increased need of staffing/inefficient allocation of staffing
- Increased risk of errors = Impediments to improved quality care
System Approaches to Expense Reduction or Revenue Enhancement

- System consolidation
- Workstation consolidation and standardization
- Automation
- Outreach program and profitability
System Consolidation

- Multi-hospital systems can consolidate testing.

- Many models use a central “core lab” facility with rapid response labs (RRLs) at the smaller hospitals.
  - Some of the core lab models attempt to perform all high-volume testing at the central location.
  - Other models use the core lab largely for esoteric testing and to support a central outreach program.
  - Microbiology and Anatomic Pathology technical activities are commonly consolidated at one location.
### Summary Financials for Two Hospital Systems

<table>
<thead>
<tr>
<th></th>
<th>System 1</th>
<th>System 2</th>
</tr>
</thead>
<tbody>
<tr>
<td># Hospitals</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>New Facility SF (sq. ft.)</td>
<td>46,306</td>
<td>62,000</td>
</tr>
<tr>
<td>Total Capital</td>
<td>$19,272,400</td>
<td>$22,832,107</td>
</tr>
<tr>
<td>Net Annual Savings</td>
<td>$3,471,500</td>
<td>$7,146,711</td>
</tr>
<tr>
<td>Revenue Impact</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Payback Period</td>
<td>5.6 Yrs</td>
<td>3.1 Yrs</td>
</tr>
</tbody>
</table>
System Workstation Standardization

- Apply a system approach to equipment selection.
- Develop a standard RFP with objective scoring criteria.
- Use a team approach involving lab management, biomedical engineering, finance, and materials management.
- Allow from three to six months to complete the process.
## System Workstation Standardization (cont.)

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Proposed Annual Expense</th>
<th>Savings Per Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$5,892,578</td>
<td>$734,872</td>
</tr>
<tr>
<td>B</td>
<td>$5,258,126</td>
<td>$1,369,324</td>
</tr>
<tr>
<td>C</td>
<td>$5,077,191</td>
<td>$1,550,259</td>
</tr>
<tr>
<td>D</td>
<td>$5,965,979</td>
<td>$661,471</td>
</tr>
</tbody>
</table>

| Current Annual Expense | $6,627,450 |
Impact of Automation

- In general, automated labs have greater productivity than non-automated labs of the same size and test complexity.

- Use Lean to redefine workflow process for the most effective use of automation.

- Consider incorporation of turnaround time standards in automation equipment selection.
Typical system of two or three Chemistry analyzers and two Immunoassay analyzers requires 800-1,500 SF for equipment only.
Operations Review:
Consider Impact of Consolidation/Automation/New Technologies

Typical system of two to four Hematology analyzers with slide maker/stainers requires 300-500 SF for equipment only.

- Design for flexibility…Manufacturers are adding new capabilities to automated hematology systems (e.g., HbA1c).
- Consider use of task-targeted automation (e.g., digital hematology).
Using Outreach Testing to Improve Profitability

- Most successful outreach programs operate with a pretax profitability margin of 15 to 30%.

- If you don’t have an outreach program, consider investing in it.

- If you have an outreach program:
  - Make sure it’s profitable.
  - If it’s profitable: Try to grow it or consider selling it.
  - If it’s unprofitable: Execute a turnaround or consider selling it.
Analysis of Outreach Profitability

Is Revenue > Expenses?

“The devil is in the details!!
Case Study:
Review of Hospital-Based Reference Lab

- Strong support from senior management but concern about actual status of outreach program regarding profitability.

- Operations review:
  - Strong, competent laboratory management and active participation by pathology group.
  - Very efficient, automated laboratory operation.
  - Extended test menu supported by outreach test volume.

- No financial metrics in place.

- Did not know cost of testing/servicing clients.

- Could measure revenue by client.

- Sales strategy attempted to match competitor pricing.
Outreach Profitability Improvement Process

- **Define:** System goals.
- **Measure:** Develop/apply tools.
  - Cost of testing.
  - Revenue by client.
  - Profitability by client.
- **Analyze:**
  - Profitability of program/clients.
  - Develop working strategy.
- **Verify:**
  - Develop forecasts for revenue, expenses, test volume, profitability.
  - Finalize working strategy.
- **Implement:**
  - Shed unprofitable clients.
  - Adjust fees.
  - Reduce expenses concurrently.
- **Control:** Continuous monitoring of metrics.
## Revenue Analysis of Fee Schedules

<table>
<thead>
<tr>
<th>Metric</th>
<th>Client Bill</th>
<th>Insurance Bill</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Volume</td>
<td>659,740</td>
<td>308,986</td>
<td>968,726</td>
</tr>
<tr>
<td>Net Revenue</td>
<td>$3,170,777</td>
<td>$3,338,035</td>
<td>$6,508,812</td>
</tr>
<tr>
<td>Avg. Revenue Per Test</td>
<td>$4.81</td>
<td>$10.80</td>
<td>$6.72</td>
</tr>
<tr>
<td>Avg. Profit Per Test</td>
<td>-$2.39</td>
<td>$3.61</td>
<td>-$0.48</td>
</tr>
<tr>
<td>Margin</td>
<td>-49.7%</td>
<td>33.4%</td>
<td>-7.1%</td>
</tr>
</tbody>
</table>
## Cost of Testing Summary

<table>
<thead>
<tr>
<th></th>
<th>Outreach Specific</th>
<th>Lab Operations</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salary and Benefits</td>
<td>$1,240,098</td>
<td>$1,971,434</td>
<td>$3,211,533</td>
</tr>
<tr>
<td>Supplies</td>
<td>$39,992</td>
<td>$995,565</td>
<td>$1,035,557</td>
</tr>
<tr>
<td>Contracts</td>
<td>$2,096,148</td>
<td>$0</td>
<td>$2,096,148</td>
</tr>
<tr>
<td>Other Allocated Costs</td>
<td>$0</td>
<td>$546,256</td>
<td>$546,256</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$3,376,238</strong></td>
<td><strong>$3,513,256</strong></td>
<td><strong>$6,889,494</strong></td>
</tr>
</tbody>
</table>

Almost 50% of this was courier expense!
Outreach Profitability Improvement: Key Findings

- Losing at least $400K annually.
- Laboratory Operations: No significant issues.
- Outreach Operations:
  - Courier expense extremely high.
  - Service area was geographically large.

- Revenue Issues:
  - Net revenue per client was at least 33% lower than industry norms.
  - Client fee pricing was substantially lower than full cost of servicing the client.
  - Toxicology business segment was marginally profitable.
  - Top 25 clients were unprofitable (e.g., $10K-200K annually).
  - Collections and bad debt were reasonable.
  - Substantial number of very profitable clients close to hospital.
Case Study Results:
Nine Months Later

- Reduced geographic area and renegotiated courier service to cut expense immediately.
- If client was unprofitable—prices increased or clients were dropped within 60 days.
- Overall client base reduced by ~30%.
  - Limited RIF to eliminate expenses.
  - Other appropriate actions to reduce other direct expenses.
- If clients were profitable—TLC.
- Profitability of at least $1 million annually (~18% pre-tax).
- System now planning for controlled growth of outreach.
- Recognition/promotions for their success.
- Developed key financial metrics that are monitored monthly.
Summary:
Key Components of Success

- Identify the key issue(s):
  - Revenue.
  - Expenses (or both).

- Develop and apply:
  - Key balanced scorecard metrics.
  - Financial analysis tools (accurate enough to make business decisions).

- Develop a realistic turnaround plan:
  - Focus on key issues impacting profitability first.
  - Use Lean to identify opportunities.
  - Develop an effective communication plan as part of the strategy.
  - Appreciate “time” value of money—turnarounds take time.

- Stay focused and take action:
  - Turnarounds require aggressive monitoring of key metrics.
Great ideas are ONE THING.

A GREAT OUTCOME IS OUR THING.

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Wayne D. Mercer, PhD
Senior Consultant
Chi Solutions, Inc.
(800) 860-5454 ext. 447
wmercer@chisolutionsinc.com

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