Using the Balanced Scorecard to Manage Lab Performance

Andrew Bridgeman, MBA

DISCLOSURE

Relevant Financial Relationship(s)
None

Off Label Usage
None
Today’s Discussion

- The Balanced Scorecard
  - What it is
  - Where it came from
  - Balanced Scorecard vs. Dashboard
- Balanced Scorecard in the Laboratory
  - Steps to implement
  - Example - Division of Anatomic Pathology at Mayo Clinic
- Questions/discussion

Life of a Laboratory Manager

- Staffing issues/shortages
- Complex technology
- Growing supply expenses
- Competition for resources
- Regulatory constraints
- Challenging IT systems
- Decreased reimbursements
- Multiple stakeholders to satisfy

Planning + Communication + Implementation
A management tool to help = the Balanced Scorecard
What is a Balanced Scorecard?

• A well-rounded set of quantifiable measures derived from an organization's strategy

Scorecard acts as.....

... measurement system
... communication tool
... tool to manage strategy deployment

The Balanced Scorecard - some history....

• Originated from research on how managers measure operational performance Kaplan and Norton, 1992

• Their findings:
  • Financial statements are not enough to manage a business
  • Manager’s want a balanced view of both operational and financial measures
  • Lack of measures to ensure strategic plans were being deployed
The Kaplan Norton Model

Key Characteristics of the Balanced Scorecard

- Quick and comprehensive view of the business
- Links vision and strategy to operational activities
- Method for aligning organization to common goals

“What you measure is what you get”
Balanced Scorecard in Healthcare

- Applicable to all types/levels of healthcare organizations
  - Henry Ford Healthcare System
  - Duke’s Children Hospital
  - Department of Anesthesiology, Yale University
  - Nursing units, Operating rooms, Long-term care centers

- Connects practices, outcomes, quality, values, and costs in a health care organization Castenada-Mendez, 1998

- BSC adopters have improved quality of care and financial results Park Huber, 2007

Balanced Scorecard vs. Dashboard

<table>
<thead>
<tr>
<th>Balanced Scorecard</th>
<th>Dashboard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus: overall organization</td>
<td>Focus: can be sub-set of organization</td>
</tr>
<tr>
<td>Strategy deployment</td>
<td>Operational monitoring</td>
</tr>
<tr>
<td>Measures versus strategic goals</td>
<td>Measures versus specific operational targets</td>
</tr>
<tr>
<td>Quarterly to monthly report</td>
<td>Monthly to real-time reporting</td>
</tr>
<tr>
<td>Specific design</td>
<td>User design</td>
</tr>
</tbody>
</table>

Scorecards and Dashboards can co-exist and support each other
Scorecard Implementation

- Generic steps for implementing a Balanced Scorecard (from Niven, Kaplan/Norton)
- Steps illustrated using Division of Anatomic Pathology at Mayo Clinic

Steps for Balanced Scorecard

- Step 1 – Select the organization level
- Step 2 – Purpose, vision, and strategy
- Step 3 – Strategy map
- Step 4 – Balanced Scorecard: Measuring your objectives, setting targets, focusing initiatives
- Step 5 – Aligning organization through cascading scorecards
- Step 6 – Implementation and beyond
Step 1 – Select the Organization Level

- What is your product/service? Who is your customer?
- Clear strategy
- Executive sponsorship of Balanced Scorecard

- Division of Anatomic Pathology
  - Interpretation of biopsies, surgical specimens, cytology, 2nd opinion consults for Mayo clinicians/patients and MML clients
  - 9 labs (i.e. Histology, Cytology, IP, Molecular)
  - 51 pathologists; 300+ allied health staff

Step 2 – Purpose, Vision, and Strategy

- Foundation of scorecard
  - Mission statement – why we exist
  - Values – guiding principles
  - Vision – picture of the future
  - Strategy – set of activities to guide the organization to achieve its vision

- Anatomic Pathology Strategy
  - Mayo’s Primary Value: The needs of the patient come first
  - Anatomic Pathology’s vision is to deliver high value, patient centric pathology services through the integration of our clinical knowledge, research and educational endeavors.
  - Annual strategic planning involves medical leadership, administration, and lab management
The Kaplan Norton Model

Financial
- Objectives
- Measures
- Targets
- Initiatives

Customer
- Objectives
- Measures
- Targets
- Initiatives

Vision & Strategy

Learning and Growth
- Objectives
- Measures
- Targets
- Initiatives

Internal Business Processes
- Objectives
- Measures
- Targets
- Initiatives

Are we performing financially?

What is important to our customers?

What must we excel at internally?

How do we adapt and improve?

Step 3 - Strategy Map
Translating your strategy into specific objectives for the scorecard

Strategy Map: Anatomic Pathology

Customer
- Provide the best pathology services

Financial
- Funded mission
- Reduce costs

Clinical Practice
- Improve operation efficiency
- Fast turnaround time
- Highest quality of service
- Develop new tests / services

Organization growth and learning
- Develop culture of continuous improvement
- Hire and retain best people
- Expand knowledge in science

© 2009 Mayo Foundation for Medical Education and Research
Steps for Balanced Scorecard

- Step 1 – Select the organization level
- Step 2 – Purpose, vision, and strategy
- Step 3 – Strategy map to define objectives
- Step 4 – Balanced Scorecard: Measuring your objectives, setting targets, focusing initiatives
- Step 5 – Aligning organization through cascading scorecards
- Step 6 – Implementation and beyond

Step 4 – Balanced Scorecard: Measuring your Objectives, Setting Targets, Focusing Initiatives

- Each objective needs a way to measure success
- Measure details that need to be considered
  - How measured exactly?
  - Where does data come from?
  - Who owns the measure?
  - Frequency of reporting?
<table>
<thead>
<tr>
<th>Perspective</th>
<th>Measuring</th>
<th>Potential Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer</td>
<td>• How do we know we are meeting our customers' needs?</td>
<td>• Test volume</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Customer satisfaction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Customer retention</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Quality reputation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Market share</td>
</tr>
<tr>
<td>Financial</td>
<td>• Are we performing financially?</td>
<td>• Revenue</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Net income</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Expenses</td>
</tr>
<tr>
<td>Internal business processes</td>
<td>• What must we excel at internally?</td>
<td>• Profit as % of sales</td>
</tr>
<tr>
<td></td>
<td>• How will we satisfy both our customers and our financial needs?</td>
<td>• Revenue from new tests</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Reimbursement rate</td>
</tr>
<tr>
<td>Organization learning and growth</td>
<td>• How do we support our goals and improve as an organization?</td>
<td>• Test turnaround time</td>
</tr>
<tr>
<td></td>
<td>• People requirements</td>
<td>• Number of events and number of errors</td>
</tr>
<tr>
<td></td>
<td>• Organizational culture</td>
<td>• Number of revised reports</td>
</tr>
<tr>
<td></td>
<td>• IT infrastructure</td>
<td>• Tests per FTE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Space utilization</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• New tests introduced</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Waste reduction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Regulatory audit results</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Continuous improvement projects</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Research projects</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Peer reviewed articles</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• IT improvements</td>
</tr>
</tbody>
</table>

**Measures and targets**

- **After measures are determined – need targets and a way to achieve them**
- **Setting targets**
  - Executive interviews
  - Benchmarking
  - Historical trends
- **Executive support for measures and targets**
Initiatives

• Initiatives - Specific tactics/projects that drive achievement of objectives

Example –
• Objective – Reduce operational costs
• Measure – Supply expenses
• Target - Achieve annual plan goal
• Initiative – Supply chain optimization
  • Develop systematic ordering processes for lab supplies

<table>
<thead>
<tr>
<th>Perspective</th>
<th>Objectives</th>
<th>Measurement</th>
<th>Target</th>
<th>Initiative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer</td>
<td>• Provide the best pathology services</td>
<td>• Case volumes</td>
<td>• Increasing</td>
<td>• Test status communication</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Client surveys</td>
<td>• High marks</td>
<td>• Report delivery pilot</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Revenue</td>
<td>• At plan</td>
<td>• Supply chain optimization</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Net income</td>
<td>• At plan</td>
<td>• Staffing to workload</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Supply expenses</td>
<td>• Below plan</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial</td>
<td>• Funded mission</td>
<td>• Revenue</td>
<td>• At plan</td>
<td>• Staffing to workload</td>
</tr>
<tr>
<td></td>
<td>• Reduce operational costs</td>
<td>• Net income</td>
<td>• At plan</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Supply expenses</td>
<td>• Below plan</td>
<td></td>
</tr>
<tr>
<td>Clinical practice</td>
<td>• Improve operation efficiency</td>
<td>• Tests per FTE</td>
<td>• Improve</td>
<td>• MAPDOG</td>
</tr>
<tr>
<td></td>
<td>• Fast turnaround time</td>
<td>• Case TAT</td>
<td>• Case specific</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Highest quality services</td>
<td>• Events &amp; errors</td>
<td>targets</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Develop new tests</td>
<td>• New tests introduced</td>
<td>• Drive to 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Achieve plan</td>
<td></td>
</tr>
<tr>
<td>Organization</td>
<td>• Hire and retain best people</td>
<td>• Retention rate</td>
<td>• Improve</td>
<td>• Histology &amp; Cytology school, PA intern program</td>
</tr>
<tr>
<td>learning and growth</td>
<td>• Expand knowledge in science</td>
<td>• Number of IRBs</td>
<td>• Increase</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Develop culture of continuous improvement</td>
<td>• Number of publications</td>
<td>• Increase</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Education events</td>
<td>• Achieve plan</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
AP Division Scorecard

**CUSTOMER**
- Patient case volumes and turnaround time

**FINANCIAL**
- Productivity, Tests/FTE

**CLINICAL PRACTICE**
- Quality trends: Events, Errors, Amendments, Safety incidents
- Process improvement projects

**ORGANIZATIONAL**
- New tests developed
- Research activity
- Staff recruitment, retention, education

---

Process Improvement and Balanced Scorecard

**Lean Tool Box**
- Value Stream Mapping
- Value Flow/Engage
- Waste/One-Flow/Manage
- Flow/Just Management/Account

**Balanced Scorecard**
- Focus continuous improvement
- Scorecard initiatives drive the project priorities
- Metrics demonstrate areas needing work
- Measuring benefits of continuous improvement
- Impacts to organizational metrics
- Holding gains after project completion
Supply Chain Optimization

- Strategic initiative to improve how supplies were managed in the labs
- Goals:
  a. Reduce expense and excess inventory
  b. Implement business controls
  c. Free up clinical space and staff time
  d. Improve vendor quality, cost, delivery and service

Manual Inventory System

Re-order Point

- Item Description
- Source
- ROP
- Item ID Number
- Re-Order Qty

Supplies Arrive
Automated Inventory System

• Most of our labs now use an automated inventory system
• Principles are the same as the manual system with benefit of automatic order placement

Supply Chain Dashboard

• Chose six key metrics
• Financial and operational
• Designed with the “customer” in mind
• Sent out regularly each month
AP Division Scorecard

CUSTOMER
Patient case volumes and turnaround time

FINANCIAL

CLINICAL PRACTICE
Productivity, Tests/FTE

Process improvement projects

CLINICAL PRACTICE
Quality trends: Events, Errors, Amendments, Safety incidents

ORGANIZATIONAL
Staff recruitment, retention, education

ORGANIZATIONAL
New tests developed
Research activity

Step 5 – Aligning Organization through Cascading Scorecards

• Scorecards at each level which supports the highest level scorecard

• Lower levels should focus on what measures they can impact

• Aligns entire organization around leadership’s strategy
AP Strategy and Execution

- Performance to plan
- Strategic Plan
- Strategic objectives

AP Balanced Scorecard
- Support of Division goals
- Lab performance to lab measures
- Division measures
- Performance targets
- Division initiatives

Lab Scorecards
- Performance to plan
- Strategic objectives

Lab Scorecard
- Test volumes, Productivity
- Quality: events, errors
- Test TAT
- Financials
- Process improvement projects
- Staff retention, Education
- Test development
Lab Initiative – Staffing to Workload

Staffing vs. Workload
(1250 blocks, Cut finish at 12 noon, Delivery 2pm)

TAT Management - Workflow Monitoring

Surgical Case (File/Holdover) Lab Send Out - July 2010
Tracks orders for four different lab areas
Manage turn around time
Monitor rework trends
Packet summary
Instrument preventative maintenance info

Easily accessible to the lab staff
Gives a current snapshot of what is going on
Real-time data to make operational decisions
Cascading Scorecards – Key Points

• Measures that directly relate to each other
  • Lab scorecard supports the Division scorecard
• A powerful way to align entire organization around common vision and goals
  • Lab initiatives and activities are focused by key AP strategic goals

Step 6 – Implementation and Beyond

• Data collection and reporting
  • Develop systematic methods for data collection
  • Leverage existing IT resources: LIS, financial systems, other
  • Timely publishing/reporting in your scorecard format
• Review process
  • Investigate areas not meeting targets
  • Prioritize improvement efforts
Step 6 – Implementation and Beyond, continued….

- Communication
  - Publish the scorecard for the organization
  - Educate staff on what the scorecard is telling them
  - Review with leadership - demonstrates daily activities support the strategic vision

- Scorecard evolution
  - Doesn’t have to be perfect first time
  - Link to annual planning cycle
  - Periodically review measures for relevance

Steps for Balanced Scorecard

- Step 1 – Select the organization level
- Step 2 – Purpose, vision, and strategy
- Step 3 – Strategy map
- Step 4 – Balanced Scorecard: Measuring your objectives, setting targets, focusing initiatives
- Step 5 – Aligning organization through cascading scorecards
- Step 6 – Implementation and beyond
Summary – Benefits

- Balanced scorecard provides a tool to deploy your organization’s strategy, links operational activity to long term vision
- Provides a set of measures to help manage the organization
- Sets direction for supporting work units and improvement efforts
- A communication tool, a common lens to view the operation

References

### Balanced Scorecard

**Baldwin Lab Services**

<table>
<thead>
<tr>
<th>Measures</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Wait time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-3 Pediatric success rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-12 Pediatric success rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult Patient Satisfaction Survey - Overall</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult patient satisfaction survey - Wait Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult patient satisfaction survey - Courteous Treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pediatric Patient Satisfaction Survey - Overall</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pediatric Patient Satisfaction Survey - Courteous &amp; Professional</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult patient satisfaction survey - Physical Environment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inventory Waste (tubes)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inventory Turnover Rate (TURNS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Service</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Financial</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal Process</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee Turnover Rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Customer**

- **Patient Wait time**
  - March: 80%
  - April: 85%
  - May: 85%
  - June: 86%
  - July: 80%
  - August: 83%
  - September: 71%
  - October: 81%
  - November: 64%
  - December: 79%

- **0-3 Pediatric success rate**
  - March: 85%
  - April: 93.44%
  - May: 92.8%
  - June: 89.93%
  - July: 94.68%
  - August: 94.12%
  - September: 94.07%
  - October: 93.48%
  - November: 93.21%
  - December: 90.09%

- **4-12 Pediatric success rate**
  - March: 95%
  - April: 94.44%
  - May: 95.89%
  - June: 95.65%
  - July: 98.59%
  - August: 97.87%
  - September: 98.77%
  - October: 98.65%
  - November: 97.09%
  - December: 95.00%

**Financial**

- **Inventory Waste (tubes)**
  - March: 93
  - April: 140
  - May: 318
  - June: 118
  - July: 251
  - August: 23
  - September: 13
  - October: 21
  - November: 181
  - December: 24

**Internal Process**

- **Employee Turnover Rate**
  - March: 80%
  - April: 85%
  - May: 85%
  - June: 86%
  - July: 80%
  - August: 83%
  - September: 71%
  - October: 81%
  - November: 64%
  - December: 79%

**Organizational capacity**

- **Employee Turnover Rate**
  - March: 80%
  - April: 85%
  - May: 85%
  - June: 86%
  - July: 80%
  - August: 83%
  - September: 71%
  - October: 81%
  - November: 64%
  - December: 79%

---

**Questions?**