Choosing Good Performance Indicators in Laboratory Medicine

Leading vs. Lagging Indicators, Checklist & Best Practices

Agenda

- Pros and cons of performance and Quality Indicators
- Balanced dashboards
- Leading vs. Lagging Indicators,
- Checklist
- Best Practices

Pros and Cons of Performance and Quality Indicators

In the Context of Healthcare and Laboratory Medicine Pros of Performance & Quality Indicators

- Improve accountability and transparency
- Support evidence-based decision-making
- Drive continuous quality improvement
- Enable benchmarking against standards
- Facilitate early detection of issues
- Encourage goal alignment across teams
- Improve patient safety and outcomes

Cons of Performance & Quality Indicators

- **A** May encourage 'gaming' of metrics
- A Can lead to tunnel vision (focusing only on what is measured)
- A Data collection may be resourceintensive
- A Risk of misinterpretation or overreliance on numbers
- Indicators may not reflect patient experience or context
- Overuse can cause staff fatigue or resistance
- Quality may be reduced to a checkbox exercise

Summary: Use with Care and Purpose

- Indicators are powerful tools—but not perfect.
- Use a balanced set of indicators (clinical, operational, patient-focused)
- Combine with narrative feedback and expert judgment
- Revisit and refine indicators regularly
- Avoid using indicators punitively—use them to learn and improve

Balanced Performance Dashboard for Laboratory Medicine

• A Framework for Comprehensive Monitoring

What is a balanced framework

- A comprehensive visual tool to monitor key lab metrics
- Combines multiple performance domains to avoid siloed thinking
- Encourages strategic decisionmaking across:
 - **Operational Efficiency**
 - **Quality Assurance**
- **Patient & User Satisfaction Financial Performance**
 - Staff Engagement

Key indicators

- 1. Turnaround Time (TAT) Compliance
- 2. Specimen Rejection Rate
- 3. Error Rate per 1,000 Tests/patients
- 4. Critical Result Reporting Time
- 5. Patient/Clinician Satisfaction Score
- 6. Equipment Downtime / Maintenance Logs
- 7. Budget Adherence / Cost per Test
- 8. Staff Absenteeism / Training Compliance

Dashboard example

Category	Metric	Target	Actual	Status (RAG)
Operational	TAT Compliance (%)	90%	87%	•
Quality	Specimen Rejection Rate (%)	<2%	2.4%	
Customer	Clinician Satisfaction Score (%)	>85%	88%	
Financial	Cost per Test (£)	<£10	£9.75	
Workforce	Staff Training Compliance (%)	100%	92%	•

Green = On track, Amber = Needs attention, Red = Action required

Tips for implementation

- 1. Use a mix of leading & lagging indicators
- 2. Align metrics to lab goals and national standards (e.g., ISO 15189)
- 3. Keep it visual and easy to interpret
- 4. Use RAG ratings, trend lines, or sparklines
- 5. Review regularly the quality meetings
- 6. Refresh data consistently (weekly/monthly)
- 7. Ensure all staff understand the "why" behind each metric
- 8. Ensure you understand the "how"

Final thoughts on balanced dashboards

- Breaks down silos between operations, quality, and finance
- Promotes transparency and accountability
- Supports early intervention and continuous improvement
- Drives patient-centered care and lab excellence

Leading vs. Lagging Indicators

- Leading Indicators:
- Predict future outcomes
- Proactive and preventive
- E.g., Specimen rejection rate, maintenance logs

Lagging Indicators

- Reflect past performance
- Reactive and confirmatory
- E.g., Error rates, turnaround time compliance

Why Use Both Leading and Lagging?

- Leading Indicators help prevent problems early
- Lagging Indicators validate outcomes and ensure accountability
- A balanced mix allows better decisions and improvement tracking

Checklist for Good Indicators (1/2) **1** Relevance & Alignment

• Linked to lab goals and patient safety

2 Measurability & Data Availability

• Quantifiable, objective, and consistently tracked

3 Actionability & Predictive Value

 Enables early interventions and decisions Checklist for Good Indicators (2/2) **4** Timeliness & Frequency

• Updated regularly, supports trend analysis

5 Benchmarking & Comparability

• Can be compared to standards (e.g., CAP, ISO 15189)

6 Simplicity & Clarity

- Easy to understand and communicate
- 7 Resistance to Manipulation
 - Not easily gamed or distorted

Summary: Good Indicators Are...

- Relevant to lab goals
- Measurable with reliable data
- Actionable and predictive
- Timely and regularly updated
- Benchmarkable against standards
- Clear and simple
- Resistant to manipulation and gaming