MANAGEMENT REVIEW USING THE DEMING CYCLE– AN ESSENTIAL COMPONENT OF ISO15189 CERTIFICATION

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INTRODUCTION

William Osler Health System (Osler) is one of Canada's largest community hospital corporations serving over 1.3 million residents in Brampton, Etobicoke and surrounding communities in the Greater Toronto area in Ontario, Canada. Osler laboratories are accredited to the ISO 15189– based OLA15189Plus™ standard. Accreditation to OLA15189Plus™ has allowed Osler to demonstrate its ongoing commitment to patient safety, reduce errors and establish its laboratory centers as leaders in quality management. A key component of Osler's strategy to continually improve while meeting accreditation requirements is in its management review process.

The laboratories at Osler are accredited to the OLA 15189Plus™ standard

ABSTRACT

Laboratory Management review is a review of the efficiency (performing in the best possible manner with the least waste of time and effort) and effectiveness (producing the intended outcome) of the Quality Management System (QMS). They give management a venue to evaluate and analyze practices for the purpose of improving the QMS.
Management review was one of the last components of Osler's QMS since all other components needed to be in place in order to fully assess the effectiveness of the entire system. The Laboratory at Osler uses the Deming cycle Plan-Do-Check-Act (PDCA) method to conduct its management review.
The goals of the Management review are to identify opportunities for improvement, promote quality and customer satisfaction through planned, periodic review of performance, ensured the continued stability and effectiveness of the QMS and to involve management, technical leads and all staff in the tracking, reporting and monitoring of the process.
As a result of the management review, Osler implemented a quarterly scorecard system which provides the inputs for the management review and provides a means of involving management, technical leads and all laboratory staff in the process. The scorecards are aligned with Osler's corporate strategic planning and provide benchmarks in four key areas related to service quality: Service Excellence, Access, Effectiveness and Safety. The scorecards are a strategic measurement and communication tool. They translate the laboratory mission, vision and strategy through objectives and measures and provide a framework to describe the key elements in the achievement of Osler's strategy. As a result of the management review process, the laboratory at Osler has seen an improvement in many processes including turnaround time, blood culture contamination, point-of care-testing non conformance . Through tracking and reporting of block mislabeling errors in Histology and performing a FMEA (Failure Modes Effects Analysis), the Laboratory is now actively pursuing bar-coding technology.
Management reviews allow senior leadership at Osler to reaffirm their commitment to continually improving the QMS.

Key Words: Quality, PDCA, Input, Output, Balanced Scorecard, Improvement, Customer Satisfaction

THE MANAGEMENT REVIEW TOOLKIT

Included in the Management Review Toolkit:

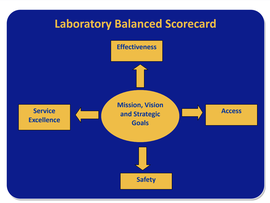
- Management Review Checklist (Agenda)- **The Inputs**
- Annual Laboratory Quality Activity Report
- Balanced Scorecards
- Minutes to Meeting Template
- Action Plan Template- **The outputs**

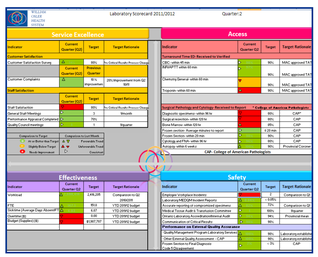
Management Review Checklist– The Inputs

Annual Quality Report

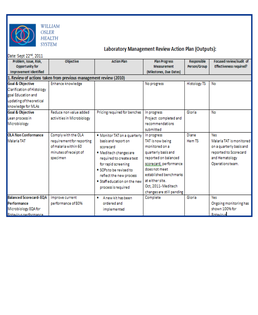
Summary of Inputs information
The Laboratory produces an annual quality report which summarizes the laboratory quality program and highlights process improvement initiatives.

Laboratory Balanced Scorecard





Action Plan from Management Review– The Outputs
Decisions and Actions that result in Continuous Improvement



THE MANAGEMENT REVIEW PROCESS– DEMING CYCLE– PDCA
Measurement, Analysis and Improvement

P– PLAN
Establish Objectives and Processes

Annual Management Review Due
- Appoint a Champion (Quality Manager)
- Prepare a schedule for the review
- Design and document the processes and procedures to conduct the management Review
- Develop a management review toolkit
- Identify representatives who will participate in the review
- Prepare a checklist (agenda) of what will be reviewed (the inputs)
- Collect performance data (annual quality report, Balanced Scorecards)
- Quality report and related documents are distributed for review prior to meeting

D-DO
Implement the Process

- Implement the process
- Determine which process records support the identified areas of measure
- Ensure quality indicators effectively assess the status of the area being reviewed
- Collect quality indicator and performance data over time to identify, correct and continually monitor problems to improve performance and patient safety by identifying and implementing effective interventions
- Implement quality indicators in a consistent and comparable manner across settings and over time

C-CHECK
Monitor and Measure Progress

- Analyze the inputs to determine if the target has been realized, if actions have been adequate or if further improvement is needed
- Compare performance data to established targets and original performance data to determine if improvement has been achieved
- Create a corrective actions report with action plans and timelines
- Decisions made and recorded

A-ACT
Take action to continually improve

- Identify Issues to be resolved
- Develop and Implement Action Plans for Improvements Identified through the review
- Assign key responsibilities and timelines for follow up and completion
- Determine corrective solutions for all non-conformances identified
- Monitor the effectiveness of actions taken from the review through follow up audits
- Manage the process and complete pulse checks to ensure targets are met and findings are appropriate or action re-directed
- Communicate to laboratory staff

INPUTS → MANAGEMENT REVIEW → OUTPUTS

Inputs
Quality Management Data to be Reviewed

- Annual Quality Report
- Quality Policy and Objectives
- Follow up Preventive and Corrective Action from previous review
- Progress towards Goals and Objectives Update
- Strategic Planning Update
- Service Excellence
  - ✓ Client Satisfaction and Feedback
  - ✓ Staff Satisfaction
- Internal Audit Results with Corrective Actions
- Balanced Scorecards
- Summary of Staff Skills Assessment
- Workload
- Utilization– changes in type/volume of testing
- Laboratory Non Conformance Reports
- Workplace Safety Incidents
- Evaluation of Suppliers/Products
- Assessment of Referral Lab Non Conformance

MANAGEMENT REVIEW

Outputs
Decisions and Actions which Result in Continuous Improvement

- Decisions and actions which result in continual improvement of the QMS
- Drive strategic initiatives and course corrections
- Improved Client and Staff Satisfaction
- Planning for the Future
- Risk Identification
- Discover what is working/not working

→ Action Plans Developed for Improvements

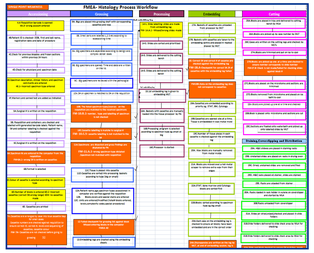
→ Corrective Actions Identified and Implemented

→ Describe the mechanism to monitor the effectiveness of action plans resulting from the management review (follow up audit)

THE BENEFITS

Histology Block Mislabelling

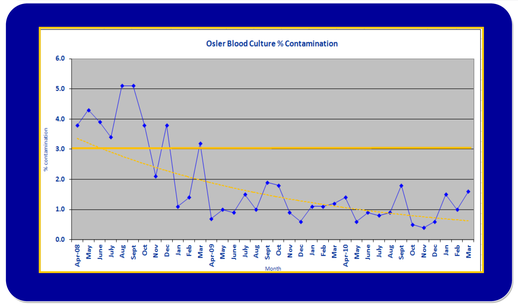
The handling, processing and reporting of Surgical Pathology specimens is a complex, multi step process which involves many members of the health care team. Errors can occur at any stage during the process and may result in serious clinical outcomes for patients.
In 2010, a Failure Modes Effects Analysis (FMEA) was performed in Histology at Osler. The FMEA included mapping the overall process for Surgical Pathology specimens from receipt to report, identifying barriers, including causes for these barriers and redesign of the existing process. The team reviewed factors which contribute to errors and devised error reduction strategies.
Critical to the ongoing process is detection, reporting and monitoring error rates. As a result of the FMEA and risk to patients,



RFP for Bar Coding Technology in Histology

Blood Culture (BC) Contamination

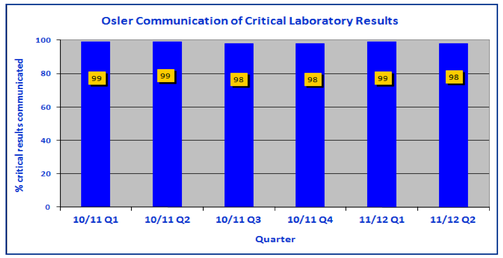
% of positive BC identified as contaminants. Lab evaluation and clinical intervention with BC contamination consumes substantial health care resources. Clinicians rely on BC results to diagnose and monitor febrile patients.
Quality Gap– False + BC lead to unnecessary repeated tests, as well as unnecessary drug use (Antibiotic resistance) with potential harm to the patient and significant downstream patient care costs.
The benchmark for BC contamination is < 3%.
Evidence Base - False + BC are costly as they are associated with an increased hospital length of stay, diagnostic testing and increased antibiotic use leading to potential resistance.



Audit of Critical Results Reporting

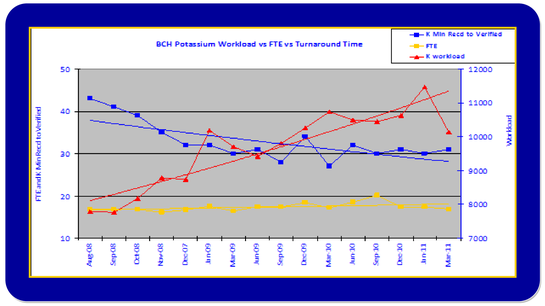
Definition: Critical results are those results which reporting delays may result in serious adverse outcomes for patients and represent potentially life-threatening situations.
% of all critical laboratory results reported to the health care provider according to established policies and accurate documentation of the communication
Rationale: Critical values reporting is considered an important laboratory process as it can impact on clinical decision making patient safety and operational efficiency.
Clinician feedback on lab critical result reporting:

- 67% of clients indicated that critical result may change the course of treatment
- 95% of clients indicated that effective communication of critical lab results is valuable for patient care



Turnaround Time

Definition: % of specific laboratory tests which meet established benchmarks
Rationale: Timely reporting of laboratory tests may improve the efficiency, effectiveness and client satisfaction.



Our Facilities

Brampton Civic Hospital

Etobicoke General Hospital

Peel Memorial Centre (redevelopment)

CONCLUSIONS

Assessing the quality of laboratory service using quality indicators and performance measures requires a transparent and consistent approach to collecting and analyzing data and developing action plans to resolve areas of poor performance (**Management Review**).
Management review is an integral part of an effective Quality Management System. It is a value added activity which addresses all stages of the total testing process with a focus on areas considered most likely to have important consequences on patient care and health outcomes to improve the quality of laboratory testing.
Management reviews have:

- Helped the laboratory bridge gaps internally and with external stakeholders
- Allowed the laboratory to do a better job, to focus its energy, to ensure team members are working towards the same goals and to assess the laboratory's direction in response to an ever changing environment
- Ensured the QMS continues to be effective as Osler's needs change and develop
- Identified problems and risks
- Identified opportunities for improvement and the need for change to the Quality Management System (QMS)
- Verified that the QMS is defined, monitored, controlled and maintained
- Assisted laboratory management in determining resource requirements

Management review has led to improvement through identified issues carrying responsibility to resolve them and resolution of issues will promote client satisfaction.
OLA15189Plus™ has solidly placed our laboratory as a leader in quality management in our organization and has brought us closer to achieving our mission to do the right test for the right patient the first time, each time, on time, every time!

"It is not just the management of the quality, it is the quality of the management"