SAFETY & QUALITY REVIEW OF A GOVERNMENT UNIT PPP MODEL

LEAR MEDICAL LIMITED

Contents

Introduction

Maintaining high standards of safety and quality in radiology services is crucial for optimal patient care and regulatory compliance. This case study presents the findings of an independent audit conducted by Lear Medical at a radiology facility operated under a Public Private Partnership (PPP) model. This assessment evaluated the facility's performance based on Safety, Productivity, Efficiency, and Quality (SPEQ) metrics.

Background

Lear Medical conducted an in-depth review of the radiology services, focusing on:

- Specific concerns raised by stakeholders.
- Safety and quality of radiology reports using the SPEQ model.
- Facility inspection for safety, operational efficiency, and regulatory compliance.

The reports reviewed by Lear Medical cover a period from 01 August 2024 to 31 August 2024. We reviewed the work of 25 different Radiologists. A total of 51 cases/reports were evaluated (1.4%). Lear Medical was tasked to review 5% (180) of the cases for August 2024 (3600 cases), but due to accessibility issues, only 1.4% were reviewed. The primary goal was to identify critical issues affecting patient safety and efficiency while providing actionable recommendations.

Methodology

The audit methodology included:

- Data Collection: Review of PACS data, documentation, and onsite observations.
- Structured Review: Analysis of imaging reports by 25 radiologists.
- Categorization of Discrepancies:

CAT 1	A significant discrepancy that will undoubtedly affect patient care
CAT 2	A moderate discrepancy that could affect patient care
CAT 3	A minor discrepancy or incidental finding that may not affect patient care
CAT 4	Grammatical error or minor discrepancy
CAT 5	No discrepancy

Facility Inspection: Evaluating safety compliance, staffing, and emergency preparedness.

Key Areas of Concern

- Excessive Scanning: 22% of CT scans and 21% of MRIs involved multiple body parts, often unnecessarily.
- Inappropriate Imaging Requests: Many referrals lacked adequate clinical justification.
- Defunct Vetting Process: No record of case rejections or conversions to other imaging modalities.
- Lack of Onsite Radiologist: Present only on select days, impacting oversight.
- Contrast Usage Not Documented: Lack of records on dosage administered to patients.

Safety (Score: 74.8%)

- 31% of reports contained CAT 3 errors, predominantly in CT abdomen/pelvis (62%).
- No CAT 1 or CAT 2 errors were detected, indicating no life-threatening reporting failures.
- Poor communication of critical findings: Most emergency cases were not relayed to referring physicians.
- Repeated radiation exposure: Some patients underwent redundant scans of the same body part.

Productivity (Score: 90%)

- Consistent scanning workflow, minimizing delays.
- Monthly average: 3,256 scans.

No record of patient waiting times, indicating a gap in operational data tracking.

Efficiency (Score: 90%)

- 76% of CT scans were reported within 2 hours, ensuring timely diagnostics.
- MRI efficiency lagged, with 13% of reports taking over 4 hours.
- 24/7 reporting services maintained despite staffing shortages.

Quality (Score: 70.3%)

- Differential diagnoses are missing in 20% of reports.
- Report conclusions often inadequate, failing to aid clinical decision-making.
- Limited documentation of incidental findings.
- Standardized scan protocols not adapted for individual cases.

Facility Audit Findings

1. Lack of MRI Zoning: No clear demarcation, posing safety risks.
2. Inadequate Emergency Preparedness: Missing critical resuscitation equipment.
3. Infection Control Failures: Poor waste disposal and hygiene practices.
4. Electrical & Fire Hazards: Exposed wiring, improper storage of oxygen cylinders.
5. Understaffing: Only one nurse is present per shift.
6. Limited Signage in the Local Language, hindering accessibility for patients.

Key Insights

- Critical Findings Not Communicated: Lack of structured escalation protocols for emergencies.
- Vetting Process for Imaging Requests is Ineffective: No systematic rejection or redirection of inappropriate referrals.
- Infection Control is a Major Concern: High risk of hospital-acquired infections.
- MRI Safety Needs Immediate Attention: Zoning issues could lead to serious accidents.
- Onsite Radiologist Absence Affects Quality: No direct oversight impacts report consistency.

Recommendations

1. Implement a Robust Vetting Process:
   A. Ensure all imaging requests are assessed for necessity.
   B. Onsite radiologist must review and approve CT/MRI requests.
2. Optimize CT/MRI Reporting Workflow:
   A. Standardize contrast billing and documentation.
   B. Consolidate multi-body part reports to reduce costs and redu
   C. Restrict whole spine MRIs to cases with clinical necessity.
3. Enhance Report Quality Control:
   A. Establish a core team of 5-7 radiologists dedicated to the facility.
   B. Conduct monthly audits on 10% of reports for accuracy.
   C. Implement mandatory documentation of critical findings and follow-ups.
4. Improve Facility Safety and Compliance:
   A. Establish clear MRI zoning to prevent safety incidents.
   B. Ensure adequate emergency equipment and conduct regular mock drills.
   C. Implement rigorous infection control training and audits.
5. Address Staffing and Operational Gaps:
   A. Increase nursing staff per shift.
   B. Provide separate restrooms for patients and staff.
   C. Expand signage for better accessibility.

Conclusion

The audit revealed that the radiology unit is highly efficient and productive but has significant deficiencies in safety, quality, and regulatory compliance. With an overall SQEP score of 81% (3.8 stars), the unit requires targeted interventions in:

- Vetting processes for imaging requests.
- Critical findings communication.
- MRI safety and infection control.
- Staffing and infrastructure improvements. port consistency.

By addressing these concerns, the facility can enhance patient safety, improve report accuracy, and optimize operational efficiency, ultimately providing better care. Continuous monitoring and structured quality improvement initiatives are essential for long-term success.

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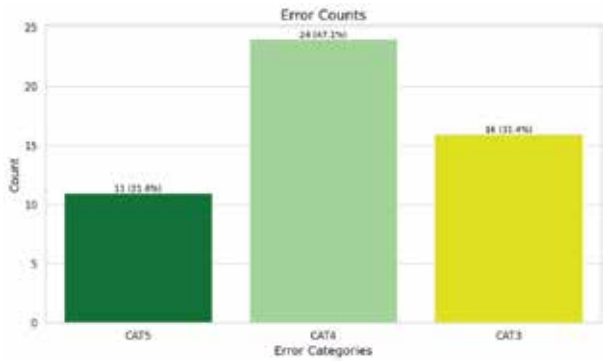
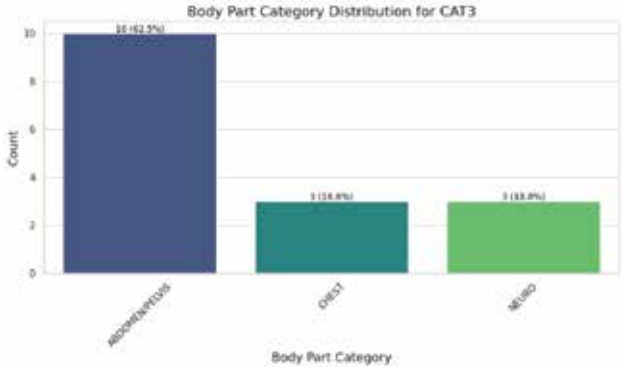
Appendices

Appendix A: Supplemental Data (Review Results)

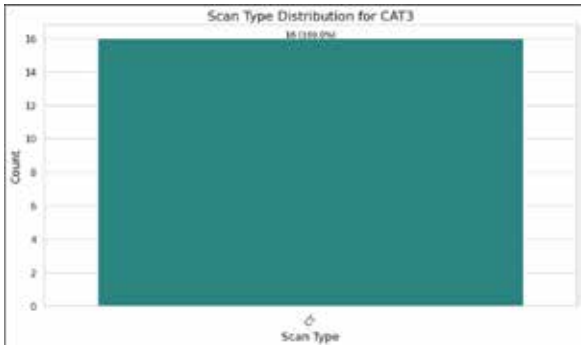
Error Category Findings



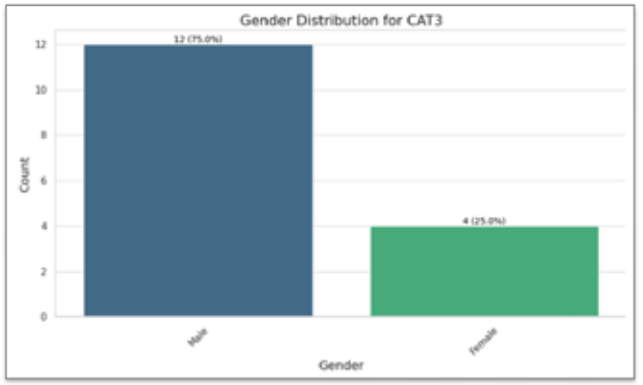
Body Part Results



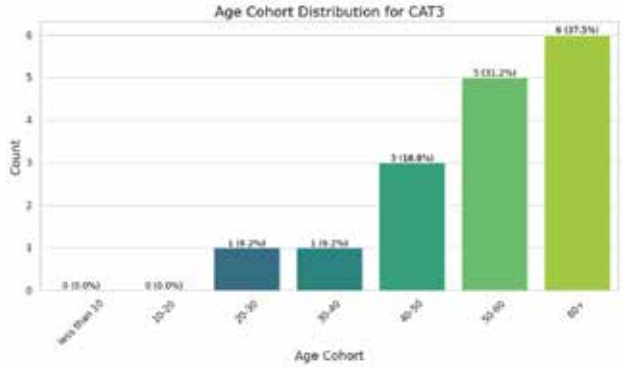
Modality Results (CT)



Patient Gender



Age



Time Window