



SHORTLISTED

Hong Kong Baptist Hospital

Precision in Practice: Elevating Diagnostic Imaging Accuracy with Integration of RA600 Broker System

Summary

Hong Kong Baptist Hospital introduced the RA600 broker system in September 2023 to enhance diagnostic imaging accuracy by acting as an intermediate quality check before images are uploaded to the Picture Archiving and Communication System (PACS). This initiative aimed to reduce errors related to incorrect or compromised images, ensuring high-quality diagnostic imaging with accurate patient information. As a result, diagnostic accuracy improved, and risks associated with imaging errors were significantly reduced. The project embeds quality control into daily workflows, supporting long-term patient safety and operational efficiency.

The Challenge

Diagnostic imaging accuracy is critical for effective patient care, yet incidents of incorrect or compromised X-ray images were identified due to:

- **Mismatched Patient Information:** Errors in assigning images to the correct patient records.
- **Technical Errors:** Variability in image quality affecting diagnostic accuracy.
- **Lack of Quality Checks Prior to PACS Uploads:** Images were sent without structured verification, increasing the risk of misdiagnoses.

These challenges highlighted the need for a robust quality assurance mechanism to safeguard patient safety and improve radiological workflow efficiency.



The Solution

A structured, multi-layered approach was implemented to enhance imaging accuracy:

- **RA600 Broker System Integration:** Acts as an intermediate verification step, ensuring correct patient data and high-quality images before PACS upload.
- **Quality Oversight through RiskMan:** Adoption of the RiskMan Quality Module to document and monitor PACS-related incidents, facilitating continuous improvements.
- **Staff Training & Compliance Measures:** Comprehensive training programs ensured effective utilisation of the new workflow.

Results and Next Steps

The initiative has led to measurable improvements in imaging accuracy and workflow efficiency:

- **Error Reduction:** Less than 0.6% incorrect diagnostic images detected out of 2,595 X-ray cases audited.
- **Increased Accuracy:** High-quality, verified images now reaching PACS, leading to more precise diagnoses.

- **Operational Efficiency:** Early error detection prevents workflow disruptions, reducing the need for repeat imaging.
- **Scalability:** The success of the RA600 system and RiskMan tracking framework is being explored for expansion into other imaging modalities and hospital departments.

This initiative has reinforced patient safety and operational excellence by embedding quality control into radiology workflows, ensuring a sustainable, high-accuracy imaging process.