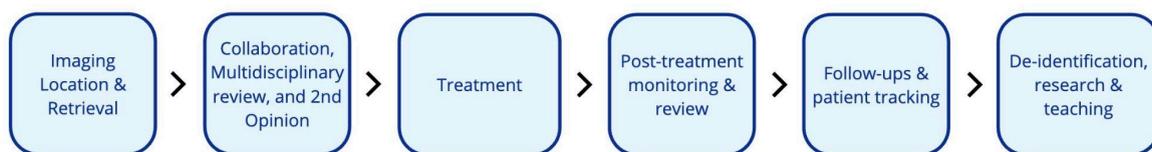# Aurabox: Solving Post-Imaging Clinical Workflow Challenges

Clinicians and healthcare workers in imaging-intensive specialties struggle daily with the challenges of working with medical imaging. This paper looks at six key areas where those problems manifest, and how you can solve them using Aurabox.

Imaging Location & Retrieval > Collaboration, Multidisciplinary review, and 2nd Opinion > Treatment > Post-treatment monitoring & review > Follow-ups & patient tracking > De-identification, research & teaching

Introduction

In the evolving landscape of healthcare, managing and utilising imaging data efficiently is crucial. Aurabox provides an advanced Medical Decision Tool (MDT) designed to optimise post-imaging workflows. This white paper outlines the capabilities of Aurabox, focusing on six key clinical workflow areas essential for clinicians, specialists, heads of departments, and other hospital decision-makers.

Key Clinical Workflow Areas

1. Locating and Obtaining Imaging

Clinicians often face significant challenges in locating and obtaining patient imaging due to the fragmented nature of healthcare systems.

Typically, patient imaging is stored across various platforms, requiring clinicians to log into multiple systems, remember different passwords, and navigate through disparate interfaces. This fragmentation not only consumes valuable time but also increases the risk of missing critical imaging data.

For instance, a radiologist might need to review a patient's past CT scans stored in one system while simultaneously accessing recent MRI results from another. Such a disjointed workflow can lead to delays in diagnosis and treatment planning, potentially impacting patient outcomes.

Aurabox Solution: Aurabox streamlines this process by aggregating data from multiple imaging providers into a single platform. This allows clinicians to quickly and efficiently access all necessary images without the hassle

of navigating multiple systems. For example, a neurologist can now review a patient's complete imaging history, including CT, MRI, and PET scans, from one place, facilitating faster and more accurate clinical decisions.
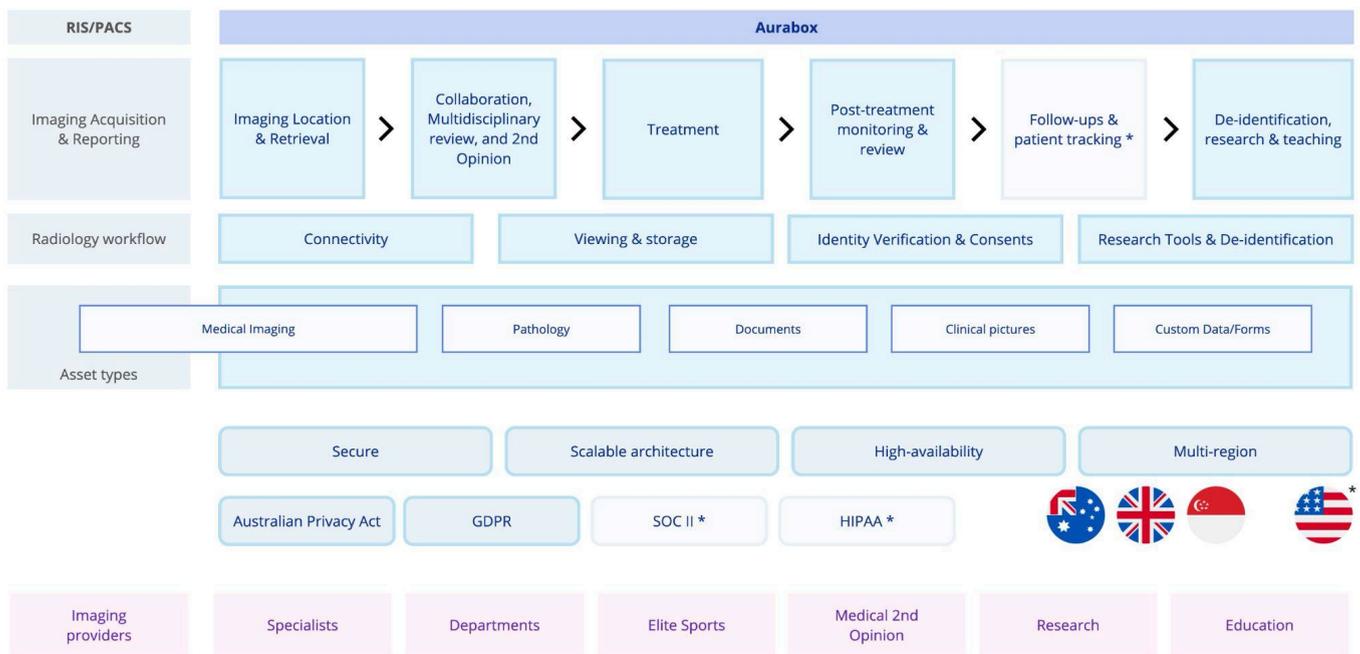
2. Treatment and Review

The complexity and variety of imaging modalities can hinder thorough assessment and treatment planning.

Clinicians often need to compare images from different modalities, such as X-rays, MRIs, and CT scans, which may be stored in separate systems or require different software to view. This can lead to inefficient workflows and the potential for oversight.

clinicians can thoroughly assess and plan treatment without the need to switch between systems. For instance, an orthopaedic surgeon can use Aurabox to compare pre- and post-operative X-rays and MRIs side-by-side, ensuring a thorough evaluation of the surgical outcome and enabling precise treatment adjustments.

3. Collaboration and Second Opinions

Coordinating multidisciplinary team (MDT) meetings and obtaining second opinions can be logistically challenging and time-consuming. Clinicians often have to synchronise schedules, gather all relevant imaging and data, and ensure that every specialist has access to the same information.

For example, an oncologist might need to compare a series of MRI scans over time to monitor tumour progression and treatment efficacy. A surgeon may need multiple provider interfaces open during treatment. Switching between different software and systems can disrupt this process and increase the likelihood of missing subtle changes.

Aurabox Solution: Aurabox addresses this issue by offering comprehensive tools for detailed viewing. This functionality ensures that

This process can be particularly cumbersome in complex cases requiring input from multiple specialists.

For example, organising an MDT meeting for a cancer patient might involve radiologists, oncologists, surgeons, and pathologists, each needing access to the same set of imaging and reports.

Aurabox Solution: Aurabox enhances collaboration by providing asynchronous

access, allowing specialists to review and contribute to patient cases at their convenience. This is particularly valuable for MDT meetings and Oncology review boards, ensuring that all relevant insights are considered without the need for real-time coordination.

Additionally, Aurabox facilitates seeking second opinions by providing a secure means for external specialists to review patient imaging and offer their expertise by securely providing access to a shared patient profile. This is a step-change from just "sharing a study", and gives the care team a shared view. For instance, a cardiologist in one hospital can easily consult with a cardiac surgeon in another city, viewing the same profile, and receiving timely feedback that can significantly impact treatment decisions.

4. Treatment Monitoring

Ongoing treatment monitoring requires clinicians to track patient progress through serial imaging, which can be challenging if images are not easily comparable or accessible.

Clinicians need to compare current images with previous ones to assess treatment effectiveness and make necessary adjustments. This process can be hindered if imaging data is dispersed across different systems or if the comparison tools are inadequate.

For example, an endocrinologist monitoring thyroid cancer treatment needs to compare ultrasounds and radioactive iodine scans over time to determine if the treatment is reducing the size of the tumour.

Aurabox Solution: Aurabox supports ongoing treatment monitoring by enabling clinicians to track patient progress through serial imaging efficiently. By maintaining all imaging data in one platform, clinicians can easily compare current and previous images to assess treatment effectiveness. For instance, an oncologist can use Aurabox to overlay images from different time points, allowing for precise measurement of tumour shrinkage and timely adjustments to the treatment plan.

5. Tracking and Follow-Up

Long-term and recurring follow-up care can be difficult to manage, especially for patients with chronic conditions or those undergoing extended treatments.

Clinicians need to keep a comprehensive record of the patient's imaging history, which can be cumbersome if spread across various systems. This fragmentation can result in incomplete patient records, making it challenging to monitor changes over extended periods.

For example, a pulmonologist managing a patient with chronic obstructive pulmonary disease (COPD) needs to review numerous chest X-rays and CT scans over several years to track disease progression and adjust treatment accordingly.

Further, sometimes knowing that a patient needs a scan at regular intervals is poorly tracked, leading to negative outcomes.

Aurabox Solution: Aurabox offers robust tracking capabilities by maintaining a comprehensive imaging history for each patient. This allows clinicians to monitor changes over extended periods, providing a clear view of the patient's condition and treatment response. For instance, a nephrologist can use Aurabox to track a patient's kidney function through serial ultrasounds and MRIs over years, ensuring any changes are promptly identified and addressed.

6. Research and Teaching

Medical research and education often require access to large datasets of imaging studies, which can be challenging to compile and de-identify manually. Researchers need to ensure patient privacy while obtaining meaningful data for analysis, and educators need real-world examples to enhance learning.

For example, a researcher studying the progression of Alzheimer's disease needs a vast collection of brain scans over time, while a medical school instructor requires de-identified

cases to teach radiology students about different pathologies.

Aurabox Solution: Aurabox supports medical research by facilitating the collection and analysis of imaging data with built-in de-identification features to ensure patient privacy. This enables researchers to utilise valuable clinical data for studies without compromising confidentiality. Additionally, Aurabox serves as a valuable resource for medical education, allowing educators to share de-identified imaging cases with students and trainees. The platform's annotation and discussion tools further enrich the educational experience by providing real-world examples that enhance learning. For instance, a radiology professor can use Aurabox to present a series of annotated images showing the progression of a particular disease, offering students a detailed and interactive learning opportunity.

Conclusion

Aurabox enhances post-imaging workflows by streamlining imaging management, facilitating collaboration and second opinions, and supporting treatment monitoring and follow-up. Its contributions to research and education make it a versatile tool in modern healthcare. Aurabox is designed to meet the needs of clinicians, specialists, and hospital decision-makers, ensuring efficient and effective patient care.

Want to know more or try Aurabox for yourself?

Contact our team below, or sign up online at https://aurabox.cloud

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