

COMPREHENSIVE REAL-WORLD EVALUATION OF THE USE OF A COMMERCIALY AVAILABLE CHEST X-RAY DECISION SUPPORT TOOL (HARRISON.AI CXR) AT UNIVERSITY HOSPITALS OF LEICESTER NHS TRUST



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BACKGROUND

- In the **Autumn of 2023**, UK government announced the **AI Diagnostic Fund (AIDF)**
- AIDF resulted in £21m awarded to 11 imaging networks / 64 NHS trusts to accelerate AI for chest diagnostics (1)
- East-Midlands Radiology Consortium (EMRAD) secured AIDF bid- the supplier Annalise.AI was awarded the contract on the 22nd of January 2024 (2)
- In **July 2024**, UHL launched shadow mode with Harrison.AI CXR
- What is **shadow mode** Harrison AI CXR?
 - Limited user experience to pre-selected staff
 - Launches via Harrison.AI Client. Not integrated into PACS directly
 - GP CXR prioritisation and AI read of CXRs to select users
- Intended uses: prioritisation of CXR GP requests, small number of users
- First Clinical AI Fellows for UHL - commenced posts on August 13th 2025

PROBLEM & SOLUTION

- The **Chest X-ray** is the most commonly performed imaging test in the UK, with around 25–30 million studies each year (3). High volumes and subtle findings mean important pathologies are still missed, contributing to avoidable diagnostic delays.
- There is a **national shortage** of radiologists and reporting radiographers to meet the growing demands of acute CXR reporting.
- AI tools such as **Harrison.ai CXR** may offer a scalable way to support clinicians, improve accuracy, and enhance patient safety.
- Our project within the Fellowship focused on deploying Harrison.ai CXR at one of the busiest NHS Trusts in the country, University Hospitals of Leicester, and to **evaluate** its impact on both clinical workflow and clinician attitudes.

PRE-DEPLOYMENT

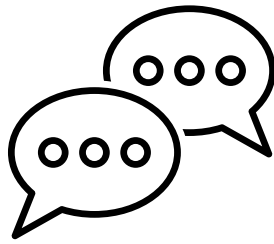
Clinical Safety Documentation

- To comply with the Health and Social Care Act 2012, **DCB 0160** (for NHS Trusts) and **DCB 0129** (for manufacturers) standards had to be met
- We therefore created the following documents drawing on our CSO training during our fellowship year:
 - **Clinical Risk Management Plan**
 - **Clinical Safety Case Report**
 - **Hazard Log** – via a Hazard Log workshop
- These documents help to mitigate against potential risks of deployment and ensure that clinical safety controls were in place

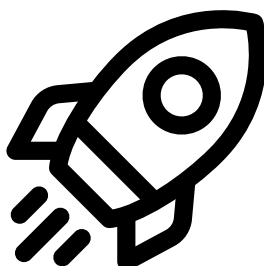


Communication and Education

- Alongside the mandatory requirements of the safety paperwork, we actively promoted Harrison.AI CXR and educated users prior to its launch by:
 - Hosting a '**Free Dinner and Information Evening**' to UHL staff, with guest speakers Dr Alex Novak (Oxford University Hospitals), and Aoibheann Doherty (Harrison.AI)
 - Created interactive **E-learning modules** on HELM (UHL e-learning platform)
 - Hosted pre (and post) deployment online Q&A sessions with Harrison.AI
 - Had multiple communications via newsletter, emails and staff intranet



GOING LIVE



Harrison.ai

- **5th February 2026** successful launch of Secondary Capture at UHL
- Mitigating issues at launch: Dr Das available for troubleshooting issues, newsletter and intranet communications
- What is **secondary capture** of Harrison AI CXR?
 - Harrison.AI CXR integrated seamlessly into PACS as an additional AI read of the x-ray
 - No extra logins to Harrison.AI Client
 - Available to all clinicians with PACS access

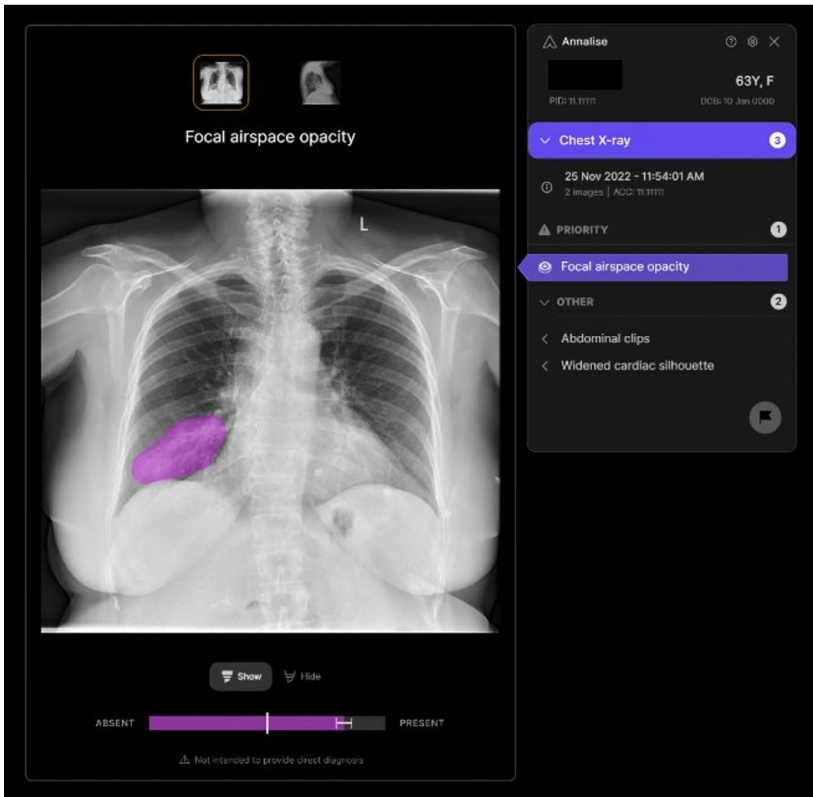


Figure 1: Example of a Secondary Capture read of Harrison.AI CXR with a focal airspace opacity

POST-DEPLOYMENT

- **Evaluating** Harrison.AI CXR at University Hospitals of Leicester with two main projects:
 - **Assessing the Potential Impact of a CXR AI Clinical Decision Support Tool in Missed and Delayed Chest X-ray Findings**
 - **Implementation and Early Evaluation of a CXR AI Clinical Decision Support Tool Across a Multi-Hospital NHS Trust**
- These projects focus on assessing how successful Harrison.AI CXR has been integrated into clinical practice and how it has impacted the workforce
- Both papers will be published in the near future



NEXT STEPS

- Current contract with Harrison.AI CXR expires in **December 2026**
- For UHL to continue using this tool, a business case requires approval – *currently in progress*
- Handing over the project to incoming NHS Fellow in Clinical AI - Dr Ali Fadhil (Cohort 5)
- New and exciting AI technologies coming to UHL!



CHALLENGES

- Large scale AI deployment required multidisciplinary working and liaising with key figures in the field to do this successfully
- Dynamic learning on the job - particularly when deciding how to evaluate AI tool appropriately
- **Silo thinking** – often having identical meetings between different departments
- Delays from members of the wider team

ADDITIONAL OPPORTUNITIES

- Collaboration with **Health Innovation East Midlands (HIEM)** evaluating Harrison.AI impact on human factors and workflow
- Collaboration with Dr Das in presenting at the Oxford Clinical AI for Healthcare Leaders conference
- Networking at the Fellowship in Clinical AI Away Days with industry experts



REFERENCES

1. <https://www.gov.uk/government/news/21-million-to-roll-out-artificial-intelligence-across-the-nhs>
2. <https://emrad.nhs.uk/workstreams/research-and-innovation/816-artificial-intelligence-diagnostic-funding-aidf-for-chest-x-ray>
3. https://www.england.nhs.uk/wp-content/uploads/sites/2/2024/11/DID-Annual-Statistical-Release-2023-24.pdf?utm_source=copilot.com