

Tracking Transformational Change in Radiology: A Mixed Methods Evaluation of the Implementation of Soliton RISP, Philips Vue PACS and Orchestrator in Betsi Cadwaladr University Health Board

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Context and Approach:

Betsi Cadwaladr Health Board is undergoing major transformation to its radiology information system (RIS) and picture archiving and communication system (PACS). The current systems RADIS and Fuji PACS are soon to be replaced by Soliton RISP and Philips Vue PACS, with an additional layer of integration by the AI system Orchestrator. This large-scale project hopes to provide the radiology team with cutting-edge systems to improve workflow efficiency, system stability and overall service performance. This project aims to evaluate these changes using a mixed methods approach; combining the analysis of key performance indicators (KPIs) with survey data from users.

Planned Activity:

Research:

Research question: How does the implementation of cutting edge RISP and PACS systems affect the performance of radiology services in a Welsh health board? A mixed-methods study in tracking transformational change.

Publication: Once completed I plan to submit this service evaluation to a suitable journal e.g. BMJ Open Quality, Clinical Radiology. I also plan to present these findings through internal NHS Wales learning events and other networks, I will also consider submitting to the UK Imaging and Oncology Congress (UKIO).

Leadership:

Led by example during the pre-implementation period, bridging between clinical and technical teams. Took ownership of KPI evaluation, supported colleagues through uncertainty, and modelled adaptability in a high-pressure environment.

Education/teaching :

Training on the new Soliton Radiology Information System has begun. Staff members are being trained in person in groups of 2-8 at a time. Invaluable feedback is being gathered from these sessions.

Progress to date:

Currently in the pre-implementation phase for the incoming systems.

- KPIs analysed for suitability and using STS models assessed for stability.
- Engaged with multidisciplinary stakeholders to identify potential issues in the systems early on.
- Identified potential limitations with data capture due to poor quality data entry in certain areas.
- Developed a preliminary framework for monitoring KPIs following system go-live.
- Developed a survey for system users following go-live, including peer-review and alpha-testing.

Reflections:

Initially planned to analyse a broad range of KPIs, but after discussion with my academic supervisor, refocused on a smaller more stable and clinically relevant set to ensure meaningful and reproducible results.

Also shifted from pre/post survey design to post-implementation only, recognising as there was no return to the old systems that a retrospective reflection would provide richer insight and reduce survey-fatigue.