

Development of a Cardiac Magnetic Resonance Service in South-East Wales

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Introduction: Cardiac Magnetic Resonance (CMR) scanning in Aneurin Bevan University Health Board (ABUHB) currently falls significantly below the per capita scanning rate recommended by the British Society of CMR, a target of 2275 scans per million population.^{1,2} Scans in ABUHB are outsourced to University Hospitals Bristol through a part-payment commissioning system at above market rates. ABUHB commissioned 276 scans in 2018-2019, a fifth of the projected requirement for a health board population of 594,164 people.³

OBJECTIVES

We sought to develop an in-house CMR service in a phased fashion to improve access to CMR for health board residents, enhance the training & development proposition for staff, and reduce costs. This service would also promote excellence within the health board, meet Cardiology trainee requirements, improve Radiology staff retention, and reinvigorate the downgraded district general hospitals in the wake of the opening of a new acute hospital, The Grange.

MATERIALS AND METHODS

- The cost of outsourcing the CMR service was compared with the cost of commencing an in-house service. The new service leverages existing assets, with newly extended health board scanning capacity through the creation of The Grange.
- A phased programme was proposed, with inpatient scanning commencing first and outpatient CMR following.
- The service was piloted with two inpatient slots per week.
- Test patients were scanned with an industry representative providing training for radiography staff and reporting cardiologists.
- A business case for outpatient scanning was compiled to assess the benefit to ABUHB of bringing the service in house.

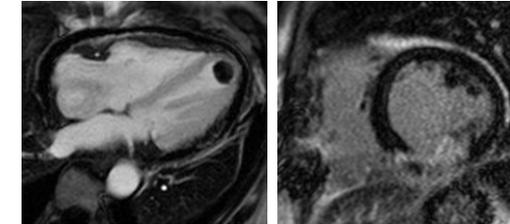
RESULTS

Eight inpatient scans have now been completed, resulting in:

- 5 fewer inpatient transfers to Bristol
- Reduction in length of stay
- Significantly altered management in 4 patients
- Markedly reduced waiting time for CMR in all patients.

At a commissioning cost of £633 compared with the in-house price of £250, each scan performed within ABUHB has a saving implication of £383.

- The inpatient service has therefore saved £3064 so far, in addition to costs of transfer to Bristol and reduction in costs associated with bed days.



Scans to date have utilised current reporting infrastructure and software. Patients have reported satisfaction with the service and opinion from within the Cardiology and Radiology departments has been positive.

Outpatient scanning is projected to commence in early 2022.

- Costs include upgrade to reporting computers, a virtual server and dedicated reporting software to improve speed and accuracy of reporting. The total cost of these items is £27,385.
- In the first year, we anticipate 250 scans (including 90 inpatient scans), leading to a saving of £95,750.
- We therefore anticipate a saving of £68,365 in the first year alone.
- Projected scanning volumes will allow ABUHB to reach optimal scanning volume per capita within five years, reducing inequality in access to diagnostics.

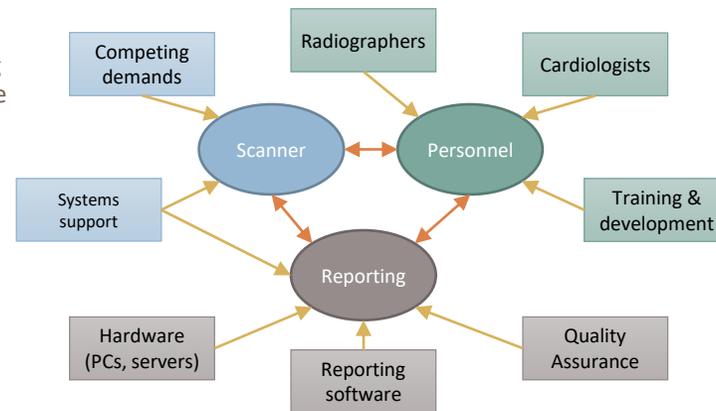
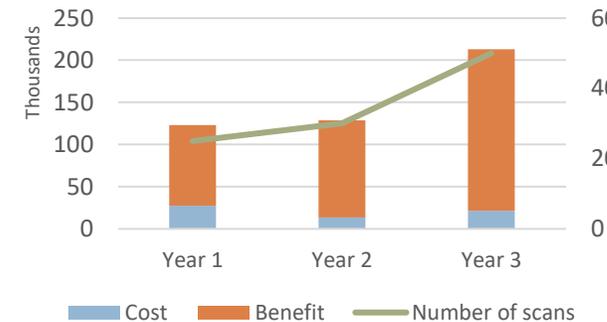


Fig 1: Key considerations

CONCLUSIONS

Commencement of inpatient CMR at ABUHB has already reduced inpatient length of stay and improved diagnostic accuracy. The planned introduction of outpatient scanning will significantly reduce costs associated with CMR and increase scanning capacity, improving patient access to high-quality diagnostics, and enhancing training prospects for registrars.

Fig 2: Projected Cost/Benefit of OP scanning for first three years of service



REFERENCES

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