CONCLUDE

Informed Decision Making

Case Study
Decentralisation of an Ophthalmology Service

Project: Community Eye Centres, Leeds Teaching Hospitals NHS Trust

The objective of the project was to contribute to the mid-term review of the Approved Quality Provider (AQP) contract for the Community Eye Centres (CEC) in Leeds.

The service objectives of the Leeds Primary Care Trust were to:

- Enable care closer to home with seamless, safe patient pathways
- Provide the best quality patient experience
- Increase cost effectiveness
- Demonstrate innovation

The project is one of the first CEC projects in the UK to consider the benefits of decentralisation aligned to the Department of Health's and NHS England stated objectives of taking care to the patient, rather than the patient being obliged to travel to a central outpatient facility. The service is also intended to serve those in disadvantaged communities, the reasoning being that residents in these areas should have the same access to health care provision as others who are not constrained by barriers, such as distance and cost of travel.

The review primarily focused on the Glaucoma patient pathway, because the insidious nature of the disease means that it can affect any part of the population, and early detection means that the quality of life of patients can be significantly improved. Yet it is patients from disadvantaged communities that typically suffer as a consequence of poor access to diagnostic facilities.

Yet there are also other competing factors. Reasoning would suggest that by decentralising the service this could dilute the available resources and could lead to poor utilisation of facilities and equipment. Furthermore, it could also be argued that as it would be too costly to replicate the whole of an eye service in a CEC, and as such patients requiring more sophisticated diagnostics may need to travel into a central, better resourced facility anyway? As it is the economic considerations that tend to take precedent over other, (what some would argue to be as important considerations), it was decided that the review should attempt to broaden the perspectives for the evaluation.

Consequently, the review was to take place from the perspective of the 'Triple Bottom Line', which focuses on three perspectives of sustainability: a)

Economic sustainability, b) Environmental sustainability and c) Social sustainability.

How did we approach the study?

The brief for The Conclude Consultancy was to focus the study primarily on the Environmental sustainability of the service with particular emphasis on the energy and carbon impacts of decentralisation.

We developed a CEC Measurement Protocol, which is a method of a) defining the data sets required for the calculation and b) the method of processing the data to provide the results. The value of this approach is that it makes explicit how the results were derived and in doing so provide a basis for others to compare results. The components of the protocol are:

- Data collection template. This is designed to ensure consistency of data collection.
- Data processing logic. This is designed to ensure that the formulae for the processing of the data will provide logical and meaningful results.
- Output norms. These will be defined in terms that are relevant to the needs of the users and thus enable informed decision-making.

The benefit of the protocol was that the template used for the data collection process was an important basis for communication between business managers responsible for data management and those that were to be analysing the data.

The key most important output norms to be reported were:

1. What were the energy and carbon impacts of operating the decentralised facilities?

   Norm: Annual tonnes of building emissions per CEC

2. What were the carbon impacts of patient travel?

   Norm: Annual tonnes of travel emissions carbon per CEC

3. How well utilised were the facilities and the equipment, and how would this utilisation impacted the carbon impacts relative to each patient episode.

   Norm: % utilisation of each CEC and % utilisation of Visual Field Test Machine.

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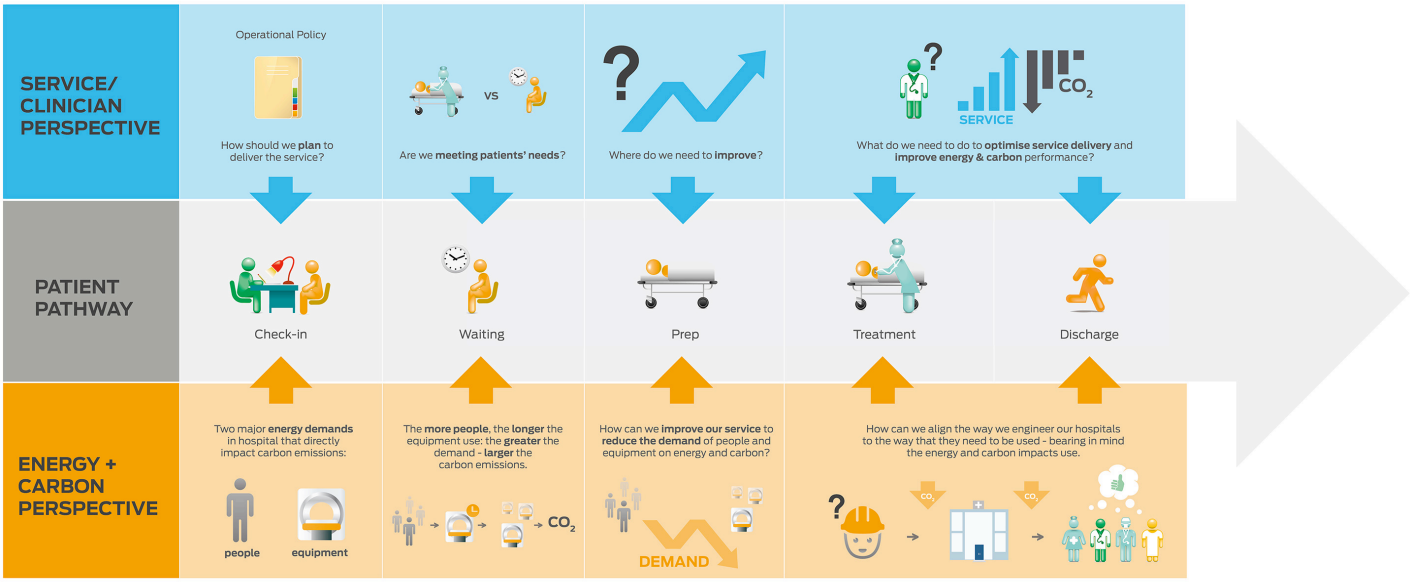

Figure 1 - The measurement protocol needs to consider both service orientated data as much as energy and carbon data

Figure 1 explains the relationship between clinical working practices and the energy and carbon impacts. The mid-term review sought to identify how decentralisation would impact each, and to use the CEC Measurement Protocol as a means of quantification of the impacts.

Key findings

The significant challenge was that of being able to access appropriate data for each section of the protocol.

- Availability of appropriate facility data. In some instances, such as metered energy data, there was none available.
- Apparent contradictions within different datasets.
- Despite concerns over the veracity of some of the data we were able to study the carbon impacts of travel. In 26,000 patient episodes there were 193,200 patient travel miles incurred. This resulted in 94 tonnes of carbon emissions from both car and public transport over a twelve month period.
- To offset these carbon emissions would require the planting of 77 acres of forest. With over 60% of all travel miles being carried out by car, the need for an improved public transport infrastructure becomes compelling.

- A study of one CEC based in a wing of a partially used hospital indicated that 68 tonnes of carbon emissions annually could arise from the use. In comparison the estimated carbon emissions arising from travel over the same period amounted to 28 tonnes. As there were 3,517 Glaucoma patient visits during the six month study period this equates to 14kg of carbon per Glaucoma patient visit.
- The analysis of patient travel miles to this CEC demonstrated significant opportunity to reduce the carbon impact of travel. Space utilisation. The study showed that less than 50% space utilisation was achieved for the Glaucoma service. There was evidence that a higher utilisation rate was achieved for the whole of the CEC services (not just Glaucoma), but concerns over the accuracy of the data were still prevalent.
- Visual Field Test Machine utilisation. Concerns over the accuracy of data meant that it was not possible to validate the results.

Conclusions from the study

- The review team was constrained by lack of accurate data. Evidence of this arose from the use of two separate data sources within the Clinical Information System. Apparent contradictions in the data created uncertainty as to the accuracy of the results.

Learning: When establishing a new service, there needs to be a clear strategy for management of the data, to ensure that the data required for the analysis is quality controlled.

Learning: When entering into property lease agreements the agreement should require the landlord to provide accurate facility data, such as space and energy consumption data for each part of the facility, including common spaces.

- The PCT objectives should be measurable. It is from these that the specification for the measurement protocol should be developed. The data processing methodology would be instrumental in defining the datasets that needed to be managed.

Learning: When establishing the service objectives, the data required to both manage the objectives and report on the outcomes should be specified.

- Holistic evaluation criteria for the decentralisation of clinical services should be established. The Triple Bottom Line criteria of Social, Environmental, and Economic impacts, provide this holistic perspective.