Case Study

McKesson CVIS Solutions

Relieving The Pressure Valve

New clinic reduces demand on both NUH cardiology services and patients at the Queen’s Medical Centre

Organisation

The Queen’s Medical Centre

Cardiology team comprises

- 13 consultants
- Additional visiting consultants
- 16,000 echocardiogram procedures each year, with numbers steadily increasing.

Solution Spotlight

- McKesson Cardiology

Critical Issues

- Rising workload
- Workflow bottlenecks
- Resource constraints

Results

- Redesigned care pathways
- Improved patient experience
- More effective management of resources
- Increased administrative efficiencies
- Improved patient flow

The Challenge

In a resource-starved, demand-rich NHS environment, the pressure on cardiology services continues to grow. The treatment of cardiovascular disease (CVD) is a major national priority, as highlighted by its prominent place on both the NHS Outcomes and Public Health Outcomes Frameworks. As one of the main causes of premature death in the UK, this is hardly a surprise. But despite improvements in the treatment and prevention of CVD, and a reduction in mortality rates over the past decade, it’s widely accepted that much more needs to be done to improve outcomes for CVD patients. Further, the combination of an ageing population and steady increases in obesity and diabetes, compounds the challenge and underlines why simply maintaining current cardiology services will not be enough to drive sustainable improvements in the quality of care.
An innovative cardiac service
CVD is clearly a national problem. But, in line with the very essence of the QIPP agenda, health economies up and down are developing innovative services and redesigning care pathways to drive health improvements for CVD patients at the local level. One such example is the recent introduction of a cardiac valve clinic at Nottingham University Hospitals (NUH) NHS Trust. The new physiologist-led Echo Valve Clinic was launched in September 2013 to help reduce demand on the Trust’s busy cardiology clinic.

NUH provides care to over 2.5 million residents of Nottingham and its surrounding communities and specialist services to a further 3-4 million people from neighbouring counties. It typically performs around 16,000 echocardiogram (an ultrasound scan of the heart) and 600 stress echocardiogram procedures each year, with numbers steadily increasing. Because ultrasound is a primary diagnostic tool for heart valve disease and a gatekeeper for surveillance of disease status, demand for cardiology services has escalated. This in turn has increased pressure on the speed of service and delivery of care.

NUH’s Echo Valve Clinic
The weekly clinic, held at the Queen’s Medical Centre, monitors patients who have heart valve disease but are not currently showing any symptoms. Patients are referred to the clinic by their cardiology consultant at the Trent Cardiac Centre, based at Nottingham City Hospital.

Prior to its introduction, patients with suspected heart valve disease were required to visit the hospital for an echocardiogram and then return for a follow-up consultation another day to determine their likely treatment pathway. This made it difficult for clinicians to quickly deal with urgent cases, and at times led to a long gap between the echocardiogram and the clinic visit to discuss the results. It also dictated the generation of an unwieldy — and indeed avoidable — volume of clinical correspondence, placing unnecessary pressure on the cardiology clinic’s administrative resources.

Now, when a patient visits the clinic, they are seen by a cardiac physiologist, who carries out an ultrasound scan of the heart and checks if the patient has been experiencing any symptoms. The physiologist also runs through a series of questions with the patient, as part of a robust examination of present symptoms. If there has been no change, the patient is asked to return for another check-up 12 to 24 months later – depending on their current condition. If there is a significant change within the patient’s clinical condition or echo, then the patient is seen by me for immediate investigation and subsequent further treatment can be arranged.

The clinic allows us to monitor patients more quickly and efficiently, and reduces the number of unnecessary visits patients need to make to hospital. Moreover, it is run in addition to existing echocardiographic services and, as a result, staff can spend more time with each of our patients.

“The NUH’s Echo Valve Clinic represents a great example of how clinicians and technology partners can collaborate to help drive innovation and improve outcomes in areas of high priority. It’s relieving the pressure on providers, healthcare resources and, crucially, patients.”
“Within just a few months, the redesigned pathway has improved the patient experience by halving the number of hospital visits for many cardiology patients. What’s more, it’s significantly relieved the strain on our cardiology clinic through a reduction in the requirement for follow-up appointments.”

**Benefits and outcomes**
The Valve Clinic system has significant benefits for everyone. From a patient perspective, it’s more convenient because many only need to visit the hospital once – and, in the process, common anxieties in the waiting period between consultations are eradicated. From a business perspective, it’s helping us manage our resources and patient flow much more effectively. Cardiologists are only required to see patients who have developed symptoms or who need care more urgently, which in turn expands the clinic’s capacity to see more patients. We also have increased administrative efficiencies: clinicians and secretaries have seen a reduction in the volume of clinical correspondence for dictation and processing.

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The cardiology team currently comprises 13 consultants, along with additional visiting consultants from other hospitals. Each of us benefits from being able to refer patients into the new service. At present, there’s been a combined total of around 100 referrals from amongst the team – which is the equivalent of almost ten clinics’ space that we have created.

**Supporting technology**
The clinic is underpinned by McKesson’s Cardiology imaging and information solution (CVIS) to store, report and share echocardiogram imaging. New features of the echo reporting module of the CVIS solution now enable physiologists to make real-time referral decisions. The new template to support the Valve Clinic was designed following close collaboration between NUH and McKesson. It builds on the standard functionality of our existing cardiology clinic through a reduction in the requirement for follow-up appointments.
The new NUH service is just one of a handful of similar specialist valve clinics that have been introduced around the country. These services, some of which were used as exemplars to help model our NUH clinic, often include direct engagement between patients and specialist cardiac nurses who manage all aspects of the service and liaise with other relevant health professionals when necessary to ensure patients receive expert specialist care. This is something NUH hopes to develop in the future. Likewise, it is anticipated that the clinic as a whole will be used as a training resource for cardiology doctors, physiologists and other doctors in training that want to listen to patient heart murmurs. The ability to offer this facility as we scan our patients promises to be a really valuable training resource.

From a patient care perspective, the Valve Clinic template will significantly enhance our databasing abilities — providing the opportunity for us to examine our patient database, conduct audit work and develop our research. Similarly, the potential to collaborate and share research with other valve clinics is something that we are keen to explore. These opportunities can only help us develop and improve our cardiology services in line with identified patient needs and evolving best practice across the NHS.

The bigger picture
The implementation of innovative services and the introduction of new pathways will be vital if the NHS is to meet some of its major strategic imperatives in the coming years. As demand on the service increases and healthcare expenditure falls, the need to develop more efficient patient-centred services that maximise NHS resources is paramount. Technology has a major role to play in redesigning the health services of the future — and in accelerating pathways so that patients can gain access to the most effective care. Improving cardiovascular outcomes, and alleviating the UK’s relatively poor mortality rates caused by heart disease, is a clear and important national objective.

The NUH’s Echo Valve Clinic represents a great example of how clinicians and technology partners can collaborate to help drive innovation and improve outcomes in areas of high priority. It’s relieving the pressure on providers, healthcare resources and, crucially, patients. And it’s most definitely worth echoing elsewhere in the NHS!

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