Better care without delay: heart failure

We continue our series on the Coronary Heart Disease Collaborative (CHDC) and turn our focus in this issue to its work in helping clinical teams improve heart failure services across the country.

Heart failure pathway

Heart failure is a subject that is equally challenging to primary and secondary care physicians but in different ways. These challenges, however, are different faces of the same problem but their presentation can lead to confusion and anxiety among some doctors treating heart failure patients.

The work of the CHDC is summarised in box 1. CHDC clinical leads have now seen a range of ideas for improvements, which have been identified and tested by different teams working on the heart failure pathway, some of which are discussed in this article. As in any CHDC initiative, the start of the process is to map out the patient's journey and then to identify areas for potential change. Many of the change ideas are not unique to the Collaborative, but the way in which the CHDC shares these ideas across different organisations and different parts of the country is central to delivering wider improvements to CHD services.

These approaches have been illustrated in this article using a hypothetical heart failure patient journey – at each stage of the journey, CHDC ideas have been tested. Box 2 illustrates further changes that have been made in various parts of the country.

Box 1. What is the Coronary Heart Disease Collaborative?

The Coronary Heart Disease Collaborative (CHDC) is a national programme and part of the work of the NHS Modernisation Agency. Involving a network of 30 local CHD programmes across England, its goal is to improve the experience and outcomes for patients with suspected or diagnosed CHD. These 30 local programmes help local teams to examine the care pathways travelled by cardiac patients across primary and secondary care. Drawing on the work of the National Service Framework for CHD, the aim is to fundamentally redesign systems for prevention, diagnosis, treatment and care of CHD.

Central to the CHDC approach is the idea that small changes in care can be planned and tested on a small scale, for example at patient, consultant or clinic level. If the change is found to be effective then it can be rapidly replicated on a wider scale.

The work is divided into six project areas: acute myocardial infarction, stable angina, heart failure, revascularisation, rehabilitation and secondary prevention and, for all of these, the project scope encompasses the whole patient pathway.

Support from the CHDC consists of advice, training in practical techniques and opportunities to share ideas at local and national level. These include:

- Mapping the patient journey
- Examining capacity in the system and the demand for services
- Understanding patient and carer views via discovery interviews
- Measuring for improvement, including a web-based reporting and information system
- Shared learning workshops

The Collaborative has published a series of service improvement guides containing practical examples to help jump-start local initiatives. Copies of these guides and other materials are available from the CHDC website www.modern.nhs.uk/chd or call 0116 222 5100.

Signs and symptoms

For example, one day, Molly a 72-year-old woman presents to her general practitioner (GP) with increasing breathlessness, swollen ankles and basal crepitations.

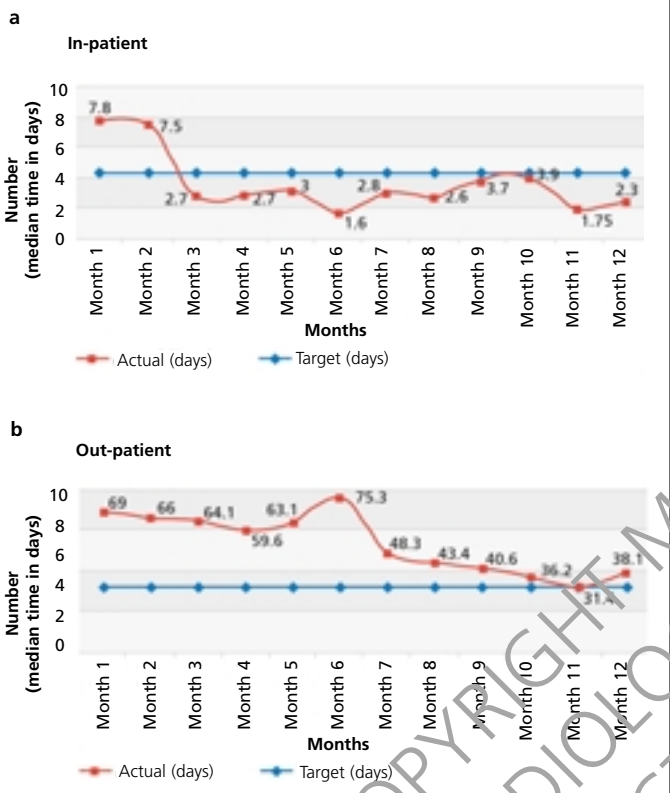
This case is typical of many presenting to primary care. If the symptoms are severe, the patient may need referral to the local emergency department.

More commonly, however, the problem for primary care is the accurate diagnosis of heart failure. Although the GP can request a chest X-ray and electrocardiogram (ECG), he/she can still be faced with managing the patient without a definite diagnosis. Echocardiography – generally considered the definitive diagnostic test – is usually only available via the local acute trust and can often be subject to delays of up to nine months. The GP, therefore, is presented with the dilemma of treating the patient based upon clinical symptoms alone, or referring the patient to either outpatients for echocardiography or the emergency department for further advice and treatment.

The CHDC has supported local organisations in redesigning the care pathway for heart failure patients with a particular emphasis on providing timely diagnosis and treatment. Significant changes can be made (see figure 1). In Poole, Dorset, for example, the wait for echocardiography in April 2001 was up to 18 days for an in-patient and up to 134 days for an out-patient. By February 2002, it had been greatly reduced to one to two days for an in-patient and 18 days for an out-patient.

This big reduction in waiting times was inspired after a

Figure 1. Graphs of **a**) in-patient **b**) out-patient echocardiography waiting times that have shown a dramatic reduction as a result of capacity and demand work at the nine Phase I CHD collaborative programme sites. The times (in days) is quoted from the decision to request echocardiography to results being obtained by the referring clinician



presentation on the North Trent CHDC programme at a Collaborative workshop. North Trent had previously also reported long waits for echocardiography and had looked at the number of requests for echo received each week compared to the number of available echo slots. To their surprise they discovered there were more slots than requests – but the requests and the slots did not match up. North Trent's excellent redesign work resulted in a reduction in waiting times. The Poole team replicated this and found the same improvements.

This encouraged the teams involved to focus similarly on other areas of their work.

Demand and capacity – a snapshot

In the National Health Service waiting lists are endemic. Lengthy waiting lists are often used to persuade management to increase funding, on the assumption that a waiting list proves that demand for a service exceeds supply.

In reality, today's capacity can be servicing last month's or even last year's demand and the 'work in progress' (i.e. waiting list) serves to act as a buffer between what the service is actually asked to undertake on a daily basis (demand) and its ability to do so (capacity). This pressure leaves the service feeling that demand is excessive, constant and insatiable.

'Demand and capacity' methodology measures daily demand, daily capacity, utilised capacity and the waiting list, all in the same units (e.g. minutes) over a period of time. The analysis, supported by detailed process mapping, can highlight areas where improvements can be made. The resultant redesign releases unused capacity.

Admission to hospital

Patients like Molly are often referred to the local emergency department where they may be admitted by a cardiology, general medical or care of the elderly team. Studies have shown that heart failure accounts for up to 20% of acute medical admissions.

A variety of initiatives have been implemented to reduce the number of referrals to emergency departments and also to reduce the need for admissions once a patient has presented there. In North West London the use of a nurse-led telephone advice service has led to a significant reduction in referrals to the emergency department and subsequent admissions to medical beds. The system provides instant access for patients and carers to heart failure nurse specialists who are able to adjust treatment early avoiding the need for admission.

If urgent admission is required, then emergency department staff and medical teams should ideally work to an agreed protocol for the management of these patients. In North West London such a protocol has been agreed between cardiology, emergency and acute/care of the elderly medical staff. This has been further strengthened by the training of ward-based 'link' nurses who liaise with the heart failure nurse specialist for advice and support.

This approach has been welcomed by patients. For example, one patient gave this favourable comment: "I am a patient with a heart problem and came to this hospital for admission. I was given a bed on the ward (cardiology) within two hours of my arriving in A&E. This admission, I have been impressed with the time in which all the tests requested were done. The heart scan (echo) and chest X-ray were done the next day following admission to the ward and the doctor explained the results to me (I was in acute failure). Although my wife speaks and understands little English, I was able to explain clearly to her in the presence of the doctor. She felt the staff were concerned about her as well, not just me – the patient."

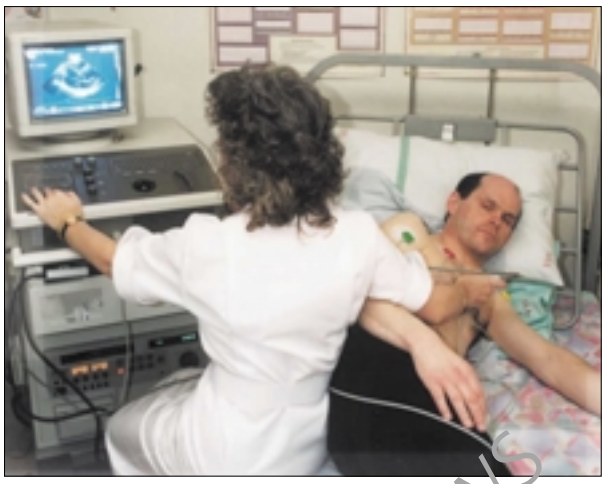
Discharge

After 14 days, Molly is discharged from acute care back into the community with a letter to take to her GP. The medication she must take has been explained to her.

A common situation highlighted by mapping the patient journey is the delay in discharge due to the long waits for echocardiography

Box 2. Small steps and big leaps – making a difference

There are many new models of care emerging from careful analysis and imaginative thinking around the whole patient pathway. As well as using demand and capacity tools to improve access, many services have examined the whole patient pathway and made significant improvements.



Nurse-led heart failure clinics have greatly improved services for patients

Community echocardiography
Community echo predates the CHDC but, in some areas, such as Poole, Colchester and Trowbridge, news of the success of some of these schemes has been spread via the Collaborative learning workshops. In North West London, the local Primary Care Trusts (also encouraged by improvements in the in-patient echo service) have combined with the acute trust to provide a new community-based echo service.

Nurse-led service
Often, heart failure is poorly managed by the health service and the patient. The provision of nurse-led clinics, supported in some centres by ward-based link nurses and primary care nurses, has led to an increase in the awareness and expertise available to treat this condition. The main aim is to treat and maintain the patients in the community (for example up-titrate drugs in primary care) and, if the patient requires expert help, have immediate access to diagnostic investigations, a consultant opinion or end of life support, as appropriate.

Patient and carer workshops
An eight-week programme of workshops for patients and their carers is another initiative developed by a team of cardiac nurse specialists at North West London Hospitals NHS Trust. Topics covered include what heart failure is, managing symptoms, medication, dietary and fluid intake, when to access appropriate healthcare, and dealing with anxiety and physical activity.

In County Durham, the Durham Dales Primary Care Trust employed a specialist heart failure nurse as part of the CHD nursing team in 2001. An initial period was spent auditing GP registers and establishing a heart failure patient register. The service was further developed so that each of the three specialist CHD nurses within the Primary Care Trust now see heart failure patients in their own clinic. The heart failure nurse provides advice and support to his/her colleagues allowing integration of ongoing care for heart failure patients into the overall management process for CHD in primary care.

In Cornwall, the Central Cornwall Primary Care Trust has supported the training of rehabilitation nurses in the care of heart failure patients. Now patients who previously attended the day care unit to have their drugs up-titrated, attend a nurse-led heart failure clinic where their drugs can be checked and altered if required, and they also receive advice and support in managing their condition.

services for in-patients. There are many examples of the CHDC supporting the reduction of in-patient waits for echocardiography – the Bedfordshire and Hertfordshire Collaborative has reduced waits from seven days to one day, for example.

Once discharge has occurred, evidence has shown that many patients do not maintain the required daily dose of drugs and fail to realise they must get another prescription once they have run out. Additionally, patients are often discharged on low dose ACE inhibitors, with the GP being expected to up-titrate to the optimum maintenance dose.

In the North Trent Collaborative, the issues of discharge information and drug compliance have been addressed by the use of a new heart failure specific discharge form informing the GP of when and how to titrate the drug doses. The Doncaster Royal Infirmary pharmacy department has also revised the labelling of heart failure drugs to remind patients they should visit their GP for a new prescription. They have also appointed a heart failure nurse whose brief is to follow patients both during admission and after discharge in the community. This is an excellent way of bridging the interface between primary and secondary care.

Palliative care in heart failure: effective links

One of the problems with managing heart failure in the community is that patients are often elderly with significant co-morbidities. A specialist heart failure nurse employed by the Darlington Primary Care Trust, as part of the CHD nursing team, receives post-discharge referrals from Darlington Memorial Hospital and follows the patients up – often seeing them in their own homes. This nurse works closely with the general community nursing team and contributes specialist knowledge about heart failure to the holistic management of the patient. In addition, the support of locally established 'hospice in the home' and a 'care of the dying protocol' have meant that the support required can be provided to

heart failure patients at the end of their life.

Patient experience

The CHDC aims to improve the patients' experiences of health care delivery and much of the work is informed by detailed patient feedback. To find out what is good and bad about their services, the CHDC has pioneered the technique of 'discovery interviews' with patients and carers.

For example, in some outpatient services, through discovery interviews, it became apparent that patients were being asked to get dressed and undressed again on three separate times for examination, ECG and echo – all at the same visit! Provision of towelling dressing gowns improved the patients experience and saved time.

Editors' note

More detail on discovery interviews, capacity and demand planning, and other support tools offered by the CHDC will be covered in future articles. Further information about how to contact the CHDC and case studies from the heart failure pathway is available on the CHDC website: (www.modern.nhs.uk/chd). CHDC initiatives in the acute myocardial pathway were covered in the last issue of the journal (*Br J Cardiol* 2003;**10**:101-04).

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