The new NHS: changing the face of British cardiology

The titles of the lectures at a recent Primary Care Cardiovascular Society (PCCS) meeting show the face of British cardiology is indeed changing. Control of NHS budgets and of patient care is shifting; guidelines for prevention of disease continue to change in line with new evidence; new ways of learning are being developed and yet more new laboratory tests are being pressed into service. As usual the PCCS speakers articulately covered the topics – they also had to be succinct as, after just 90 minutes, the session was over and it was 'all change' for the audience. Medical writer Ola Soyinka reports from the PCCS plenary session at the British Cardiac Society Annual Conference in Manchester on 25th May 2004.

The new NHS – who will control cardiology?

In the new NHS, the balance of control will, and should, shift towards the patient according to Professor David Colin-Thome, National Director of Primary Care.

He called the patient an underused resource and foresees more emphasis on developing the concept of the 'expert patient'. Such people can help to educate other patients on how best to manage their disease. He described an American model in which the level of input is stratified, based upon the degree of stability of the patient's condition. Stable patients are encouraged to pursue self-management and make more use of services such as the community pharmacy. Those who are less stable have more intensive input from the nurse or doctor – termed 'assisted care' – and the most intensive input is reserved for the most ill patients. Undiagnosed patients he singled out as deserving more attention, emphasising that "the real change in practice will be that we will have to look for problems and not wait for them to come to us".

The management of chronic disease will be the "big push" in the future, he says, and primary care will have to adapt to this situation. Primary Care Trusts (PCTs) will create the environment that will keep patients with chronic cardiovascular disease out of hospitals. He believes the new General Medical Services (GMS) contract with its promise of more money for primary care will be a great help. By improving the management of chronic cardiovascular disease, the need for hospital admission will be reduced, which in turn, he says, will offer an opportunity for expansion of services in the community setting.

> ***'We will have to look for problems and not wait for them to come to us'***
>
> David Colin-Thome

He believes general practitioners, now able to commission a whole range of services, will remain the mainstay of future care. PCTs are, however, being encouraged to cast their nets wider and also look at the hospital sector and the private sector to provide services. A whole range of Personal Medical Services (PMS) opportunities are also becoming available with the new community pharmacy contract.

So, ultimately, who will control cardiology? Dr Colin-Thome foresees a situation in which the main agent will be the PCT, and its agent will be the executive committees. But, he says, "what we are really asking when we ask who will control cardiology is how do we make a difference so that patients have more say in the way their care is organised".

The Joint British Guidelines for CVD Prevention in Clinical Practice

A preview of the new 2004 Joint British Societies guidelines was given by Professor David Wood (Imperial College, London), who explained that these will now emphasise cardiovascular rather than coronary disease prevention.

These guidelines have been developed by the four societies which developed the first joint guidelines in 1998 (the British Cardiac Society, the British Hyperlipidaemia Association [now H·E·A·R·T UK], the British Hypertension Society, and later the British Diabetic Association [now Diabetes UK]), with the addition of the PCCS and the Stroke Association. "We are now looking at targeting individuals who have a cardiovascular risk of over 20% over 10 years, (equivalent to 15% coronary heart disease risk)," he said, adding that patients with diabetes have been made a priority group.

Commenting on the new 20% threshold, he said that this was not "a magic figure" but "simply the chosen point at which the evidence is sufficient-

ly strong to justify treatment". He reminded delegates that the benefits are always greatest in those at highest risk. A patient's risk could be estimated, he said, with the following information: age, gender, smoking status, systolic blood pressure, and random non-fasting total cholesterol (TC) to high-density lipoprotein cholesterol (HDL-C) ratio. He urged doctors to remember, in calculating risk, to take into account lifetime exposure to tobacco and not just a patient's current smoking status. Pre-treatment cholesterol values should also be used.

The new guidelines will contain only two charts: one for non-diabetic men and one for non-diabetic women. There would be no longer be a separate chart for patients with diabetes since they should be treated as they are now classified as high risk. The charts would also not be appropriate for patients with established cardiovascular disease or familial hyperlipidaemia.

The new charts would use three age bands – under 50, 50 to 59 and over 60 years. One of the problems with risk estimation, he said, is that it tends to concentrate treatment in the older age groups, so in compiling the new charts, the risk estimation is based on the risks at 49, 59 and 69 years - the charts will therefore overestimate risk in patients under 40 years and underestimate risks in patients over 70 years. It is therefore important that clinicians use their judgment, he said, taking into account other risk factors not used in developing the chart – a family history of premature heart disease, for example, or raised triglycerides (above 2 mmol/L), premature menopause, impaired glucose regulation. A patient's ethnic group should also be considered since the charts will overestimate risk for Afro-Caribbean patients but underestimate it in Asian patients.

'We are now looking at targeting individuals who have a cardiovascular risk of over 20% over 10 years'
David Wood

The guidelines will also recommend that all high-risk patients should have at least two separate fasting glucose estimations to screen for abnormalities.

Professor Wood gave some examples of how risk levels should guide management in practice. Taking hypertension, for example, he explained that if a patient's blood pressure is over 160/100 mmHg, or if target organ damage is present, then risk estimation should not be carried out – the blood pressure should be treated. The same applies if the TC/HDL ratio is over 7, or if the patient is diabetic. But if a patient's blood pressure is 140–159/90–99 mmHg, then drug treatment will be decided by the calculated risk, or the presence of target organ damage. If drug treatment is not indicated then lifestyle measures should be taken. Similarly with lipids, if cholesterol is over 5 mmol/L and the risk is over 20% then lifestyle measures and drug treatment should be the management option, but if risk is below 20%, then lifestyle measures only should be used.

The post-graduate diploma for practitioners with a special interest in cardiology

A post-graduate diploma for practitioners with a special interest in cardiology, developed by the Bradford city teaching primary care trust, together with two other Bradford Primary Care Trusts, the Acute Trust, the Coronary Heart Disease Collaborative, the PCCS and Bradford University, was outlined by Dr Terry McCormack, deputy chairman of the PCCS and a GP in Whitby. The course is accredited by the Royal College of General Practitioners and has been recommended by the Royal College of Physicians.

He described the course as contributing to the extension of the role of practitioners with a special interest. It is structured deliberately to encourage development of appropriate pathways of cardiac care for all participants in their areas of work and is designed to run in collaboration with the local networks of care. Combining teaching and distance learning, the course is modular in design.

"There is a non-clinical module, an applied methodologies module, and three clinical modules (on hypertension, arrhythmias and conduction disorders; ischaemic heart disease; heart failure and valvular disease) which require the investigation, treatment and appropriate referral of patients," he said. All learning is evidence based.

Candidates can choose whether to study for a post-graduate certificate or a diploma. Practitioners wishing to apply must be registered practitioners, be able to provide evidence of support from their local Primary Care Trust and be able to provide evidence of support from an NHS consultant cardiologist, who will offer mentor supervision and enable local clinical work placement.

Debate: new diagnostics in cardiology – should BNP be routinely available?

For

The plenary session ended with a lively debate on whether assays for measuring plasma brain natriuretic peptide (BNP) assays should be routinely available. Dr Ahmed Fuat, a general practitioner in Darlington, opened in support of the motion, contending that the available data supported such assays in ruling out heart failure in patients presenting with symptoms in primary care. In other words, they had a high negative predictive value.

"BNP is an accurate measure of cardiac abnormality," he claimed, noting that studies had now defined accurate age- and gender-specific cut-offs for BNP plasma levels. He said that by using these normal ranges, specific cardiac abnormalities can virtually be ruled out.

> ***'BNP is an accurate measure of cardiac abnormality'***
>
> Ahmet Fuat

He also claimed that cost-benefit studies had shown that "if BNP was used before open access or one-stop heart failure clinics, money was saved for every identified patient with left ventricular systolic dysfunction (LVSD)". These cost savings could potentially result in money that could be reallocated across PCTs.

The tests are of great diagnostic accuracy in the emergency department, helping distinguish between cardiac and lung disease. Dr Fuat also described advantages of the tests in prognostic assessment and risk classification. High BNP levels are associated with cardiovascular risk and increased all-cause mortality. In myocardial infarction patients, a raised BNP identified those at risk of adverse left ventricular remodelling, heart failure and death. In unstable angina with no evidence of myocardial necrosis, BNP is associated with increased risk of death, while it is also a powerful outcome indicator in unstable angina.

Dr Fuat concluded that this "routine blood test for ruling out heart failure cardiac disease has a useful role useful role in primary and secondary care and already has a large and very strong evidence base."

Against

Speaking against the motion, Professor Richard Hobbs, of the University of Birmingham and PCCS Chair, maintained that the high negative predictive value of BNP came at a cost, as only one in five patients predicted as having heart failure will have it. The second big issue is where the data have been derived from. The large random population studies provide data on the performance of BNP in the general population, not the symptomatic or high-risk population in which the test would be used. Further, he warned, most data are based on LVSD (heart failure only about half of all heart failure patients) and not all-cause heart failure.

Professor Hobbs was also critical of hospital data, suggesting that the better data coming in were almost all in cases where there had been a high prior risk among the patients being referred. "GPs therefore have a high index of suspicion when referring the patients to hospital." He dismissed Dr Fuat's evidence base with the contention that "currently, data are significantly subject to both spectrum and reference bias", adding that most of the studies Dr Fuat quoted were too small. "We need at least one big prospective, adequately powered study looking at all patients who may have heart failure," he said.

He was also concerned about BNP thresholds, pointing out that these are derived from large populations (blood donors, for example), most of whom are under 65 and are asymptomatic, whereas most patients with heart failure are over 65 and are symptomatic.

Dr Fuat's economic argument, he said, was weakened by the fact that in all cases of BNP-positive testing an echocardiograph is needed to confirm diagnosis since four out of five identified patients will not have heart failure. Finally, on prognostic value, Professor Hobbs suggested that if one looked at a representative population, BNP will only predict half of the mortality in this lower risk population. "Perhaps the overall conclusion is that we need better echo services," he concluded.

The debaters came back for a brief concluding statement. Dr Fuat reminded the audience that BNP assays had weighty support from such august bodies as the National Institute for Clinical Excellence and the European Society of Cardiology. Professor Hobbs' last slide, perhaps aimed at those who had not been paying attention, was an attempt to confuse the laboratory assay with the political party. "Don't vote for the BNP," he said – but it didn't work. The motion was carried.

> ***'The high, negative predictive value of BNP comes at a cost'***
>
> Richard Hobbs

● **More news from the British Cardiac Society meeting can be found in the news section on pages 272–4**