VASCULAR SCREENING PROGRAMME MOVES FOCUS TO EARLY PREVENTION

The Department of Health has set out a new programme to detect levels of vascular risk and encourage patients and healthcare professionals to reduce it. Nerys Hairon reports.

The Department of Health recently announced plans to introduce vascular screening for all people aged 40 to 74 in 2009–2010. The programme, set to cost around £250m per year, aims to shift the emphasis to primary prevention of vascular disease (Vascular Programme, 2008a).

While the details of implementation are still being worked out, it is clear practice nurses and other community practitioners will play a significant role in carrying out screening. The RCN has warned that ensuring there are enough nurses with the right skills in place must be a key government priority if the programme is to succeed (Tweddell, 2008).

BACKGROUND
Vascular disease includes coronary heart disease (CHD), stroke, diabetes and kidney disease. It affects the lives of more than four million people in England, causes 36% of deaths (170,000 a year in England) and is responsible for a fifth of all hospital admissions (Vascular Programme, 2008a). People from disadvantaged communities and from particular ethnic groups, such as South Asians, are disproportionately affected by vascular disease.

While national service frameworks have already contributed to a substantial improvement – a 40% reduction in cardiovascular deaths in the under-75s since 1996 – the DH programme points out that it is now necessary to move the focus to prevention.

It draws a distinction between ‘fixed’ risk factors, such as age, sex, family history of vascular disease and ethnicity, and modifiable risk factors. The latter are:
- Smoking;
- Physical inactivity and sedentary lifestyle;
- Hypertension;
- Raised cholesterol levels;
- Obesity.

An editorial in The Lancet last year warned of a massive increase worldwide in adults with hypertension. It is predicted that the number of adults with hypertension worldwide will increase to 1.56 billion by 2025, compared with around 972 million in 2000 (The Lancet, 2007; Hairon, 2007).

The Vascular Programme also highlights the importance of tackling health inequalities in relation to vascular disease, as people in lower socioeconomic groups tend to suffer earlier and more severe disease. In addition, in some black and minority ethnic (BME) groups, vascular disease contributes significantly to premature death. In the UK, mortality from CHD is currently 46% higher for men and 51% higher for women of South Asian origin than the general population.

RATIONALE FOR SCREENING
Research indicates that it is possible to identify the risk factors for vascular disease and take action to modify them. According to the DH programme, early intervention to reduce risk can prevent, delay and – in some cases – reverse the onset of vascular disease.

In 2005 the UK National Screening Committee recommended that screening certain subgroups of the population at high risk of type 2 diabetes is feasible but that it should be carried out as part of an integrated programme to identify and manage cardiovascular risk factors.

Modelling
In response to this, the Vascular Programme has been exploring how a comprehensive risk assessment and management initiative could work, with vascular checks as a key...
element. The group modelled the effects of a systematic, primary care-based programme, testing the whole population for vascular risk, within certain age ranges at specific intervals. The aim was to assess and model effectiveness in both clinical and cost terms.

The group considered three different starting ages of 40, 45 and 50, going up to age 74, with re-testing every five or 10 years (Vascular Programme, 2008b). These ages were chosen because they represented an estimate of when people would most benefit from starting a specific disease management programme immediately.

The analysis found that all six scenarios of starting ages and frequencies were cost-effective in terms of being below the NICE threshold of £20,000 per QALY (quality adjusted life year). However, the scenario with a starting age of 40 with re-screening every five years was found to give the largest overall health benefit. It also had a very favourable incremental cost per QALY compared with the lower cost scenarios.

This initial phase of modelling concluded that a systematic, integrated approach to vascular risk assessment for all those aged 40–74, followed by personalised advice and tailored management, is effective in both clinical and cost terms.

IMPLEMENTING HEALTH CHECKS

The Vascular Programme's document (2008a) includes a diagram that outlines how the vascular risk assessment programme would be implemented (see www.dh.gov.uk). Healthcare professionals would carry out a standard assessment of questions and measurements to record basic information such as height, weight, age, medication, family history, smoking and blood pressure. A blood test for cholesterol levels and (in some cases) glucose levels would also be taken. Those at risk of kidney disease may have further blood and urine tests.

This would then be followed by an individually tailored assessment outlining the patient’s level of vascular risk and appropriate action to take to reduce it (see box, right). For those at low risk, this is likely to be general advice on how to maintain good health. Those at moderate risk may be recommended weight-management programmes, smoking cessation services or a brief intervention to increase physical activity. Those patients at highest risk of vascular disease might also require statin medication or antihypertensive treatment while, for those identified with impaired glucose regulation, an intensive lifestyle management programme may be advised. Some patients may need further assessment and referral to acute care.

The programme also expects to identify people with an existing, undiagnosed vascular disease, such as diabetes or kidney disease. In these cases, patients may benefit from starting a specific disease management programme immediately.

The Vascular Programme states that, overall, the modelling work has confirmed high levels of both clinical and cost effectiveness, against a range of assumptions when this approach is applied to all those aged 40–74. It is estimated over time the programme has the potential to:

- Prevent at least 9,500 heart attacks and strokes a year (preventing 2,000 deaths);
- Prevent at least 4,000 people a year from developing diabetes;
- Detect at least 25,000 cases of diabetes or kidney disease earlier.

To assess the impact of the planned programme on the individual GP surgery, the group looked at a typical GP practice with 5,600 patients on its list and modelled the effect of offering vascular checks to all patients aged 40–74 every five years. The modelling found this would result in an estimated 330 additional vascular checks per year. Of those who attended, an estimated 65% would be eligible for one or more of the lifestyle interventions, and an estimated 20% would require statins and/or antihypertensives in the first round of tests.

CONCLUSION

The Vascular Programme stresses the importance of offering screening in a wide range of settings to achieve the aim of reducing health inequalities. It emphasises that there is no blueprint yet for how best to deliver the scheme but it is envisaged that PCTs will be responsible for commissioning this service. The modelling work is continuing to establish the details of how to best deliver the programme to achieve the greatest health benefit while ensuring value for money. An impact assessment is due to be published later this year.

It is clear practice nurses and other community nurses will be vital in undertaking screening and encouraging patients to adopt preventative strategies to reduce their vascular risk.

<table>
<thead>
<tr>
<th>INTERVENTIONS TO REDUCE RISK</th>
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<tbody>
<tr>
<td><strong>Low risk</strong> (advice)</td>
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<tr>
<td>Appropriate feedback and maintenance plan to sustain good health</td>
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<tr>
<td><strong>Moderate risk</strong> (advice and assistance)</td>
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<tr>
<td>Appropriate feedback and maintenance plan. For example, referral to:</td>
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<tr>
<td>- Smoking cessation services</td>
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<td>- Obesity management</td>
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<tr>
<td>- Physical activity</td>
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<tr>
<td><strong>High risk</strong> (advice and intervention)</td>
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<tr>
<td>As with moderate risk patients, plus pharmacological interventions and/or intensive lifestyle programme for patients with impaired glucose regulation</td>
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<tr>
<td><strong>Disease diagnosed</strong></td>
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<tr>
<td>Existing clinical pathways</td>
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Source: Vascular Programme (2008a)