

## “Opportunistic” screening

This issue of the journal contains three papers on screening for abdominal aortic aneurysm. An issue that arises from the papers is that of so called “opportunistic” screening or testing – that is, offering a test for an unsuspected disorder at a time when a person presents to a doctor for another reason.

Derbyshire and colleagues from Oxford (page 220–2) report a study in men aged 65–74 years who were referred to a radiology department because of clinical features that warranted an abdominal ultrasound examination. The ultrasound was extended to include a screen for an abdominal aortic aneurysm, at little additional cost. Population coverage was poor – it was estimated that over five years about 15% of all men aged 65–74 would be examined in this opportunistic manner. But in the absence of a public health screening programme greater coverage than this is difficult, and, as the authors point out, it would seem better to do something than nothing at all.

The two other papers come from authors in Chichester and Birmingham who operated successful screening programmes for abdominal aortic aneurysm using local population registers. The high rates of acceptance in these two programmes were encouraging – about 75% in men aged 60–75 and 66% in men aged 76–80. The operative mortality for surgical repair of asymptomatic aneurysms detected on screening in the Chichester programme was 2.9%, well below the risk of death from spontaneous rupture of larger aneurysms over the ensuing 12 months.<sup>1</sup> These results reinforce the need for a national screening programme.

Systematic population screening has important advantages over opportunistic testing. There is universal coverage, and, because an explicit screening policy needs to be specified, there is a basis for ensuring that the benefits are achieved in a cost effective way, and for monitoring the programme. Opportunistic testing often has a poor coverage, and tests are apt to be misdirected – some individuals having too many too often, and others too few. Also, as it is often carried out among people seeking medical help, it will identify a disproportionate number of individuals with pre-existing illness, which may make the search for another disease, such as aortic aneurysm, inconsequential. Opportunistic testing may appear the cheaper option, but this can be deceptive. Avoiding the cost of the ultrasound screening test in aortic aneurysm screening saves only about 10% of the total cost of the screening programme as the elective surgery constitutes about 90%.<sup>1</sup>

The experience of screening for cervical cancer in Britain illustrates the weakness of the opportunistic approach. Cytological screening became widespread after 1964, but was done opportunistically. The result was a public health disaster.<sup>2</sup> The women who had cervical smears were those seen

with a clinical indication for a vaginal examination. Over three million smears were performed each year among relatively young women (who had vaginal examinations for family planning or antenatal care purposes), but opportunities to screen older women, in whom most of the deaths occur, rarely arose, and they were not screened. As a result the three million smears annually had little effect on mortality. In 1988 a systematic population based screening programme was established offering regular cervical smears to women up to the age of 65, and by 1992 the national five yearly coverage was 80%.

Opportunistic testing is usually done without explicit consideration of wider screening issues. Policy is determined locally, often by individual doctors. The service is fragmented, tests of proved value may be underused or used inefficiently, while tests that are ineffective or of unproved value may be widely used. There is inequity and wastage of valuable resources. These problems were highlighted in the report of the Advisory Council on Science and Technology (ACOST).<sup>3</sup>

Derbyshire and colleagues (page 222) mention three examples of opportunistic testing – measurement of blood pressure and intraocular pressure and testing for glycosuria. For the last two examples there is no evidence that such activity is worthwhile, and for the first example although lowering blood pressure reduces cardiovascular mortality, rational screening policies have not been formulated. Systematic analyses are needed. A proposed screening approach must be quantitatively evaluated and, if it is worthwhile, the evaluation used to specify how a screening programme should be conducted.

The absence of such evaluation, and of ensuing national guidelines and policies on screening for specific disorders tends to invite opportunistic testing as it is the only alternative that individual doctors or health authorities can offer.

Local opportunistic testing activity is not an acceptable alternative to systematic population screening. Its emergence should prompt research and the development of guidelines if screening is judged worthwhile. If it is, a national screening programme is needed, not opportunistic testing.

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- 1 Law MR, Morris J, Wald NJ. Screening for abdominal aortic aneurysms. *Journal of Medical Screening* 1994;1:110–16.
- 2 Editorial. Cancer of the cervix: death by incompetence. *Lancet* 1985;ii:363–4.
- 3 Advisory Council on Science and Technology. *A report on medical research and health*. London: HMSO, 1993.