

Screening: more action, less talk

SCREENING has been defined as 'medical investigation which does not arise from the patient's request for advice for a specific complaint'.¹ Its aim is to determine the presence or absence of a disease (or disease risk factor) in an individual who has no symptoms of the disease. The rationale for screening is that those at risk or in the early presymptomatic stage of a disease can be identified and the development or progress of the disease averted by secondary prevention. Screening is initiated by the doctor, in contrast with normal medical care which is initiated by the patient and is based on specific symptoms. Case-finding is an opportunistic form of screening where advantage is taken of a patient-initiated contact to carry out an unrelated screening procedure. Case-finding is less aggressive than screening programmes which aim to cover the whole population and it represents the 'anticipatory care' originally described by Van den Dool as the screening method most appropriate for primary care. In addition, as case-finding is part of normal medical care the abnormalities detected can be dealt with by those detecting them.

All screening imposes additional ethical obligations on the doctor. An essential prerequisite of any screening procedure is the availability of an acceptable and effective remedy for the abnormality identified. Labelling an individual as sick or at risk cannot otherwise be justified. Also important is the problem of false negative and false positive results. A false negative result for an affected individual is wrongly reassuring and a false positive result for a healthy person will not only cause unjustified anxiety but will also expose the person to the risk of unnecessary and possibly harmful treatment.

Few medical issues arouse such a polarization of views as screening; on the one hand there are those who see any form of screening as a good thing and on the other there are those who believe that apparently healthy people should be left alone. Fashions change and so do attitudes to screening. Enthusiasm for screening increased in the 1950s and 1960s, stimulated by the awareness of the amount of undetected disease in the community. There followed a critical assessment of the cost (financial and otherwise) versus the benefits of screening activities.² Few screening procedures emerged unscathed from this scrutiny and the general enthusiasm for screening waned.

Screening is now making a come-back and is contributing to the increase in preventive activities in primary health care. There is evidence that many general practitioners now regard screening as important³ and so do their patients.⁴ A recent Royal College of Physicians conference on screening not only approved of this revival but also endorsed the view that the scope for implementation, particularly in primary care, is considerable. Among the issues raised at the conference were the new opportunities for antenatal screening — such as the detection of neural tube defects and chromosomal abnormalities — arising out of modern technological developments. But the issue which provoked most concern was screening in adults. The relative failure of the cervical cancer screening programme in the UK was reiterated — the technique is effective but those most at risk are still not being screened. Over two million cervical smears are taken annually but this is having little impact on the incidence of cancer of the cervix. Although the outcome of the Department of Health and Social Security's national trial of screening for breast cancer is still awaited, evidence for a more active approach to screening for this disease does appear to be accumulating.

© *Journal of the Royal College of General Practitioners*, 1985, 35, 315-318.

Undoubtedly the issue discussed at the RCP conference which had most significance for general practitioners was screening for cardiovascular disease. Michael Oliver discussed the continuing uncertainty concerning screening for blood lipids, particularly the effectiveness of intervention and its possible harm. It was felt that lipid screening should be confined to those with a family history of premature vascular disease, those under 55 years of age with overt coronary heart disease and those with stigmata of hypercholesterolaemia.

Geoffrey Rose emphasized the limitations of screening and the problem of predicting individual risk. Although screening identifies those who have the highest relative risk, the 'high risk' group, because of its relatively small size, accounts for only a minority of cases — the majority occur in the much larger 'low risk' group. The importance of studying the level of risk factors in the population as a whole for a mass disease like coronary heart disease was stressed. Risk factors are common and their average level is too high. The risk of disease is not therefore confined to a deviant minority.

Doctors are trained to be concerned with the diagnosis and management of problems presented by patients. They are not trained to look for trouble. However, the limitations of this approach are recognized and if all of the disease iceberg⁵ is to be tackled, screening must play an important part. Technological advances can be expected to provide further opportunities for the detection of genetic and other disorders by antenatal and neonatal screening. But for the general practitioner, the major potential for prevention offered by screening will remain in those fields which are already established and of proven benefit but where screening still needs to be effectively implemented. Two decades of screening for cancer of the cervix have made little impact on the disease, not because the test is ineffective but because of the failure of application. The declining rate of mortality from cardiovascular disease found in many countries is not found in the UK and this may, to some extent, be attributable to our failure to screen those patients who are at risk. Advantage should be taken of the opportunity for screening provided in the UK by contact between the primary care team and the population, since about three-quarters of the population consult at least once a year. In order to do this, the true potential of the primary care team, particularly the potential of the practice nurse, needs to be realized.⁶

As with improvements in medical treatment, better screening will depend more on the effective application of what is already known and is of proven benefit than on new discoveries. The reorganization of health services so that valid screening can be effectively applied will be one of the major challenges in the next decade.

GODFREY FOWLER

*General Practitioner, Oxford, and
Clinical Reader in General Practice, University of Oxford*

References

1. Nuffield Provincial Hospitals Trust. *Screening in medical care: reviewing the evidence*. Oxford University Press, 1968.
2. Wilson JMG, Jungner G. *Principles and practice of screening for disease*. Public health paper no. 34. Geneva: World Health Organization, 1968.
3. Catford JC, Nutbeam D. Prevention in practice: what Wessex general practitioners are doing. *Br Med J* 1984; **288**: 832-834.
4. Wallace PG, Haines AP. General practitioners and health promotion: what patients think. *Br Med J* 1984; **289**: 534-536.
5. Last JM. The clinical iceberg. *Lancet* 1963; **2**: 28-31.
6. Fullard E, Fowler G, Gray M. Facilitating prevention in primary care. *Br Med J* 1984; **289**: 1585-1587.