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Protecting our health

The role of primary care in disease prevention

At the heart of primary care is the concept of preventative medicine, the belief that diseases or disability should be avoided rather than treated. How to put this into practice is something which has to be considered by all general practitioners (GPs). On a purely economic basis, the benefits associated with preventative medicine are considerable. Not only are resources for treatment not required, but the individual can also continue working and contributing to the economy. Unfortunately, however, not all conditions can be prevented. Examples include salmonella and other infectious diseases which can be acquired from contaminated food. On the other hand, conditions such as type 2 diabetes can be largely prevented. With a rapidly ageing population in many developing countries, it is important that prevention should have a high priority in primary care.

Three different aspects of prevention need to be taken into account by GPs when considering the services they deliver. Primary prevention, or the promotion of health and the prevention of illness, involves vaccination programmes and efforts to ensure that a safe environment is provided for individuals. **Lifestyle modification** (providing advice and encouragement to patients on how to change to healthier behaviours) is a tool for achieving this at an individual level. Smoking cessation clinics are a good example of this. At a community level, awareness campaigns can be used – for example, putting up healthy eating posters.

Secondary prevention is concerned with the early identification of disease and the provision of prompt treatment to minimize its damage. This can include running screening programmes for various diseases.

Tertiary prevention is about reducing the effects of disease or disability on the patient, which can involve minimizing the patient's suffering using appropriate analgesia (pain relief), as well as promoting **self-management**, the management of a condition by the patient themselves. Effective self-management is often possible, for example, for patients who have diabetes.

Screening programmes, **in which** tests are carried out for a specific condition at regular intervals, are one of the most important secondary prevention tools which GPs use. Screening can deliver considerable benefits in minimizing the effects of disease. When used with **profiling** **that is**, identifying patients likely to develop specific conditions using data from patient records, it can be very cost-effective. Early diagnosis, when conditions or diseases are identified at an early stage, often means that diseases are easier to treat and can be completely cured in some cases. Diseases often screened for include cervical cancer, breast cancer and heart conditions. However, screening is not suitable for all diseases. Some tests produce a high number of **false positives** – results falsely indicating the presence of disease. Further testing may be required for confirmation, which can be distressing for patients. Tests can also be expensive and may return

few results if incidence rates for a disease are low. Care needs to be taken in deciding whether to set up a screening programme for a specific disease.

In the developed world, targeting three disease-linked behaviours could provide huge benefits, in human and financial terms. The first of these is tobacco smoking, which causes death through lung cancer and vascular disease as well as chronic obstructive pulmonary diseases. It is estimated that around 100 million deaths were directly attributable to tobacco smoking in the 20th century, and that by 2030 around eight million people will still die from smoking each year. Secondly, eating too many fatty and sugary foods and not exercising is one of the main causes of diabetes. According to the WHO, diabetes is likely to be one of the most substantial threats to human health in the 21st century, with a projected financial cost of \$622 billion by 2030 for the United States alone. If diagnosed early, it can be managed relatively easily. The final behaviour is alcohol abuse. Studies show that the misuse of alcohol can be responsible for up to 5% of hospital admissions and can impact significantly on the incidence of heart disease, diabetes and liver failure. The medical profession has known for a long time that population health is improved by prevention. With a rapidly ageing population, it is important that a similar conclusion is reached by governments in the developed world.