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An overall perspective

This book is concerned with promoting the good health of individuals who have already reached old age. This may be achieved by a number of strategies that have been variously described as preventive health care, health promotion or health maintenance. Unlike the situation for younger people, however, interest and knowledge about the preventable problems of old age and strategies to combat these problems are still in their infancy. Irrespective of the age group under consideration, there is also a good deal of emotional controversy surrounding many preventive care strategies. Several of these issues are discussed in detail in later sections of this book. This chapter broadly sets the scene for health promotion and preventive care and begins by defining what is meant by the terms elderly people and old age.

What is meant by old age?

This book concentrates on people who have already reached old age or who are elderly persons. The concept of what is meant by these terms has changed gradually throughout human history and has altered markedly in the last hundred years. In previous centuries, because of the considerably shorter life expectancy, older members of society would be those who, in present day terms, might not yet have reached middle age. However, from the early part of the twentieth century, the age when someone becomes 'elderly' has, for largely political and economic reasons, been considered to start around the age of retiral at 60 to 65 years. Most of this population are, however, relatively fit and vigorous. From a health perspective therefore, a more realistic definition of old age begins around 75 years and upwards. It is this sector of the population that has increasing concomitant medical disorders [1] and resultant physical and mental disability. Even if free from disease, homeostatic reserve in the various

organ systems is sufficiently impaired in the majority of this age group [2] to require particular care with their medical intervention and particular effort in the restoration of physical function after illness. A large section of those over 75 years of age have also lost much of their prior system of social support and are at increased risk of institutionalisation [3].

Ideally, old age might best be applied not to the chronological age of an individual but to the extent to which they have aged biologically. The difficulty is in establishing markers that will identify this 'functional age'. For example, Costa and McCrae [4] reviewed data that attempted to use single or multiple criteria for this purpose. This included an analysis of over 600 normal persons in the Boston Normative Study followed over a ten-year period. They concluded that neither anthropometric nor psychosocial variables nor even medical parameters predict ageing changes or death better than does simple chronological age.

In the absence of a precise means of defining 'functional age', this book will allude to elderly people or old age as referring to 'chronological age' from the mid-sixties onwards. It is appreciated, however, that this also is an imperfect definition that results in two broad categories of older person: the relatively fit 'young old'; and an often less fit 'old old' occurring from the mid-seventies onwards.

The potential benefits of health promotion and preventive strategies

A considerable number of benefits have been suggested for preventive care and health promotional strategies in an elderly population. These are now considered separately.

Mortality

An ethical debate could be mounted over the value of prolonging life in old age and certainly few would maintain that prolonging life per se was the primary focus of preventive care and health promotional programmes for this age group. Nevertheless, for many of the fitter members of the elderly population a decrease in mortality and an increase in life expectancy seem reasonable expectations.

The average life expectancy for people entering old age at 65 years has undoubtedly increased, from 11.9 additional years at the turn of this century to 14.3 additional years by 1960 and 16.1 years by 1976 [5]. However, it is difficult to ascribe these changes to preventive care or health promotional

measures as these methods were in their infancy prior to the early 1970s. Most of the benefit, therefore, seems attributable to better medical treatment and care. There has also been little further improvement since 1976, suggesting a boundary to upper life expectancy. It is quite likely therefore that, irrespective of the extent to which it is considered desirable, mortality rates for this age group may prove stubbornly resistant to preventive care and health promotional strategies.

Morbidity

Society has long used the adage that health care should be about adding 'life to years' rather than 'years to life'. It is therefore encouraging that there appears to be significant potential to delay the morbidity and disability associated with disease. Fries [5] points out that, when considering the prevention of cardiovascular disease 'in every randomised trial of primary prevention, effects on morbidity have far exceeded effects on mortality'.

Notwithstanding the definite lessening of morbidity that can result from preventive care strategies, there is still no unanimity of opinion about the overall future health of the elderly population. This depends on the *relative* rates of movement between the average age of onset of disease (or disability) and the average age of death (see Fig. 1.1). On the one hand, Fries [5] believes that mortality rates for elderly people in Western societies are now becoming resistant to preventive interventions whilst, as described above, significant potential still exists to delay the onset of disability. A 'compression of morbidity' therefore results in an overall more healthy older population. Alternatively, Kramer [6] and Gruenberg [7] point to the significant fall in mortality in old age that occurred in the 1970s and suggest that this has not been accompanied by much decrease in morbidity but rather is a result of the increase in life expectancy of people with poor health. Kramer [6] therefore predicts increasingly poor health in the elderly population with a subsequent 'pandemic of mental disorders and associated chronic diseases'.

An accurate prediction about the overall health of an elderly population is obviously of importance for the formulation of government policies directed at the provision of services. A resolution to the above debate is therefore currently being attempted using the notion of disability-free [8] or active life expectancy [9]. Review of the current evidence suggests that at the age of 65, men can expect 8 years of disability-free life and women 10, with the life expectancy being respectively 14 and 19 years. There are also significant disparities in these figures between various socioeconomic groups (see p. 231).

Wellbeing

The above benefits of preventive care are largely 'medically' orientated and carry with them an implicit message that old age is about illness and disability. This is, however, a false stereotype. Illness and disability usually do not occur until old age is well advanced and even then affect only a minority. Hence, in the above discussion about old age, the importance of the distinction between the 'young old' and the 'old old' was emphasised. Furthermore, Laslett [10], in considering the traditional 'ages of man', suggests that the 'young old' are in a *third age*, which should be one of positive development, of personal

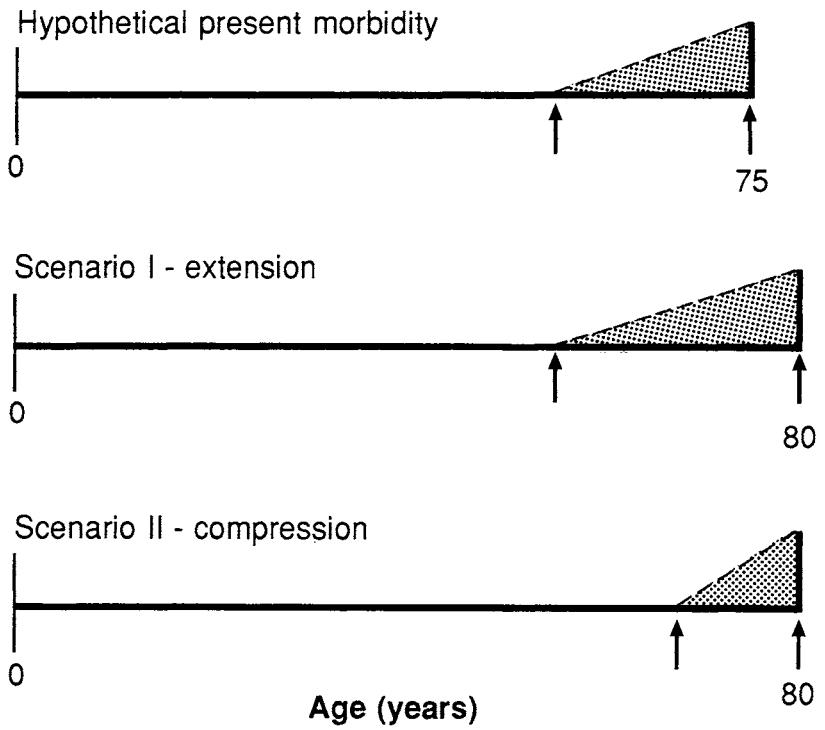

Fig. 1.1. The association between average age of death and average age of onset of morbidity. In the hypothetical present model, average age of onset of morbidity occurs at age 60, increasing in frequency to a maximum (indicated by the shaded area) at average age of death at 75. Extension of lifespan, without change in the average age of onset of morbidity (scenario II), results in a larger population in poor health. If there is still the potential to delay the onset of morbidity [5], without changing average age of death, then a smaller proportion of elderly people are in poor health (scenario II). Adapted from ref. [5]

achievement and fulfilment. This is then followed by a *fourth age* of 'dependence, decrepitude and death'.

Health promotion (as distinct from preventive care practice) has been seen as a major vehicle in helping the elderly population to realise and achieve the more positive aspects of health in old age. On the one hand, health promotion places considerable personal responsibility on elderly individuals through advice and exhortation that they adopt healthy lifestyles and practice regular 'body maintenance'. Some of these self-care programmes have been evaluated in randomised controlled trials and have resulted in improved psychological wellbeing, confidence and some coping skills [10a, 11]. On the other hand, health promotion should be concerned about activities that enable and empower older people to achieve their full potential. Minkler and Pasick [12] rightly express concern that in the USA, health promotion has previously been unduly focussed on individual *responsibility* for health at the expense of ignoring the individual's *response-ability*, that is their capacity for responding effectively to the challenges posed by the environment. *Response-ability* requires consideration of the elderly person's housing and transportation needs, level of income, access to services and many other social issues. Real success therefore requires mechanisms that enable society to focus on individual behaviours and enable it to supply social choices. If Filner and Williams' [13] definition of health as 'the ability to live and function effectively in society and to exercise self reliance and autonomy to the maximum extent feasible' is accepted, then the remit of health promotion must encompass 'any combination of health education and related organizational, political and economic interventions designed to facilitate behavioural and environmental changes conducive to health'.

Carer burden and stress

Until recently, the role of preventive care and health promotion in minimising caregiver stress has been neglected. Research and service programmes have had delayed institutionalisation and financial savings as their primary focus, rather than the wellbeing of carers. However, the continued ageing of society, an improved knowledge of the problems experienced by family carers and the heightened awareness of these problems amongst service providers as they have been brought to their attention through various advocacy groups, is changing the situation. Now, the emphasis has shifted towards accepting that family carers have rights of their own to a certain quality of life and to the limit of stress to which they may be subjected. The preventive care and health

promotional strategies outlined later in this book are therefore based on these latter assumptions (see also p. 26).

Societal burden

A healthier elderly population might benefit society in a number of ways: for example, society might use its more active sapiental authority, or its workforce may have a lengthened potential activity. Overwhelmingly, however, the societal benefits of preventive care and health promotion have been seen in the context of a reduced need for resources and accompanying cost savings. This issue has had such political backing that it is discussed separately in the following section.

Health promotion and cost savings

There have been many notable advocates of using health promotion and preventive care as ways of reducing health care costs. Indeed the logic of the allegory of health promotion refocussing upstream, to where people are being thrown into a river, rather than conventional health care, which merely tries to pull them out downstream, is superficially attractive. However, the situation is far more complex than is immediately apparent. Refocussing upstream is efficient only when the point at which people are entering the water is within reachable distance. They must also be entering the water at an identifiable and limited number of sites and something must be able to be done to stop them taking the plunge. Whilst redirecting resources to refocus upstream, it must also be accepted that a number of people will drown as they are allowed to float past farther downstream.

The idea that preventive strategies will save costs is, therefore, far too simplistic. Several economists have reviewed the evidence [14, 15] and are mostly in agreement. Russell [14] summarises this by saying 'even when the financial cost of the preventive measure looks small, careful evaluation often shows that the full costs are rather large, larger than any savings'. In fact, prevention usually adds to medical expenditure. A detailed discussion on the costs of health promotion and preventive strategies is provided in Chapter 14.

Risks and disadvantages

Despite the many advantages of health promotion and preventive care for elderly people, there are also several potential risks and disadvantages.

1. One of the commonest preventive measures is screening for early undetected disease. However, the screening process identifies a number of entirely healthy individuals who, because of the inadequacies of the screening test, are wrongly identified as having a problem or risk factor. These individuals who show 'false positive' must then be subjected to further (and usually more complex) investigation before being proven to be well. Inherent in any screening programme, then, is the need to inconvenience a few to benefit the majority. No matter how much this problem is minimised, some continue to feel that screening can be achieved only by coercion and deception and that this is invariably an infringement of an individual's personal liberty. Practically, screening programmes for elderly people must ensure that any benefit outweighs any harm and that, ethically, each elderly person must be accurately informed of the balance between risks and benefits.
2. A related and particularly important issue is that with age there is a decline in physiological functioning in almost every organ system, particularly after the eighth decade of life. Consequently, the elderly person has a significantly decreased homeostatic reserve to deal with the stress and challenges imposed by the detection and treatment of early disease and is particularly vulnerable to iatrogenic insult arising from preventive care measures.
3. There is well-documented evidence that certain preventive care strategies such as screening may also do psychological harm by arousing anxiety where none existed before. For example, fear and anxiety in women screened for cervical and breast cancers is well recognised and the same has been found in screening programmes for male hypertensives [16]. Stoate [17] has also shown that general practice patients screened for coronary heart disease scored more highly three months later on a psychological distress scale, as measured by a general health questionnaire, than an age-matched control group.
4. Identifying and highlighting health problems, for example by case finding, in elderly people who are already suffering from chronic incurable illness may be excessively stressful, if not to the older people themselves, then to loving family carers who may already be worrying excessively. This may lead to the loss of the older person's autonomy (for example by being persuaded to go into a nursing home), or worse (if the additional problem identified has no known cure), to the elderly person being taken from doctor to doctor in the hope of some research treatment being available.
5. Health promotional programmes have tended to focus on elderly individuals by placing upon them a responsibility to minimise the risks to their health through their adopting a healthy lifestyle. However, many elderly people do

not wish to change the habits of a lifetime. Consequently, they may be victimised, or blamed as 'deserving' the various ailments from which they suffer, simply because of their obdurate approach.

6. Preventing the health problems that occur in old age can, in extreme cases, be a sign of maladjustment to the ageing process. For example, avoiding grey hair and wrinkles, or baldness may for many be an expression of choice, yet for a few it can also be a sign of concern or even denial of the ageing process. Rather than preventive measures, some form of psychological counselling may be more appropriate.
7. It is possible that an emphasis on health promotion or preventive care becomes merely a highly publicised, token gesture of interest in the health problems of old age while the real problems of neglect and inequity of resource distribution are left unaddressed. This fear mirrors some of the previous concern in the USA about screening black races for sickle cell anaemia [18].
8. Health maintenance of elderly people is a relatively attractive concept for clinicians. However, it allows them to concentrate on the relatively more attractive 'young old' and salves their conscience about their relative neglect of a wide range of more pressing health problems in those who are more frail [19].
9. The increased awareness of health issues (brought about in part by health promotion programmes) has been suggested as a reason for a decline in people's subjective sense of healthiness in the USA. Health is becoming so industrialised and commercialised that it may enhance many people's dissatisfaction with their health.

Variance

There is considerable variation around the world in the degree to which countries have adopted health promotion and preventive strategies. In some it may be a matter of timescale, in that the country is still struggling to generate wealth or to introduce political stability, public health measures or an adequate health care system and does not yet consider preventive strategies as a priority. In more affluent societies, the variation may be partly cultural depending on the extent to which its individuals believe in scrutiny by other individuals or believe in taking responsibility for their own destiny. Variation will also depend on the stoicism that individuals have developed from their life's experiences. This latter aspect is particularly important for an elderly population that has experienced the hardship and traumas of war. As younger generations age, their expectations will no doubt increase, yet their acceptance

of the tribulations of old age may at the same time be less well tolerated. The affluence of society itself further explains variation in interest in preventive care, and there becomes a thin dividing line between the adoption of appropriate health promotional strategies and a society's narcissistic pursuit of hedonism.

Politics is a further reason why the adoption of health promotion varies from country to country. For example, its comprehensive adoption in the USA may in part have been due to the Carter Administration (1976–80) which was retreating from introducing a national health insurance policy because it was considered too expensive. 'Raising the banner of prevention therefore, coincided very nicely with the retreat from national health insurance; presumably, it was both cheaper and better.' [20] However, politics also operate within the health care arena and health promotion is still used vociferously as a way of leading health services away from its intensely biotechnological stance towards a more holistic approach. It is also used as a means of promoting community versus institutional or hospital care. Interestingly, the strength of these political reactions seem in direct proportion to the perceived imbalance of the existing health care system, which again may explain the influence of the preventive care movement in the USA.

Lastly, variation in the extent of preventive care in a country depends on the nature of its existing health care system and how it is funded. Perhaps the biggest incentive to implement preventive care measures is the sort of fee-for-service system previously seen operating in the USA. Regrettably, this leads to unacceptably high levels of intervention and iatrogenic insult, particularly in elderly individuals. Conversely, in a relatively underfunded 'blanket' national health service, such as that in the UK, health promotional measures are viewed far more sceptically; the existing distribution of scarce resources within health care are often maintained at the expense of introducing useful preventive strategies.

Primary, secondary and tertiary prevention

Traditionally, preventive strategies have been considered in three categories. *Primary* prevention consists of those measures designed to reduce the incidence of disease in a population by delaying the age of onset. *Secondary* prevention consists of those measures designed to reduce the prevalence of a disease in a population by shortening its course and duration. *Tertiary* prevention consists of interventions to minimise the resultant distress, disability or handicap.

Over the years this categorisation has served well in clarifying thinking and

serving as an operational basis for preventive strategies with younger populations. Regrettably, however, the distinctions between primary, secondary and tertiary prevention fit poorly into the language of chronic disease because there is so much overlap and duplication. For example, a risk factor for hip fracture, such as falls, is also a symptomatic health problem in its own right that requires preventive measures. Also, because hypertension is a risk factor for cerebrovascular disease, a tertiary preventive strategy, such as a reduction of high blood pressure, becomes at the same time a primary preventive strategy for stroke.

Kane [21] has also tried classifying traditional preventive activity according to the World Health Organization's classification for chronic disease [22]. This defines three points in a continuum: *impairment* of an organ system created by disease; *disability* that results in dysfunction; and social *handicap* that results despite compensatory efforts. Nevertheless, significant difficulties were encountered in using even this system because of 'blur and overlap' that required somewhat arbitrary decisions to be made in categorisation.

In view of these problems, little attempt is made throughout the remainder of this book to consider separately strategies concerned with primary, secondary or tertiary prevention. Instead, as actually happens in caring for elderly people, a mix of these strategies is considered together.

Separation versus integration

'Preventive care' and 'health promotion' are not synonymous terms nor necessarily similar activities. Each has a different focus in relation to the types of strategy employed and the evolutionary stage of the health problem at which they are targeted. Regrettably, an uneasy tension is often seen between those who espouse preventive health care and those who propound the benefits of health promotion.

Some of the reasons for this are immediately apparent. Health promotion tends to be conducted outwith the health care arena. However, preventive health care is an integral part of the training and daily practice of health care professionals. Health promotion finds lay personnel, government departments and public health professionals in its ranks of advocates, whereas preventive health care traditionally includes doctors and nurses among its supporters. Health promotion espouses a more social model of care, preventive health care a more disease orientated one.

Some of the reasons for the tensions between health promotion and preventive care are less obvious but more distressing. Essentially it comes down to the proponents of one philosophy trying to gain control over the