

The **Language of Prevention**



The Language of Prevention

Introduction 2

The concept of prevention 2

The levels of prevention 3

Prevention and public health 7

Benefits of prevention 7

Tables

Table 1: Levels of prevention 4

Table 2: Examples of primary, secondary and tertiary prevention related to selected diseases and national health priority areas 6

Figures

Figure 1: The Dahlgren Whitehead model of health 3

Figure 2: Comprehensive model of chronic disease prevention and control 8

© Copyright: National Public Health Partnership 2006

Copies of this publication can be obtained from the National Public Health Partnership website:
www.nphp.gov.au

ISBN (print): 0-9775144-5-5
ISBN (online): 0-9775144-6-3

Suggested citation:

National Public Health Partnership (2006). *The Language of Prevention*. Melbourne: NPHP.

The Language of Prevention

This brief explanation of the language of ‘prevention’ from a public health perspective, aims to foster a common understanding of prevention terminology across the continuum of prevention and care. Effective communication amongst health professionals and policy makers is essential to a strengthened integrated capacity for preventive action and improved community health and wellbeing. Recent national initiatives to improve the health status of the population have emphasised the opportunities for the health system and society in providing an increased focus on the prevention of disease and disability, concurrent with the on-going need for quality health care. The following overview of the concept of prevention should facilitate integrated preventive action across the continuum of prevention and care and better enable workforce participation in financial and structural reforms for improved health outcomes.

Introduction

A description of the concept of ‘prevention’ is provided as the term is used to refer to the efforts of society to promote, protect and sustain the health of the population. This description is based on the customary public health categorisation of **primary prevention**, **secondary prevention** and **tertiary prevention**.

Preventive actions are developed and implemented by a wide range of health disciplines to address many facets of disease, disability and injury control and management. With this diversity of use has come differences in the way in which prevention is categorised and communicated within the health sector. A shared understanding of frameworks of prevention can facilitate coordination of effort, collaboration on new solutions, effective use of valuable resources and sharing of experiences and expertise.

The National Public Health Partnership has previously developed a strategic framework for chronic disease prevention that presents the case for prevention and clarifies the various contributions of the health sector

within the context of the continuum of care and the lifecourse of the population.¹ Building on this resource, The Language of Prevention aims to reinforce and stimulate the broader opportunities for prevention across the health system and to provide a guide to the public health terminology of prevention.

The concept of prevention

Prevention can be simply defined as ‘action to reduce or eliminate or reduce the onset, causes, complications or recurrence of disease’.²

In general, the concept of prevention is characterised by activities that are designed to reduce the likelihood that something harmful will occur, or to minimise that harm if it does occur.

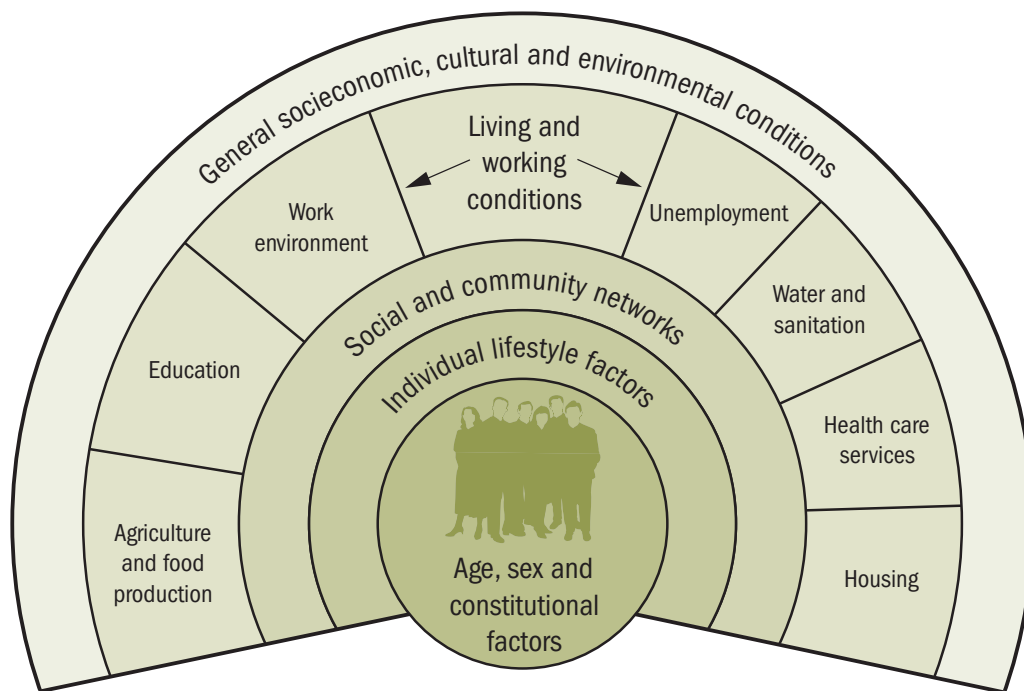
Prevention is an important component of many aspects of public policy (for example crime prevention, child abuse prevention, road safety), many of which also contribute, directly or indirectly, to health. The health sector can play a lead role in preventive initiatives or a supporting role when it is more appropriate for other sectors to provide leadership. The familiar model shown in Figure 1 illustrates the breadth of individual, social, socioeconomic, cultural and environmental conditions affecting the health of individuals and communities. These conditions are both proximal (direct) and distal (indirect), highlighting the potential for public policy to influence the determinants of health and the opportunities for prevention by stakeholders in health and other sectors.

In the health arena, prevention is seen as one of the core responsibilities of organised health systems – alongside the curative, restorative and palliative functions – and is an increasingly important element in societal efforts to improve health.

¹ National Public Health Partnership (2001). *Preventing Chronic Disease: A Strategic Framework*. Background Paper, NPHP.

² Australian Institute of Health and Welfare (2004). *Australia's Health 2004*. Canberra, AIHW Cat. No. AUS 44, p.496.

Figure 1: The Dahlgren Whitehead model of health



Preventive activities focus on those major health problems, which are known to be amenable to intervention. For many other health conditions, treatment and care is the mainstay and prevention may have less relevance. The prevention of illness or disability requires the identification of modifiable risk and protective factors and the implementation of strategies to eliminate or reduce these risk factors and/or maximise and increase the protective factors. An example would be the reduction of harmful/hazardous consumption of alcohol (risk) and the increasing of self-efficacy, social support and resilience (protective).

The levels of prevention

It has previously been noted that there are several ways of categorising preventive measures, according to the stage in the natural history of disease at which they are introduced; the determinants of disease which are being addressed; the target groups to which they are applied; and the setting or level of delivery of preventive measures.³

³ Sindall C and Stratton J (2003). Unpublished discussion paper: *Perspectives on Prevention Terminology*. Department of Health and Ageing.

In public health it has been common practice to categorise the different goals – or levels – of prevention across a ‘stages of disease’ continuum in terms of primary, secondary and tertiary prevention.

The goal of *primary prevention* is to limit the incidence of disease and disability in the population by measures that eliminate or reduce causes or determinants of departures from good health, control exposure to risk, and promote factors that are protective of health.

Secondary prevention aims to reduce progression of disease through early detection, usually by screening at an asymptomatic stage, and early intervention.

The goal of *tertiary prevention* is to improve function and includes minimisation of the impact of established disease, and prevention or delay of complications and subsequent events through effective management and rehabilitation.

Further explanation of the levels of prevention is provided in Table 1.

A fourth, more fundamental level of prevention is sometimes described as ‘primordial’ prevention. This term is used to refer to preventing the emergence of predisposing social and environmental conditions that can lead to causation of disease. Because of the many

Table 1: Levels of prevention

Level of Prevention	Aim	Phase of Disease	Target	Intervention Examples
Primary	Widespread changes that reduce the average risk in the whole population Reduction of particular exposures among identified higher risk groups or individuals	Specific causal factors associated with the onset of disease Specific and non-specific factors associated with protection against disease.	Total population, selected groups and healthy individuals	Measures that eliminate or reduce the causes or determinants of departures from good health, control exposure to risk, and promote factors that are protective of health: <ul style="list-style-type: none"> • Air quality guidelines leading to reduction of urban air pollution • Systematic immunisation to eliminate communicable disease • Education programs to increase awareness of the risks of physical inactivity and poor diet to reduce the burden of preventable chronic disease • Legislation to require wearing of seat belts to reduce the incidence of death and disability associated with road trauma • Tobacco control programs
Secondary	Prevent progression to disease through early detection and intervention	Early stage of disease – period between departure from good health and onset of symptoms	Asymptomatic individuals with early disease or established high risk factors	Measures available to individuals and populations for early detection of asymptomatic biological changes, disease precursors or asymptomatic disease, and prompt and effective intervention to address the departures from good health: <ul style="list-style-type: none"> • ‘Pre-diabetes’ programs • Breast screening to reduce the death rate from breast cancer • Blood pressure measurements and treatment of hypertension in middle-aged and elderly people to reduce progression to associated diseases • Testing for hearing loss and advice concerning protection against noise in industrial workers
Tertiary	Reduce the consequences of established disease through effective management of the patient to reduce the progress or complications of established disease and improve patient well-being and quality of life	Later stages of disease involving treatment and rehabilitation	Patients	Measures to reduce impairments and disabilities, prevent or delay subsequent events (including prevention of recurrences), minimise suffering and promote the patient’s adjustment to chronic conditions: <ul style="list-style-type: none"> • Rehabilitation of patients with strokes, injuries, blindness and so on • Good glycaemic control in diabetics • Self-management programs for persons living with chronic conditions • Relapse prevention in mental health

Source:

Adapted from Beaglehole R, Bonita R, Kjellstrom T (1993). *Basic Epidemiology*. Geneva, World Health Organization.

Brownson, R, Remington, P & Davis J (Eds) (1998). *Chronic Disease Epidemiology and control*, (2nd Edition) American Public Health Association, Washington DC.

different interpretations of primary prevention and the association of primary prevention with a disease-focused approach, some commentators suggest the use of the primordial prevention level to address upstream (distal) determinants. However, this term has not gained much currency and is usually embraced within the level of primary prevention.

Public health is defined as the ‘organised response by society to protect and promote health, and to prevent injury, illness and disability’. Public health is a particular set of measures and activities, most of which have primary prevention as their goal; that is, public health aims to prevent through an organised effort, the occurrence of health problems in whole populations before they occur. However, in many circumstances organised and systematic secondary prevention activities – such as breast screening programs – also form part of the public health effort.

Generally speaking public health efforts try to focus on the upstream determinants (environmental, social and behavioural determinants) of preventable health problems.

A distinction is made between the goals of the different levels of prevention and the type of measures required to achieve the goals. For example, measures that reduce the development of risk factors for heart disease (such as physical activity interventions) may be implemented at both a population and an individual level and can both be considered primary prevention.

It is also necessary to distinguish between a type of intervention (for example, aimed at a particular risk or protective factor) and level of prevention. For example, promotion of physical activity can be aimed at primary prevention, secondary prevention (for example, where physical activity is used in the management of borderline hypertension or impaired glucose tolerance), or tertiary prevention (where physical activity is part of the management regime for a chronic condition, such as arthritis).

Frameworks for conceptualising prevention continue to evolve and respond to the needs of different fields

of health. In the mental health field, the concept of prevention is divided into approaches designated as universal, selective or indicated prevention, depending on whether they are applied to the whole population (universal) or sub-groups at a higher risk (selective) or those people at an early stage of high risk (indicated). This model largely encompasses the concepts of primary and secondary prevention in the traditional public health model and separately defines the remainder of the spectrum dealing with ‘treatment’ and ‘maintenance’ (although it does comprehend that the ‘indicated’ group effectively overlaps with the ‘treatment’ group, in the case of mental health).⁴ A similar approach was used by the Australian Institute of Health and Welfare in development of the indicator framework for monitoring the National Health Priority Areas.⁵

While the prevention terminology used can vary in different fields, the basic concepts and objectives are essentially the same, but allow for differences of emphasis and expanded interpretation, especially in the non-medical context.

What is most important is the understanding that all of the levels and approaches to prevention form part of a holistic health system response to the patterns of health and disease in a particular society, and to formulate the most cost effective and feasible options for health gain accordingly.

The examples in Table 2 illustrate how a range of preventive measures, delivered at both the population and individual levels, can contribute to health gain. For example the spectrum of prevention measures for cancer might include primary prevention through tobacco control legislation, secondary prevention through screening those at higher risk of the disease and tertiary prevention through provision of care that delays complications of the disease.

Increased capacity for the health workforce to identify appropriate prevention interventions complements initiatives to drive improvements in health services, such as the National Service Improvement Frameworks.⁶

⁴ Australian Health Ministers (2003). *National Mental Health Plan 2003–2008*. Canberra: Australian Government.

⁵ Australian Institute of Health and Welfare and Commonwealth Department of Health and Family Services (1997). *First Report on National Health Priority Areas 1996*. AIHW Cat. No. PHE 1. Canberra: AIHW and DHFS.

⁶ The National Service Improvement Frameworks have been developed for the national health priority chronic conditions of cancer, diabetes, asthma, cardiovascular health and musculoskeletal conditions. The Frameworks accompany the National Chronic Disease Strategy and are designed to guide the delivery of the most appropriate care for these conditions and cover the continuum of care encompassing prevention, detection, screening, management, treatment, rehabilitation and palliation.

Table 2: Examples of primary, secondary and tertiary prevention related to selected diseases and national health priority areas*

	Communicable Diseases	Cancer	Cardio-vascular Health	Diabetes	Injury	Mental Health
	<i>General socioeconomic, cultural and environmental conditions</i> Agriculture and food production, education, work environment, unemployment, living and housing conditions, transport, water and sanitation					
Primary prevention	Vector control Tobacco control (environmental tobacco smoke and meningococcal disease) Immunisation	Tobacco control and smoking cessation Nutrition Physical activity Responsible use of alcohol	Tobacco control and smoking cessation Nutrition Physical activity	Nutrition Physical activity	Road safety engineering (road design, traffic calming, railway crossing boom gates etc) Vehicle design (structural features, seat belts, air bags etc) Road safety awareness Responsible use of alcohol	Social capital Self-esteem Responsible use of alcohol MindMatters program Positive Parenting
Secondary prevention	Testing of at-risk individuals or groups (eg STIs) Prophylactic antibiotics (eg antimalarials) Needle and syringe availability programs	Early detection and screening programs	Hypertension management Hypercholesterolaemia treatment	Early detection Weight loss Dietary management	Mandatory accredited education program for first 'drink driver' offenders	Suicide prevention through early intervention in at-risk groups Kids in Mind program
Tertiary prevention	Isolation Quarantine Infection control Treatment	Treatment and care Psychosocial support	Cardiac rehabilitation programs Antiplatelet drugs Diet and physical activity advice	Rigorous blood glucose control Self-management Foot care Diet and physical activity advice	Road trauma rescue services	Relapse prevention

* The examples provided in this table are purely indicative for the purposes of demonstrating the principles and scope of preventive measures, and do not purport to be a complete representation, nor do the listed preventive measures necessarily apply to all communicable diseases or manifestations of the National Health Priority Areas disease states.

Prevention and public health

Public health is characterised by planning and intervening for better health in populations rather than focussing exclusively on the health of identifiable individuals.^{7,8}

Where public health cannot control health problems through upstream environmental measures (removing the cause), efforts focus on modifying behaviour. Where neither avenue is available or likely to be effective, the focus is on raising community resistance (passively or actively) – for example, through immunisation, and preventing the spread of transmission of infectious agents. The use of drugs (for example, chemoprophylaxis for malaria) and vaccines administered to individuals can therefore also be seen as a public health measure, where this is part of an organised effort to prevent a wider impact on population health.

Public health typically uses a range of intervention strategies mostly in combination to achieve effective outcomes.⁹ These strategies might utilise legislative or financial levers, multi-sectoral and multi-disciplinary collaborations, immunisation, information analysis and communication, and development of healthy public policies to mobilise resources and promote evidence-based actions.

In cases where neither upstream measures, behaviour change nor raising host resistance are possible, but where a condition can be detected sufficiently early by screening asymptomatic individuals on a population basis to change the course of disease progression, organised early detection programs become part of a public health response. Where early stage disease is detected, the health response is then provided by the treatment and care sector to an ‘identified individual’. The role of public health is illustrated in Figure 2 in the context of a model for prevention and management of chronic conditions.

Benefits of prevention

The imperative to maintain and sustain healthy communities derives from the need for a well functioning society. A society that is healthy will also prosper economically.¹⁰ The health challenges threatening to undermine the future capacity of the nation are largely preventable. All parts of the health system have an important role in the prevention of health problems. The greatest long-term contribution to high-quality and affordable prevention measures can come from investment in the implementation of population based public health approaches that are largely focused at the level of primary prevention.

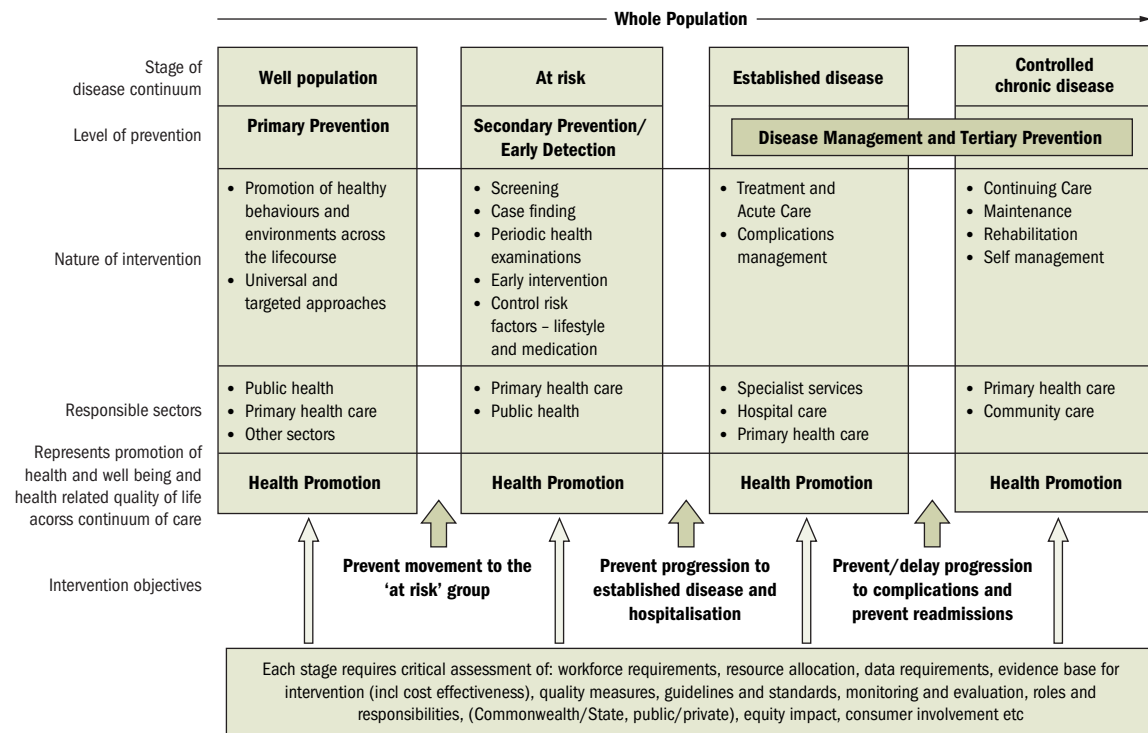
⁷ At present, an increasing number of government health departments in Australia have shown a preference for use of the term ‘population health’ over the more traditional term ‘public health’. What lines up under these structural labels will vary between organisations and reflects the on-going debate about whether these concepts are interchangeable or whether they reflect different but overlapping domains.

⁸ National Public Health Partnership (2006). *Public Health Classifications Project Phase One: Final Report*. Melbourne: NPHP.

⁹ National Public Health Partnership (2000). *Public Health Practice in Australia Today: A statement of core functions*. Melbourne: NPHP.

¹⁰ Thomas, D. (2001). *Health Nutrition and Economic Prosperity: A Microeconomic Perspective*. Commission on Macroeconomics and Health, CMH Working Paper Series Paper No. WGI: 7.

Figure 2: Comprehensive model of chronic disease prevention and control



Source: Preventing Chronic Disease: A Strategic Framework.