



Primary Health Care and Chronic Disease Prevention and Management

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In our daily pursuits at work or at play, it is easy to lose track of our health when everything else seems to demand more of our attention. Most of the time, we adopt a “passive” approach, only taking action when something obvious has gone wrong. Frequently, when a disease has reached a stage where it is also obvious to the patient, treatment will almost always be more complicated.

Prevention may be defined as the means to promote and maintain health or averting illness. It concerns the removal or reduction of risks, early diagnosis, early treatment, limitation of complications and maximum adaptation to disability.

The promotion of health involves helping people learn healthy behaviours and to accept responsibility for their own well-being. A better-educated patient will have better health outcomes. In this issue, we look at the well population and what Primary Prevention is about.

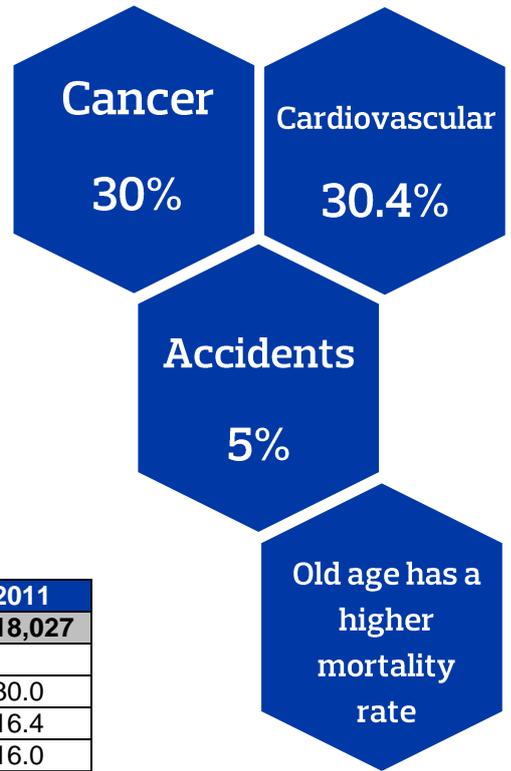
Population by stages of the Disease Continuum			
Well Population	At Risk	Established Disease	Controlled Chronic Disease
Primary Prevention	Secondary Prevention/ Early Detection	Disease Management and Tertiary Prevention	
<ol style="list-style-type: none"> Promotion of healthy behaviours Universal and targeted approaches Immunisation Prophylaxis 	<ol style="list-style-type: none"> Screening Case Finding Periodic Health Exam Early Intervention Controlling Risk Factors 	<ol style="list-style-type: none"> Treatment and Acute Care Complications Management 	<ol style="list-style-type: none"> Continuing Care Maintenance Rehabilitation Self-Management
<ol style="list-style-type: none"> Primary Health Care Public Health 	<ol style="list-style-type: none"> Primary Health Care Public Health 	<ol style="list-style-type: none"> Primary Health Care Specialist Services Hospital Care 	<ol style="list-style-type: none"> Primary Health Care Community Care
Health Promotion			
Prevent movement to AT RISK group.	Prevent progression to established disease and hospitalisation.	Prevent/ delay progression to complications and prevent readmissions.	

Figure 1: Comprehensive Model of Disease Prevention and Control.

In general practice, a doctor’s role is two-fold:

- A General Practitioner (GP) is trained to recognise the preventable factors that are involved in an illness. This allows the GP to determine the right intervention(s) for the patient
- Next, the GP then proceed to implement the preventive measures. In cases where the responsibility rests with the individual or community, the GP can support through education or working with community agencies

What can we prevent at the GP level? It is impossible to prevent ALL diseases. To see what matters most, we can look at the death statistics of Singapore as shown below.



		2009	2010	2011
Total Number of Deaths		17,101	17,610	18,027
% of Total Deaths				
1	Cancer	29.3	28.5	30.0
2	Ischaemic Heart Disease	19.2	18.7	16.4
3	Pneumonia	15.3	15.7	16.0
4	Cerebrovascular Disease (including Stroke)	8.0	8.4	9.0
5	Accidents, Poisoning and Violence	5.7	5.5	5.5
6	Other Heart Diseases	4.4	4.8	5.0
7	Urinary Tract Infection	2.5	2.5	2.5
8	Chronic Obstructive Lung Disease	2.4	2.5	2.2
9	Primary Kidney Disease	2.3	2.2	2.0
10	Diabetes Mellitus	1.7	1.0	1.7

Figure 2: Principal Causes of Death: Singapore (adapted)

The bulk of impactful primary health care for the working population thus lies in:

- a) Prevention and Screening of cancers that are treatable when detected early
- b) Prevention and Detection of cardiovascular diseases

Cancer Prevention

Diets with high alcohol consumption, high animal fats and low insoluble fibre in fruits and vegetables are said to have commonly caused cancer. In the US, at least 35% of all cancer deaths are related to diet. Obese individuals have an increased risk of colon, breast and uterine cancers. High-fat diets are a risk factor for prostate, breast and colon cancers. Salt-cured, preserved, smoked and nitrate-cured foods increase the risk of cancers of the esophagus and stomach.

Overall, diet, smoking, alcohol and occupational exposures (5%) account for over 73% of all cancer deaths. Some studies consider environmental factors to be responsible for up to 90% of cancers and diet is a major factor in the cause of cancer for 40% of men and 60% of women.



Cardiovascular Disease Prevention

Cardiovascular end-stage diseases are typically heart attacks and strokes. The risk of suffering from one is greatly increased if one has Hypertension, Diabetes or Dyslipidemia (a form of abnormal cholesterol levels).

Small frequent meals with low carbohydrate and salt content, regular exercise of at least 150 minutes a week, and substituting pork, beef or mutton with fish or chicken will go a long way to prevent cardiovascular ill-health.