

# SNAP

Smoking  
Nutrition  
Alcohol

Physical activity

**A population health guide to behavioural  
risk factors in general practice**



THE ROYAL AUSTRALIAN  
COLLEGE OF  
GENERAL PRACTITIONERS

Smoking, Nutrition, Alcohol and  
Physical activity (SNAP)

A population health guide to  
behavioural risk factors in  
general practice

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## 1. Introduction

This guide is designed to assist general practitioners and practice staff to work with patients on the lifestyle risk factors of Smoking, Nutrition, Alcohol and Physical activity (SNAP). Organisations working with general practices such as divisions of general practice, public health services and other agencies that provide resources and training for primary care staff may also find this guide valuable.

The SNAP guide covers:

- why these risk factors are important and why general practice is the right place to influence SNAP risk factor behaviour in adults
- how to assess if a patient is ready to make lifestyle changes
- a five step model (5As) for detection, assessment and management of SNAP risk factors (ask, assess, advise, assist, arrange)
- effective clinical strategies for SNAP risk factors (and overweight and obesity) using the 5As model
- practical business strategies to apply the SNAP approach to general practice (including samples of roles for practice staff)
- resources including:
  - a SNAP Practice Inventory
  - a sample SNAP Care Plan (for patients who meet the eligibility requirements for the Enhanced Primary Care [EPC] Multidisciplinary Care Team Medicare Benefits Item)
  - where to find the right guidelines, tools and organisations to support you in giving brief advice to your patients.

The SNAP guide is based on the best available evidence at the time of publication. Specific clinical recommendations in the tables are graded according to levels of evidence and the strength of recommendation. The levels of evidence are coded by Roman numerals I–V while the strength of recommendation is coded by the alphabet letters A–E. (More detail on the levels of evidence and strength of recommendation can be found in *Appendix 1*). Further information on preventive care in general practice can be found in the RACGP *Guidelines for preventive care in general practice*.

The SNAP risk factors are common among patients attending general practice. In 2002–2003 of adult patients attending general practice encounters<sup>1</sup>:

- 54.7% were overweight or obese
- 17.2% were daily smokers, 4.1% were occasional smokers, 27.2% were previous smokers, and
- 26.2% drank 'at risk' levels of alcohol.

In 1998/1999, 65.3% of patients reported doing less than 150 minutes of moderate physical activity spread over five sessions per week.<sup>2</sup>

Each of these risk factors is associated with many diseases – and may themselves interact with each other throughout the lifecycle. Therefore, it is important not to deal with each risk factor in isolation. The ‘absolute risk’ approach being developed by the National Vascular Disease Prevention Partnership attempts to place assessment and intervention of an individual risk factor within the context of the ‘absolute risk’ that the patient will have a vascular event in the next 5 years. This approach is illustrated in *Section 5.4* of this guide.

## Planning – making a difference

Information on risk factors can be used to help educate patients about the need to change their lifestyle and to help the GP and patient decide when and how to intervene. The interventions agreed to can be summarised on a management plan of the patient's care and risk factors referred to in subsequent consultations. When interventions are jointly planned and negotiated – and information is shared between doctor and patient – the patient is assisted to exercise autonomy and follow the agreed plan.

The 'stages of change' model, together with a patient centred approach and informed decision making underpin the approach used in this guide.

These methods of working with patients form the basis of sustainable behaviour change as they involve patients in making decisions about the goals they are prepared to aim for to improve their health. The *Chronic condition self management guidelines* (RACGP 2002) outline in more detail the principles of patient self management that also apply in this context.

Plans for patient care can be prepared using normal Medicare consultation items (including long consultation items). For patients with a chronic or terminal medical condition and complex care needs, an EPC multidisciplinary care plan may be appropriate (see SNAP Care Plan *Appendix 2*). Enhanced Primary Care multidisciplinary care plans are comprehensive, longitudinal plans for patient care. While they are not appropriate for patients who are merely 'at risk' of disease, EPC care plans can be an important tool for managing risk factors and interventions for those patients who have chronic medical conditions and complex needs.

## **The risk factors**

### **1.1 Smoking**

Most people who smoke begin using tobacco in their teenage years and almost all first time use occurs before 20 years of age.<sup>3</sup> Tobacco smoking is the risk factor responsible for the greatest burden of disease in Australia, accounting for 12% of the burden in males and 7% in females, and an increased burden among low socioeconomic status (SES) groups. It is estimated to kill approximately half of long term users,<sup>4</sup> causing 40% of deaths in men, and 20% of deaths in women before 65 years of age.<sup>5</sup> Every year, approximately 19 000 Australians die from diseases caused by smoking.<sup>6</sup>

### **1.2 Nutrition**

Exclusive breastfeeding for at least the first 6 months of life offers considerable health benefits to infants – and in the long term – to children and adults.<sup>7</sup> Diets low in fruit and vegetables have been causally linked to cancer and cardiovascular disease (CVD), accounting for nearly 3% of the total burden of disease (men 3%, women 2.4%).<sup>8</sup> The most recent national data on the prevalence of overweight and obesity in Australian children and adolescents reports that between 20–25% of Australian children and adolescents are either overweight or obese.<sup>9</sup>

### **1.3 Alcohol**

Light or moderate alcohol consumption reduces the total burden of disease by 2.8%. Excessive alcohol consumption increases the disease burden by 4.9%.<sup>1</sup> While regular intake at light to moderate levels of alcohol protects against CVD, alcohol consumption at all levels above abstinence increases the risk of other diseases and injuries.<sup>10</sup> Alcohol use is also associated with road traffic accidents, crime and social problems, and lost productivity.

### **1.4 Physical inactivity**

Physical inactivity is responsible for 7% of the total burden of disease,<sup>1</sup> and accounts for approximately 8000 deaths per year in Australia.<sup>11</sup>

### **1.5 Health inequalities**

Risk factors for heart, stroke and vascular disease are far more prevalent in people from low SES backgrounds and indigenous Australians.<sup>12</sup> However, there is evidence that the health risk status of low SES groups is improving, probably related to improved diet, smoking rates and awareness of preventive care.<sup>13</sup> This suggests that targeting CVD preventive activities to low SES groups may be beneficial. Socioeconomically disadvantaged people make greater use of primary and secondary health services such as doctors, hospitals and outpatient clinics; but are less likely to use preventive health services.<sup>14</sup>

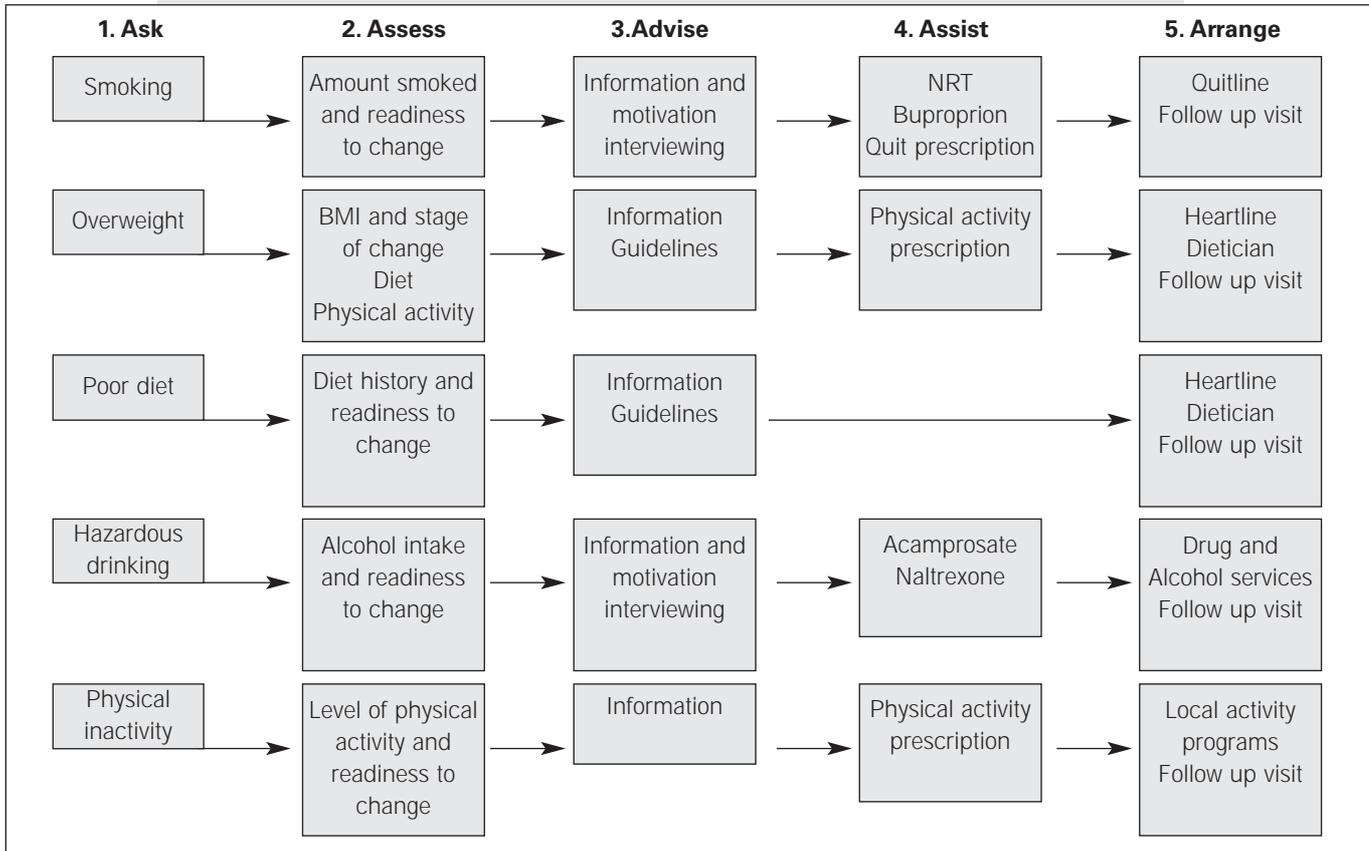
## 2. Introduction to the 5As and stages of change theory

### 2.1 The 5As

At the practice level, there are five main roles for assisting patients (adapted from the 5As approach developed by the US Department of Health<sup>15</sup>) which are similar across all SNAP risk factors (Figure 1):

- Ask (1)**
  - identify patients with risk factors
- Assess (2)**
  - level of risk factor and its relevance to the individual in terms of health
  - readiness to change/motivation
- Advise (3)**
  - provide written information
  - provide a lifestyle prescription
  - brief advice and motivational interviewing
- Assist (4)**
  - pharmacotherapies
  - support for self monitoring
- Arrange (5)**
  - referral to special services
  - social support groups
  - phone information/counselling services
  - follow up with the GP.

Figure 1. The 5As



## 2.2 Patient readiness to change

In assessing how ready patients are to changing their lifestyle, ask the patient if they are:

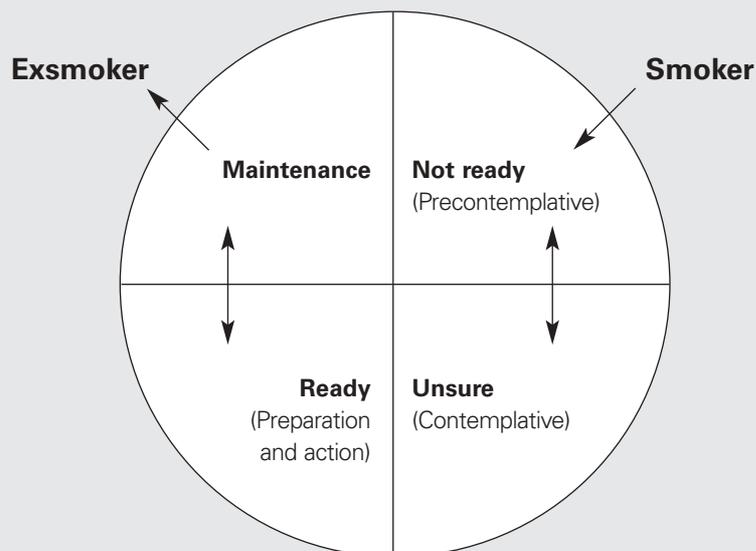
- not convinced of the need for change?
- willing to make a change but not confident about their ability to succeed?
- ready to make a change but not sure how to best go about it?
- in the process of trying to make a change?
- trying to sustain a change they have already made?

These 'stages of change' (*Figure 2*) can help to determine the best management approach.<sup>16</sup> For patients who are unconvinced, explore the reasons why the patient should change:

- what are the benefits and barriers for the patient
- how big is the problem for this individual, and
- what are the consequences of not making a change?

For patients who are not confident about their ability to succeed, information and reassurance about their likelihood of success and the support available should be given. For patients who are ready to make a change, time can be spent explaining and planning how to make that change. Patients who have already made a change, may need follow up to monitor progress and help deal with any relapse or difficulties.

**Figure 2. The stages of change model in smoking cessation**



### **A systematic approach to motivational interviewing**

- Examine the good things about improving lifestyle (eg. nutrition or physical activity) and self management by the patient
- Ask about the less good things and compare these with the good things
- Explore if these less good things really are a negative
- Ask the patient: How does this concern you? Why does it concern you?
- Look to the future: Is the good/not so good balance going to change?
- Highlight any discrepancies
- Get the patient to rate their motivation and confidence on a scale of 1–10
- Summarise
- Identify strengths and barriers to lifestyle change and self management

Source: The RACGP. Sharing health care guidelines. Chronic condition self management guidelines, 2002

### 3. Applying the 5As to each risk factor

#### 3.1 Smoking

##### 3.1.1 Ask and assess

Smoking status should be assessed for every patient 10 years of age and over.<sup>17</sup> Ask at every opportunity, especially if there is a related medical problem (eg. respiratory or CVD). This should be documented in the medical record.

Question	Answer	Level of evidence and strength of recommendation
When to start screening?	All people aged 10 years or over	I–A
When to stop screening?	No upper age limit for screening has been reported	None available
How often to screen?	Take every opportunity to ask about the smoking of cigarettes, pipes or cigars	III–A
Which groups are at higher risk of developing smoking related complications and would benefit most from quitting?	Pregnant women	I–A
	Parents of babies and young children	III–A
	Indigenous Australians	
	People with mental illness	
	People with other chemical dependencies	
	People with smoking related diseases	
What methods to use when screening?	People with diabetes or other cardiovascular risk factors	
	People from low SES groups <sup>18,19</sup>	
How should I assess readiness to quit?	Include smoking status as part of routine history taking.	I–A
	Consider implementing systems changes at practice or clinic level, eg. using stickers in patient records – these have been shown to be effective in helping GPs identify smokers and keeping track of progress	III–B
How should I assess readiness to quit?	This must be done in a nonjudgmental and nonthreatening way, eg. How do you feel about giving up smoking?	I–A
Benefits and risks of preventive actions?	Quitting smoking has benefits in reducing the risk of cancers, coronary artery disease, chronic obstructive airways disease and stroke. There are no risks from preventive actions	III–B

#### Short Fagerstrom test for nicotine dependence<sup>20</sup>

Questions	Answers	Score
1. How soon after waking up do you smoke your first cigarette?	Within 5 minutes	3
	6–30 minutes	2
	31–60 minutes	1
2. How many cigarettes a day do you smoke?	10 or less	0
	11–20	1
	21–30	2
	31 or more	3
Score: 0–2 very low    3 low    4 moderate    5 high    6 very high		

The Fagerstrom test can be used by GPs to determine if the patient has nicotine dependence and therefore offer the patient pharmacotherapies such as nicotine replacement therapy (NRT).

### 3.1.2 Advise and assist

Patients who smoke (regardless of the amount they smoke) should be offered brief advice to stop smoking (A).<sup>21,22</sup> Smoking cessation is well established as an effective intervention within the primary care setting. Simple, single consultation advice given from a GP results in 1–2% of smokers quitting and not relapsing for 1 year.<sup>23</sup>

Question	Answer	Level of evidence and strength of recommendation
Is counselling from a GP effective in getting people to quit?	Yes. Brief advice given by GPs during a single routine consultation is more effective than no intervention at all. Interventions work best in people who are ready and motivated to quit and follow up support is provided	I–A I–A
Who should be offered patient education?	All patients especially those presenting with smoking related problems. <sup>24</sup> Education should be supplemented by written patient education material	I–A
Who should be offered pharmacotherapy to assist cessation?	Pharmacotherapy may be considered in all patients smoking more than 10 cigarettes per day. In the absence of contraindications, pharmacotherapy should be offered to all motivated smokers who have evidence of nicotine dependence	I–A
Should I counsel non-smokers about passive smoking?	Yes. Although there is no evidence regarding the effectiveness of counselling, strong evidence on the harms of passive smoking justifies counselling nonsmokers, especially parents of babies and young children, and pregnant women to limit exposure to tobacco smoke <sup>25,26</sup>	III–B I–A (for pregnant women)
Should patients be offered follow up visits?	Yes. Patients should be offered follow up visits at 1 week and 1 month. Further follow up should be negotiated between doctor and patient	I–A

Patients not interested in quitting smoking should be offered brief advice on the risks of smoking and encouraged to consider quitting. Patients who are interested in quitting smoking but are unsure should be offered information on smoking cessation including what is available in the way of support (eg. Quitline, NRT) and offered a follow up visit.

Smokers who are ready to quit should be assisted by:

- setting a quit date
- identifying smoking triggers and discussing quit strategies
- providing self help materials

- prescribing nicotine gum or patch if appropriate
- arranging follow up visits at 1–2 weeks to prevent relapse, and
- considering referral to a quit program.<sup>27</sup>

All patients who smoke more than 10 cigarettes per day should be considered for pharmacotherapy, especially those who are nicotine dependent.

Nicotine replacement therapy produces a two-fold increase in smoking cessation at 3–5 months. Contraindications include recent onset of life threatening arrhythmia, pregnancy, and lactation. Caution should also be exercised in patients with recent acute myocardial infarction or severe or worsening angina pectoris, recent stroke or arrhythmia.

Bupropion has been shown to be effective when combined with behavioural therapies in dependant patients. It is contraindicated in patients with allergy to bupropion, seizures, anorexia or bulimia, central nervous system tumours or monoamine oxidase inhibitor (MAOI) treatment within 14 days. It should be used with caution in patients with alcohol abuse, recent head trauma, diabetes, patients on stimulants or anorectic drugs, drugs that may lower seizure threshold, renal impairment or patients on NRT.

Patients with other drug and alcohol problems or mental health disorders may need particular support to reduce smoking. SANE Australia can assist GPs with support materials for patients with mental disorders. Help line: 1800 688 382, email: helpline@sane.org, website: www.sane.org.

### 3.1.3 Arrange

Patients who are motivated and physically or psychologically addicted to nicotine should be referred to a quit program (**III B**). If a smoker has a chronic medical condition and/or complex needs, they may benefit from an EPC multidisciplinary care plan.

**Quitline – 131 848 or [www.quitnow.info.au/](http://www.quitnow.info.au/)**



Image courtesy of the National Tobacco Campaign. Reproduced with permission

Quitline is a telephone information, advice and counselling service for people who want to quit smoking. The 'Quit book' provides information on:

- the best way to quit
- coping with withdrawal symptoms, and
- Quit courses and details of local organisations that can provide help and counselling.

Further referral services can be found on page 35. Information about how to set up a practice directory can be found in *Section 4* of this guide.

### **3.1.4 Follow up**

Patients should be reviewed within 1 week and then again at 1 month after quitting smoking to help increase the chance of quitting long term. The practice information system should generate reminders or lists of patients overdue for follow up (see page 31). Most relapses occur in the first few weeks and patients should be encouraged to keep trying even if they have relapsed. It often takes a number of attempts to quit smoking successfully.

## 3.2 Overweight and obesity

### 3.2.1 Ask and assess

Weight is associated with diet and levels of physical activity. Body mass index (BMI) and adult waist circumference should be measured every 2 years for those patients who appear over or underweight (**A**). Weight alone may be used to monitor the patient at follow up.

#### Waist circumference

An adult's waist circumference is measured half way between the inferior margin of the last rib and the crest of the ilium in the mid-axillary plane. The measurement is taken at the end of normal expiration.

<b>Waist circumference<sup>28</sup> (adults)</b>		
	<b>Men</b>	<b>Women</b>
Increased risk	>94 cm	>80 cm
High risk	>102 cm	>88 cm

#### Body mass index

Body mass index = body weight in kilograms divided by the square of height in metres. BMI on its own may be misleading especially in older people and muscular individuals and classifications may need to be adjusted for some ethnic groups.<sup>29</sup>

<b>Healthy weight:<sup>28</sup> BMI (kg/m<sup>2</sup>) (adults)</b>		
<b>Classification</b>	<b>BMI</b>	<b>Risk of morbidities</b>
Underweight	Below 18.5	Increased
Normal weight	18.5–24.9	Low
Overweight	25 or greater	
Preobese	25.0–29.9	Increased
Obese I	30.0–34.5	Moderate
Obese II	35.0–39.9	Severe
Obese III	40 or over	Very severe

People who are overweight have a higher risk of disease including coronary heart disease (CHD), diabetes, dyslipidaemia, hypertension, and bone and joint disorders. The presence of excess fat in the abdomen is an independent predictor of morbidity. The patient's motivation to lose weight should be assessed to better target advice. Blood pressure should be measured on all patients over the age of 18 years.

For children and adolescents, age specific BMI percentile charts should be used (available from children's hospitals in each state).

For further information on the management of obesity, see the NHMRC *Clinical practice guidelines for the management of overweight and obesity in adults* and the NHMRC *Clinical practice guidelines for the management of overweight and obesity in children and adolescents*. Both of these guidelines can be downloaded from: [www.obesityguidelines.gov.au](http://www.obesityguidelines.gov.au).

### 3.2.2 Advise and assist

Advice should be tailored to the degree of overweight. Patients who are overweight or obese should be offered individual education and skills training.<sup>29</sup>

Question	Answer	Level of evidence and strength of recommendation
What dietary advice should be provided?	Reduce total energy intake over time. This should involve reduced fat, high sugar drinks and food. The size of food portions should be reduced.	II
What physical activity should be recommended?	Any increase consistent with the patient's medical condition should be encouraged. This should start with moderate physical activity.	I
What is recommended for adolescents and children?	Restrictive dieting is not recommended for children and adolescents. However, increasing physical activity should be encouraged in ways which are appropriate for the age of the child.	V
What should the goals for weight loss in adults be?	The goals should be to achieve a sustainable weight reduction (1–4 kg per month in the short term, 10% of initial body weight in the long term).	V

For adults there is a range of treatment options.<sup>29</sup> For most overweight patients, individual education and simple behavioural interventions are appropriate, eg. low cost activities such as walking. For those with disordered eating patterns or thinking, cognitive behavioural therapy (CBT) approaches are the most appropriate. For a small number of obese patients (BMI >30 or BMI >27 with other diseases) who do not respond, medical or surgical interventions may need to be considered. Drugs that may be added to education and behavioural interventions include orlistat and sibutramine for long term therapy, and phentermine and diethylpropion for short term use only.

Small amounts of weight loss or lack of any increase can be viewed as successes with health gains likely. Any changes made must be able to be maintained in the longer term. Fad diets are not recommended for long term weight loss.

### **3.2.3 Arrange**

People suffering from obesity should have long term contact with, and support from, health professionals. Multidisciplinary care from appropriate services or an allied health professional such as a dietician is recommended, especially in complex cases and in patients with morbid obesity (**V-C**).<sup>29</sup> Patients suffering from obesity who have a chronic medical condition and complex needs may benefit from an EPC multidisciplinary care plan.

Consult the 'find a dietician' section of the Dietitians Association of Australia website ([www.daa.asn.au](http://www.daa.asn.au)) or phone 1800 812942 to find a dietician in your local area. Contact details of local dietetic services should be included in the practice directory (see *Section 4*).

Further referral services can be found on page 35 of this guide.

### **3.2.4 Follow up**

Patients should be reviewed after 2–3 months to help increase the chance of sustaining lifestyle changes over the long term. The practice information system should generate reminders or lists of patients overdue for follow up (see page 31). Emphasis at follow up should be on sustained change in diet (and physical activity) rather than on repeatedly measuring weight (unless otherwise indicated for specific diseases such as diabetes). Relapse and weight gain are common. Patients should be followed up at yearly intervals over 5 years after weight reduction is achieved.

### 3.3 Nutrition

#### 3.3.1 Ask and assess

Diet is an important risk factor – independent of weight. The frequency and quantity of fruit and vegetable consumption is considered an important indicator in the Australian diet. Ask patients how many portions of fruit or vegetables are eaten in a day. At least five portions of vegetables and two portions of fruit should be consumed each day.<sup>30,31</sup>

#### Examples of a single portion

##### Fruit

- 1 medium size apple, banana, orange, quarter of a rockmelon
- 1/2 cup of fruit juice
- 4 dried apricots or 1 1/2 tablespoons of sultanas
- 1 cup of canned or fresh fruit salad

##### Vegetables

- 1/2 cup cooked vegetables (75 g)
  - 1 medium potato
  - 1 cup of salad vegetables
- Note: Rice and pasta do not count as a vegetable

Total cholesterol, LDL cholesterol, HDL cholesterol and triglyceride tests should be performed on at risk patients between 20–75 years of age as part of absolute CVD risk assessment (see the RACGP *Guidelines for preventive care in general practice*). At risk patients include those who are overweight, smoke, or have a past or family history of CVD.

#### 3.3.2 Advise and assist

While there is evidence that nutritional counselling is effective in changing diet, the role of the GP has not been adequately evaluated.<sup>32</sup>

Question	Answer	Level of evidence and strength of recommendation
Preventive action?	Patients should be encouraged and supported to follow Australian dietary recommendations. Patients should be advised to eat at least 7 portions of fruit or vegetables per day <sup>33</sup>	II–B
Should vitamin supplementation be recommended for asymptomatic individuals?	Vitamin supplementation is not of established value in asymptomatic individuals* (with the exception of folate in pregnancy)	V–C
Should asymptomatic individuals take beta-carotene or other antioxidants?	There is insufficient information that for the general population this results in improved health outcomes	V–C

\* Prevalence of nutritional deficiency is high in groups such as alcoholics, the elderly living alone and in institutions

General practitioners should recommend patients follow the *Dietary guidelines for Australian adults* and the *Dietary guidelines for children and adolescents in Australia*.<sup>34,35</sup>

**Dietary guidelines for Australian adults**

- Enjoy a wide variety of nutritious foods
  - eat plenty of vegetables, legumes and fruits
  - eat plenty of cereals (including breads, rice, pasta, noodles) preferably wholegrain
  - include lean meat, fish, poultry and/or alternatives
  - include milks, yoghurts, cheeses and/or alternatives. Reduced fat varieties should be chosen where possible
- Drink plenty of water

And take care to:

- limit saturated fat and moderate total fat intake
- choose food low in salt
- limit your alcohol intake if you choose to drink
- consume only moderate amounts of sugars and foods containing added sugars
- Prevent weight gain: be physically active and eat according to your energy needs
- Care for your food: prepare and store it safely
- Encourage and support breastfeeding

Note: Low fat diets are not recommended for children 2 years and under.

Patients with specific conditions may require specific dietary advice. Recommendations can be found at websites of the Heart Foundation of Australia, Diabetes Australia, National Stroke Foundation, Cancer Council of Australia and the Australian Kidney Foundation (see page 37).

Dietary advice for patients with abnormal lipids includes the restriction of foods with high quantities of polyunsaturated or monounsaturated fats. Further details on the management of these conditions are available in the National Heart Foundation and Cardiac Society *Lipid guidelines*.<sup>36</sup>

Patients with elevated blood pressure (systolic >130 or diastolic >85) should be offered advice on weight reduction, healthy eating (in particular dietary sodium intake), alcohol consumption, regular moderate physical activity, and smoking cessation.

Minimum daily sample serves needed to achieve at least 70% of the requirements for protein, vitamins and minerals (adults over 19 years of age).

<b>Food group</b>	<b>Number of daily serves</b>
Bread, cereals, rice, pasta, noodles	4
Vegetables, legumes	5
Fruit	2
Milk, yoghurt, cheese	2
Meat, fish, poultry, eggs, nuts	1

What people consider a daily serving from a food group may vary. Sample serves define equivalent foods within a food group. A sample serve comprising 2 slices (60 g) of bread is equivalent to 1 1/3 cups (40 g) of ready to eat cereal flakes or 1 cup (180 g) of cooked rice, pasta and noodles. Details of sample serves can be found at the Australian Guide to Healthy Eating website ([www.health.gov.au/pubhlth/strateg/food/guide/materials.htm](http://www.health.gov.au/pubhlth/strateg/food/guide/materials.htm)).

Weight reduction can be achieved in a variety of ways, eg. reduced fat (particularly saturated fat), carbohydrate, protein or alcohol intake and smaller portion size.<sup>28</sup> Any changes must be maintainable in the long term. Fad diets are not recommended for long term weight loss.

### 3.3.3 Arrange

People suffering from nutrition related conditions or obesity should have long term contact with, and support from, health professionals. Multidisciplinary care from appropriate services or an allied health professional such as a dietician is recommended, especially in complex cases and for patients with morbid obesity (**V-C**).<sup>28</sup> Patients with nutrition related conditions who have a chronic medical condition and complex care needs may benefit from an EPC multidisciplinary care plan.

Consult the 'find a dietician' section of the Dietitian Association of Australia website ([www.daa.asn.au](http://www.daa.asn.au)) or phone 1800 812942 to find a dietitian in your local area. Contact details of local dietetic services should be included in the practice directory (see *Section 4*).

### Heartline – 1300 36 27 87

Heartline is the National Heart Foundation of Australia's telephone service. The cost is a local call from anywhere in Australia. Heartline is staffed by trained health professionals who can provide information on CVD management, nutrition and healthy eating, BP, smoking cessation, and physical activity. Heartline also offers information on relevant support programs, and information booklets on a range of topics. Further referral services can be found on page 36.

Nutrition Australia also provides a useful service for health professionals and the general community ([www.nutritionaustralia.org/default.htm](http://www.nutritionaustralia.org/default.htm)).

### 3.3.4 Follow up

Patients should be reviewed at 2–3 months to help increase the chance of sustaining long term dietary change. Practice information systems should generate reminders or lists of patients overdue for follow up (see page 31). Emphasis at follow up should be on sustained change in diet (and physical activity) rather than on repeatedly measuring weight (unless otherwise indicated for specific diseases such as diabetes). Relapse and weight gain is common. Patients should be reviewed at yearly intervals over 5 years after weight reduction is achieved.



Image courtesy of Nutrition Australia. Reproduced with permission

### 3.4 Alcohol

#### 3.4.1 Ask and assess

All patients should be asked about the quantity and frequency of alcohol intake and number of alcohol free days each week from 14 years of age (**B**).<sup>37</sup> As some patients may be sensitive to questioning, it is important to be nonjudgmental. Australian men should limit their consumption to a maximum of four standard drinks of alcohol per day (28 per week); women to two standard drinks per day (14 per week).<sup>38</sup> Drinking at risk levels is most common for men and women 30–45 years of age. The proportion of men drinking at risk levels is 1.5–2.0 times that of women at all ages.

Question	Answer	Level of evidence and strength of recommendation
When to start screening?	14–15 years of age	II–B
When to stop screening?	Continue indefinitely	II–A
Optimum frequency of screening in asymptomatic persons?	At least every 3 years	II–A
Should those in higher risk groups be screened more often?	Whenever they present	V–C
Groups not requiring screening?	Children	V–C
Optimum method of screening?	Ask about quantity and frequency of alcohol use. Consider using the AUDIT questionnaire*	V–A
Methods of screening not recommended?	Routine measurement of biochemical markers	V–D
High risk groups for complications?	People with high BP or liver disease, pregnant women	I–A
High risk groups for drinking and complications?	People showing 'red flag' risk factors**	IV–B

\* Alcohol Use Disorders Identification Test (AUDIT) is a 10-item screening instrument developed by a WHO collaborative study to help identify patients at risk from harmful and hazardous drinking

\*\* Red flag risk factors: accidents/trauma, psychological/psychiatric problems, family/relationship problems, employment problems, involvement in crime, sexual dysfunction, sleep problems. In assessing risk, particular attention should be given to young people and indigenous Australians

Alcohol consumption is calculated from the amount of alcoholic beverages such as beer, cider, wine, spirits and mixed drinks usually consumed in 1 day combined with the number of days per week in which alcohol is usually consumed. Alcohol consumption is usually measured in 'standard' drinks. An Australian standard drink contains 10 g of alcohol, which is equivalent to 12.5 mL of alcohol.<sup>38</sup>

<b>Light beer</b> 2.7%	<b>Full strength beer</b> 4.9%	<b>Wine</b> 12%	<b>Spirits</b> 40%	<b>Port/sherry</b> 20%
<b>Large glass</b> 425 mL	<b>Medium glass</b> 285 mL	<b>Glass</b> 100 mL	<b>Nip</b> 30 mL	<b>Glass</b> 60 mL



### Risk of harm in the short term<sup>19</sup>

	<b>Low risk (standard drinks)</b>	<b>At risk (standard drinks)</b>	<b>High risk (standard drinks)</b>
Men (on any 1 day)	Up to 6 on any 1 day, no more than 3 days/week	7–10 on any 1 day	11 or more on any 1 day
Women (on any 1 day)	Up to 4 on any 1 day, no more than 3 days/week	5–6 on any 1 day	7 or more on any 1 day

### Risk of harm in the long term

	<b>Low risk</b>	<b>At risk (standard drinks)</b>	<b>High risk (standard drinks)</b>	<b>(standard drinks)</b>
Men (on average per day)		Up to 4	5–6	7 or more
Overall weekly level		Up to 28 per week	29–42 per week	43 or more per week
Women (on average per day)		Up to 2	3–4	5 or more
Overall weekly level		Up to 14 per week	15–28 per week	29 or more per week

#### 3.4.2 Advise and assist

Brief interventions to reduce alcohol consumption should be offered to all patients drinking at potentially risky or high risk levels (**A**).<sup>39</sup> Patients are more likely to be responsive to changing their drinking habits if they see a connection between their drinking and a health problem, if they believe they can change, and that things will improve if they do.

Question	Answer	Level of evidence and strength of recommendation
Advice to be given as a result of screening?	Simple advice to reduce alcohol consumption should be given to all patients drinking at potentially risky or high risk levels. Everyone who consumes alcohol should be counselled about the dangers of operating a motor vehicle or performing other potentially dangerous activities after drinking Pregnant women should consider abstaining from alcohol	I–A II–B V–A
Benefits and risks of preventive actions?	Australian and UK studies have shown that GPs providing brief advice has resulted in a 25–30% reduction in alcohol consumption and a 45% reduction in the number of excessive drinkers	I–A

Treatment options need to be tailored to the patient's needs and priorities. Patients drinking at potentially risky or high risk levels should be assessed according to their readiness to change their drinking pattern. Avoid arguing with patients. Patients who are not ready change their drinking pattern should be offered information about the risks associated with their level of alcohol use. Patients who are ready, should be provided with brief motivational counselling.

Patients should be encouraged to set their own goals. Try to reach agreement about the number of drinks per day and the number of alcohol free days per week. Ask patients to assess their own motivation and confidence in making a change. High risk situations should be identified and avoided, and appropriate social support such as friends or family should be enlisted. Patients should also be given information on self help and the available support services.

Drug therapy should be used in conjunction with behavioural counselling. Both acamprostate and naltrexone improve the rate of abstinence and reduce the rate of relapse drinking over the first 3–6 months. Acamprostate has more consistent treatment effects. Naltrexone should not be used where patients are using opioids, have acute hepatitis or hepatic failure. Acamprostate should not be used in patients with renal failure.

### 3.4.3 Arrange

Patients who have acute problems with alcohol consumption or fail to respond to brief interventions, should be referred to a local drug and alcohol counsellor or counselling service. Patients who drink alcohol at high risk – or potentially high risk levels – who also have a chronic medical condition and complex care needs may benefit from an EPC multidisciplinary care plan.

### Telephone information services

<b>New South Wales</b>	Alcohol and Drug Information Service (ADIS) – 24 hour hotline Ph: 02 9361 8000 Toll free: 1800 422 599
<b>Victoria</b>	Alcohol and Drug Direct Line Toll free: 1800 888 236
<b>Western Australia</b>	Alcohol and Drug Information Service (ADIS) – 24 hour hotline Ph: 08 9442 5000 Toll free: 1800 198 024
<b>Queensland</b>	Alcohol and Drug Information Service (ADIS) – 24 hour hotline Ph: 07 3236 2414 Toll free: 1800 177 833
<b>South Australia</b>	Alcohol and Drug Information Service (ADIS) – 24 hour hotline Toll free: 1300 131 340
<b>Northern Territory</b>	Amity Community Service Ph: 08 8981 8030 Toll free: 1800 629 683
<b>Tasmania</b>	Alcohol and Drug Information Service Toll free: 1800 811 994
<b>ACT</b>	Alcohol and Drug Information Service Toll free: 1800 422 599

Further referral services can be found on page 36. A local directory of services for patients with alcohol problems may be compiled for the practice (see *Section 4*).

#### 3.4.4 Follow up

Patients should be reviewed 1–3 months after their first visit to monitor progress and review goals. The practice information system should generate reminders or lists of patients overdue for follow up (see page 31). Most relapses in behaviour occur in the first few weeks and patients should be counselled to keep trying even if they have relapsed.

### 3.5 Physical activity

Physical activity can be defined as 'any bodily movement produced by skeletal muscles that results in energy expenditure'.<sup>40</sup> Exercise is a subset of physical activity that is planned, structured, repetitive and purposive for improvement or maintenance of fitness. Physical fitness is a state reflecting cardiovascular endurance, strength and mobility that may result from a variety of factors including physical activity. Physical inactivity is an important risk factor for overweight, obesity and many chronic diseases.

#### 3.5.1 Ask and assess

Patients should be asked about their daily physical activity and assessed to determine if they walk or participate in leisure time physical activity of sufficient intensity and duration for health benefits. Sufficient physical activity for health benefit for a usual 7 day period is calculated by summing the total minutes of brisk walking, moderate and/or vigorous physical activity. Vigorous physical activity is weighted by a factor of two to account for its greater intensity. Total minutes for health benefit needs to be equal to or more than 150 minutes per week over five or more sessions per week. There should be discussion on what type of activity the patient enjoys and what the barriers and enabling factors are to physical activity.

##### Question 1

How many times a week do you engage in 30 minutes (all together or in shorter amounts) of brisk walking or moderate physical activity that increases your heart rate or makes you breathe harder than normal? Eg. digging in the garden, dancing, golf, tennis.

##### Question 2

How many times a week do you engage in 20 minutes of vigorous physical activity that makes you sweat or puff and pant? Eg. jogging or running, tennis, swimming, bike riding, aerobics or fitness exercises.

These questions are contained within the physical activity module available in some general practice software programs. This program also produces a physical activity prescription and has a recall function.

All patients should have their weight assessed, in particular BMI and waist circumference, as outlined in *Section 3.2*.

#### 3.5.2 Advise and assist

Regular moderate physical activity reduces all cause mortality, incidence of CHD, hypertension, NIDDM, obesity, osteoporosis, colon cancer, falling, anxiety and depression, (A)<sup>41</sup> and diabetes in those with impaired glucose metabolism.<sup>42</sup> Advise moderate physical activity on most, or preferably all days of the week for an accumulation time of at least 30 minutes per day (A).<sup>43</sup> This can be aided by the use of a physical activity prescription (B).<sup>44</sup>

Question	Answer	Level of evidence and strength of recommendation
How much physical activity is enough?	Advise moderate physical activity on most, preferably all days of the week for an accumulated time of 30 minutes per day. This can be achieved in 3x10 minute sessions. Brisk walking for 30 minutes most days of the week would be ideal	III–A
Are there benefits in more vigorous physical activity?	The duration of physical activity is more important than intensity. While moderate physical activity is recommended for a health benefit, more vigorous physical activity may confer additional cardiovascular health if carried out for minimum of 30 minutes 3–4 times per week	II–B
Are there dangers in vigorous physical activity?	Sedentary individuals should be discouraged from undertaking sudden vigorous physical activity in favour of starting with moderate activity	V–B
What type of physical activity should I advise?	Physical activity that does not need attendance at special facilities and one that the patient enjoys is likely to be more successful, eg. walking, swimming, cycling	V–B
Who should be counselled to engage in physical activity?	All adults and children should be encouraged to participate in physical activity tailored to their health status and personal lifestyle. The benefit from physical activity is greatest in those who were previously sedentary. Adults from low SES backgrounds are less likely to engage in regular physical activity but are more likely to have multiple CVD risk factors and benefit from physical activity	III–A

Moderate physical activity: Activity that causes a slight, but noticeable, increase in breathing and heart rate and may cause light sweating in some people.<sup>43</sup>

Vigorous physical activity: Activity that leaves you puffing and makes it difficult to talk in full sentences between breaths, ie. physical activity at a heart rate of 70–85% of maximum heart rate (MHR). MHR is calculated as 220 minus age.<sup>43</sup>

The health risks of moderate intensity physical activity are low. Physical activity reduces morbidity and mortality from diabetes even without weight reduction.<sup>45</sup> However, certain conditions place patients at higher risk and require clinical assessment and supervision.

These include:

- unstable angina
- recent complicated myocardial infarction (within 3 months)
- untreated heart failure or cardiomyopathy
- resting heart rate >100
- symptoms such as chest discomfort or shortness of breath on low exertion
- severe aortic stenosis
- uncontrolled diabetes or hypertension.

Weight reduction should involve both increased physical activity and modification of food intake (see *Section 3.2*). This should commence with moderate physical activity of 30 minutes duration per day. Regular physical activity can reduce weight or prevent weight gain. Any changes must be made in the long term.

### **3.5.3 Arrange**

Patients may be referred to cardiac rehabilitation or physical activity programs, or classes run by local community organisations. Patients who are insufficiently active and have a chronic medical condition with complex care needs may benefit from an EPC multidisciplinary care plan.

#### **Heartline – 1300 36 27 87**

Heartline is the National Heart Foundation of Australia’s telephone service. The cost is a local call from anywhere in Australia. Heartline is staffed by trained health professionals who can provide information on CVD management, nutrition and healthy eating, blood pressure, smoking cessation, and physical activity. Heartline also offers information on relevant support programs, and information booklets on a range of topics.

Accredited exercise physiologists specialising in risk stratification, clinical exercise prescription and health behaviour change management may assist patients to adopt and maintain physical activity. For referral to an exercise physiologist see the ‘find an exercise physiologist’ section of the Australian Association for Exercise and Sports Science (AAESS) website ([www.aaess.com.au](http://www.aaess.com.au)).

Further referral services can be found on page 36. Information on local physical activity programs may be available from state government and local councils and should be included in a practice directory (see *Section 4*). For example, the state departments of sport or recreation have databases of local sport and recreation organisations in each state:

<b>National</b>	<a href="http://www.ausport.gov.au/">www.ausport.gov.au/</a>
<b>ACT</b>	<a href="http://www.sport.act.gov.au/">www.sport.act.gov.au/</a>
<b>New South Wales</b>	<a href="http://www.dsr.nsw.gov.au/">www.dsr.nsw.gov.au/</a>
<b>Northern Territory</b>	<a href="http://www.sportandrecreation.nt.gov.au/">www.sportandrecreation.nt.gov.au/</a>
<b>Queensland</b>	<a href="http://www.sportrec.qld.gov.au/">www.sportrec.qld.gov.au/</a>
<b>South Australia</b>	<a href="http://www.recSPORT.sa.gov.au/">www.recSPORT.sa.gov.au/</a>
<b>Tasmania</b>	<a href="http://www.osr.tas.gov.au/home.htm">www.osr.tas.gov.au/home.htm</a>
<b>Victoria</b>	<a href="http://www.sport.vic.gov.au/web/srv/srvsite.nsf/pages/srvhome">www.sport.vic.gov.au/web/srv/srvsite.nsf/pages/srvhome</a>
<b>Western Australia</b>	<a href="http://www.dsr.wa.gov.au/">www.dsr.wa.gov.au/</a>

### **3.5.4 Follow up**

Patients should be reviewed at 3–6 month intervals. The practice information system should generate reminders or lists of patients overdue for follow up (see page 31). Many patients find it difficult to sustain changes in physical activity especially if it is not a regular part of their daily activity.

## 4. Practice organisation

### 4.1 Introduction

Within the practice, many organisational activities can support the implementation of SNAP interventions such as:

- Recording and accessing information on patient risks (eg. searching records to identify patients for assessment or follow up of previous behavioural interventions)
- Updating and managing tools to assist in patient assessment and management within the consultation (eg. assessment tools, patient education materials and aids)
- Educating patients and carers about their risk factors and self management (eg. patient education sessions, managing access to information, practice newsletters)
- Managing referral and communication of patient information (eg. directories and reports)
- Recalling patients for follow up and help in maintaining lifestyle changes (eg. searching registers, phone and mail recall, flagging records)
- Quality improvement (eg. audit, review of existing practices).

The main barriers to implementation of SNAP at the practice level include:

- Lack of staff time (especially consultations). Assessing or intervening in a consultation for single risk factors can take 2–10 minutes
- Practice information systems not geared to support SNAP assessment and management
- Lack of organisation within the practice including a team approach to management with responsibilities shared by many providers
- Difficulty linking with, getting support from, and referring to population health services
- Lack of financial incentives or funding to pay for involvement of nonmedical staff.

These can be overcome to some extent by the development of a preventive program including:

- Setting practice priorities
- Listing what roles each practice member currently undertakes and how SNAP interventions can be integrated into existing roles and responsibilities
- Reviewing the way in which appointments and follow up are arranged
- Establishing information systems to support SNAP interventions
- Conducting ongoing quality improvement programs
- Developing links with local services (eg. health promotion services).

## 4.2 Setting practice priorities

The first priority is to ensure agreement that managing SNAP risk factors in all patients is a high priority practice goal. This needs to involve the practice leadership and requires commitment from the entire practice team, and will usually require a face-to-face practice meeting with the outcome being a shared model of how SNAP will work in the practice.

The model can be clarified by reviewing the following questions:

- How well is the practice performing in identifying, assessing and managing the four SNAP risk factors in the practice population?
- Whose responsibility is it to do what? Who coordinates the practice management of SNAP? Are staff adequately trained in the implementation of SNAP?
- How effective and appropriate are the practice systems in supporting SNAP:
  - the practice record and computer system
  - patient education materials and resources in the waiting room
  - patient education materials in the consulting rooms
  - the appointment system
  - the practice register and recall system
  - the practice newsletter?
- How well does the practice link with health promotion services, self help groups and organisations such as the Heart Foundation and Cancer Council?

These may be achieved by conducting a practice inventory or even a patient survey. The issues may be discussed more informally at practice meetings. There may be opportunities to link in with the local division of general practice on SNAP activities – especially if there is a network of practice managers and/or nurses.

The next step is to draw up a practice plan. This should identify the problem or issue, how it will be dealt with, whose responsibility it is and where support, assistance or resources can be obtained to achieve it.

**Example of a SNAP practice plan**

<b>Problem or issue</b>	<b>Action to be taken</b>	<b>Person responsible</b>	<b>Resources or support</b>
Patient education materials in waiting room not up-to-date	Develop a system for regular updating and rotating materials in waiting room	Practice manager	Health promotion unit National Heart Foundation
Some patients with CVD miss assessment and interventions	Flag patient records who have been admitted to hospital with CVD in the past 12 months for risk factor assessment	Receptionist	List of patients discharged from local hospital
Not enough time for assessments and interventions during consultations	Longer appointments for risk factor assessment and management	Receptionist	
Don't know where to refer patients for support and activities	Directory of referral resources for SNAP to be developed for practice	Practice nurse	Division and local health promotion unit directory
Difficulty coordinating multidisciplinary care for patients with multiple risk factors	Identify patients with multiple risk factors for assessment and development of care plan	Practice nurse (with GP involvement in care planning)	Division or local health service

SNAP interventions can be part of a successful business model for general practice and an attractive component of practice programs encouraging patients to attend the practice. There are also a number of commonwealth programs that may help provide financial support. These include:

- The Practice Incentive Program (PIP) incentives for establishment of chronic disease register and recall systems ([www.hic.gov.au/providers/incentives\\_allowances/pip/new\\_incentives.htm](http://www.hic.gov.au/providers/incentives_allowances/pip/new_incentives.htm))
- The program to help fund practice nurses in rural practices ([www.hic.gov.au/providers/incentives\\_allowances/pip/new\\_incentives/nurse\\_incentive.htm](http://www.hic.gov.au/providers/incentives_allowances/pip/new_incentives/nurse_incentive.htm))
- Under Medicare, EPC care planning services attract a Medicare rebate. An EPC multidisciplinary care plan may only be provided to patients with at least one chronic or terminal medical condition AND complex care needs requiring multidisciplinary care from a team of health care providers including the patient's GP ([www.health.gov.au/epc/careplan.htm](http://www.health.gov.au/epc/careplan.htm)) (see *Appendix 2*).

### **4.3 Roles and responsibilities**

The roles and responsibilities for SNAP need to be shared among members of the practice team. Key roles for GPs include:

- leadership within the practice confirming the importance of SNAP interventions
- identifying patients for risk assessment opportunistically
- conducting assessments of the risk factors and readiness to change, and
- providing brief interventions especially behavioural counselling and risk assessment.

Key roles for the practice manager or receptionist may include:

- managing the practice information system including monitoring and reporting the quality of recording
- the development of a recall and reminder system practice protocol which addresses privacy issues and patient consent (see Federal Office of Privacy Commissioner website: [www.privacy.gov.au/](http://www.privacy.gov.au/) and CGPIS website: [www.commed.unsw.edu.au/cgpis](http://www.commed.unsw.edu.au/cgpis))
- ensuring patient education resources are available and up-to-date both in the consulting rooms and waiting room
- including SNAP material in the practice newsletter
- managing the directories and referral communications to and from the practice
- setting up and maintaining systems for patient recall and reminders, and
- managing appointments for GP, nurse, special education programs.

Key roles for the practice nurse include:

- education and informing patients either individually or in groups
- identifying SNAP risk factors that can be incorporated into plans for the care of the patient, eg. assessment and management goals for patients with CVD
- following up patients by phone, mail, visits or recall
- ensuring the practice has appropriate tools available to conduct assessments and management
- providing a link with self help and other community organisations
- quality improvement, and
- working with other services to reach disadvantaged groups and linking the practice's work with population health programs.

Staff may require training to perform these roles. Training may be available through local divisions of general practice, as well as courses and programs run by tertiary institutions, the National Heart Foundation and Cancer Councils.

## 4.4 Managing access

The appointments system should facilitate the assessment and management of SNAP risk factors. Additional time may need to be spent with a patient who is having a SNAP assessment. Special individual or group education sessions may need to be arranged for other practice staff. Reminders may also be required for patients to book a follow up visit. Electronic scheduling systems need to be sufficiently flexible to allow this to occur.

Patient name	Further visit date	Education session with nurse	Reminder for follow up visit
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 4.5 Information management and systems

### 4.5.1 Record and register systems

Information systems can minimise time spent accessing and sorting information. A practice register should be able to generate lists of high risk patients for recall and identify patients overdue for follow up for reminders. Computerised prompts can also remind the GP during the consultation that the risk factors need to be reviewed. Computer based systems have been demonstrated to improve the quality of preventive care delivered in the primary care setting.<sup>46,47</sup>

A practice register is a complete and ordered list of patients. It should contain the patient's name, gender, date of birth, address, phone number and reason for being on the register and the dates of visits. For SNAP, the register should contain patients known to have CVD, eg. have had a myocardial infarct, unstable angina, stroke, other vascular disease, hypertension, diabetes, or hyperlipidaemia. Local divisions of general practice may be able to provide assistance in setting up a practice register and/or involving the practice in a division wide register.

Recall should invite a patient to return to the practice for a GP consultation, specifying the purpose of the visit, eg. review of smoking cessation. The Health Insurance Commission has advised that recall is appropriate for follow up of an existing problem or for preventive care.

Patient held records can help patients to take a more active role in their own health and monitor their progress. They can also act as vehicles for communication when patients move between different health care providers.

#### **4.5.2 Risk assessment tools**

Absolute risk assessment tools can provide an estimate or the likelihood of a cardiovascular event. There are several computerised versions of these tools. The best allow all four SNAP risk factors to be considered, as well as BP, lipids, family history, and conditions such as diabetes. The risk information can be useful in helping to motivate patients to make a lifestyle change as well as to decide whether certain interventions are warranted (eg. referral to a dietician, prescription of bupropion).

A number of websites provide absolute vascular risk assessment tools including:

- a downloadable tool at: [www.htl.com.au/downloadsaus.html](http://www.htl.com.au/downloadsaus.html)
- an online calculator at: [www.riskscore.org.uk/calculator.html](http://www.riskscore.org.uk/calculator.html)
- a number of more sophisticated but inexpensive tools at: [www.absoluterisk.com](http://www.absoluterisk.com).

A physical activity module that incorporates an assessment of physical activity, provides prompts and produces a physical activity prescription has been incorporated into some general practice software programs.

#### **4.5.3 Patient education materials**

##### **Consulting room materials**

Patient education materials that are handed to the patient directly by the GP or practice nurse will have particular impact. These should ideally be stored on computers used in the consulting rooms. These materials should be tailored to the:

- patient's language
- patient's health problems (eg. existing CVD)
- patient's readiness to change.

They should also be evidence based and provide a balanced approach to the problem. Some of the material produced by commercial interests gives undue emphasis on a particular treatment or product. The physical activity prescription is a useful tool both in summarising what action the GP and the patient have agreed to as an education tool on how physical activity goals can be achieved, and to facilitate referral to activity programs. This is now available in some general practice clinical software programs.

##### **Waiting room materials**

The waiting room is an important place for patients to access health information. Material left in the waiting room can act as a prompt for patients to raise issues with the GP or other practice staff. Waiting room materials, including posters, may be available from local divisions of general practice, health promotion units of state health departments, and nongovernment organisations such as the National Heart Foundation, Diabetes Australia, Cancer Councils and other key groups (eg. Nutrition Australia).

Leaflets should be clear, simple and unbiased. They should, if possible, be available in the languages which patients attending the practice speak. They need to be replenished periodically (ie. about every 3–6 months).

Posters are an important way of alerting patients to behavioural risk factors and the fact that the GP may be able to help. However, posters need to be rotated regularly. A poster that is left in the practice for years will become invisible. Video materials are also available and can be played in the waiting room.

A practice notice board can provide information about self help groups and local programs, as well as contact information for patients to self refer. It is important to keep the notice board up-to-date. Some practices now provide computer terminals in the waiting room for patients to access patient education material from selected websites.

#### **Practice newsletter**

A practice newsletter may be a useful way of informing patients about preventive issues. These should regularly contain information about the SNAP risk factors and strategies patients can use to reduce their risk.

#### **Recommended websites**

An increasing amount of information and educational materials is available on the world wide web. Many patients will have previously accessed this information or will do so after visiting the practice. Therefore, it is important to recommend websites that provide unbiased and evidence based information. One such website is 'Healthinsite' conducted by the Australian Government Department of Health and Ageing ([www.healthinsite.gov.au](http://www.healthinsite.gov.au)).

#### **4.5.4 Referral information**

A directory of referral information needs to be readily available in the practice. This should include:

- counselling and self help groups for smoking cessation (in addition to Quitline)
- dietician referral information
- drug and alcohol counsellors and self help groups, and
- local programs and services for physical activity (eg. walking groups).

It should also include more specialised services such as diabetes services and cardiac rehabilitation services.

Many divisions of general practice have employed allied health workers such as dieticians and educators to support practices offering SNAP interventions (as part of the More Allied Health Services [MAHS] program).

## 4.6 Quality improvement

Quality improvement activities need to be assigned as the responsibility of at least one member of staff. This may be the practice manager or nurse. In order to assess if the practice is performing adequately, it is important to assess how frequently:

- patients' risk factors are assessed
- patients are offered brief interventions
- patients are referred to various referral services.

It may also be important to determine if these result in any change in patient behaviour. This can be evaluated by conducting:

- an audit of medical records, or
- a patient survey.

Auditing computerised records can be difficult depending on the software being used and the extent to which the information is recorded in a structured way. This is relatively easy for patients with diabetes, as most general practice software contains special modules for patients with diabetes. Other groups of patients may be identified from prescribing records (eg. patients on antihypertensive or lipid lowering drugs). Information on SNAP risk factors may be listed in various parts of the computerised record.

Conducting a patient survey is another approach - asking patients who have received SNAP interventions to provide some feedback on how helpful they found the support provided by the practice. Either of these may have privacy implications. The office of the Privacy Commissioner website ([www.privacy.gov.au/](http://www.privacy.gov.au/)) and The Handbook For The Management of Health Information in Private Medical Practice can be downloaded from the RACGP website ([www.racgp.org.au](http://www.racgp.org.au)).

## 4.7 Linkages

Providing effective behavioural interventions in general practice requires support from a number of sources. Public health, primary health care or community health services, organisations such as the Heart Foundation and Cancer Councils local self help groups, and local government can help by providing the practice with:

- education and information materials
- information systems
- outreach programs and community education
- referral services or programs.

Local divisions of general practice may also be able to help with these, and with training for practice staff in what is available. Establishing and maintaining these links may be made easier by designating a member of the practice who has main responsibility for liaison with these other services.

## 5. Resources and further reading

### 5.1 Guidelines

RACGP. Guidelines for preventive care in general practice (2002):

[www.racgp.org.au/document.asp?id=4169](http://www.racgp.org.au/document.asp?id=4169)

RACGP. Sharing health care guidelines. Chronic condition self management guidelines (2002):

[www.racgp.org.au/document.asp?id=611](http://www.racgp.org.au/document.asp?id=611)

RACGP. Handbook for the management of health information in private medical practice:

[www.racgp.org.au/document.asp?id=6528](http://www.racgp.org.au/document.asp?id=6528)

National Heart Foundation and Cardiac Society Lipid guidelines. A guide to risk reduction for patients with or at risk of CVD: [www.heartfoundation.com.au/prof/index\\_fr.html](http://www.heartfoundation.com.au/prof/index_fr.html)

A guide to motivational interviewing – NSW Drug Programs Bureau:

[www.health.nsw.gov.au/public-health/dpb/professionals.htm](http://www.health.nsw.gov.au/public-health/dpb/professionals.htm)

#### 5.1.1 Smoking

NSW Drug Programs Bureau: A guide to smoking cessation:

[www.health.nsw.gov.au/public-health/dpb/professionals.htm](http://www.health.nsw.gov.au/public-health/dpb/professionals.htm)

National Heart Foundation: Effects of smoking and quitting:

[www.heartfoundation.com.au/heart/index\\_fr.html](http://www.heartfoundation.com.au/heart/index_fr.html)

NSW Health Promotion: A guide for management of nicotine dependent patients:

[www.health.nsw.gov.au/public-health/health-promotion/pdf/Tobacco/NicotineDependentInpatient.pdf](http://www.health.nsw.gov.au/public-health/health-promotion/pdf/Tobacco/NicotineDependentInpatient.pdf)

Zwar N, Richmond R, Borland R. Smoking cessation guidelines for Australian general practice:

[www.health.gov.au/pubhlth/publicat/document/smoking\\_cessation.pdf](http://www.health.gov.au/pubhlth/publicat/document/smoking_cessation.pdf)

#### 5.1.2 Overweight and obesity

NHMRC: Clinical practice guidelines for the management of overweight and obesity in adults:

[www.obesityguidelines.gov.au](http://www.obesityguidelines.gov.au)

NHMRC: Clinical practice guidelines for the management of overweight and obesity in children and adolescents:

[www.obesityguidelines.gov.au](http://www.obesityguidelines.gov.au)

### **5.1.3 Nutrition**

Dietary guidelines for Australian adults, children and adolescents:

[www.nhmrc.gov.au/publications/synopses/dietsyn.htm](http://www.nhmrc.gov.au/publications/synopses/dietsyn.htm)

Dietary guidelines for older Australians (1999):

[www.nhmrc.gov.au/publications/synopses/n23syn.htm](http://www.nhmrc.gov.au/publications/synopses/n23syn.htm)

Australian guide to healthy eating (1998):

[www.health.gov.au/pubhlth/strateg/food/guide/index.htm](http://www.health.gov.au/pubhlth/strateg/food/guide/index.htm) Nutrition

Nutrition Australia provides consumer information:

[www.nutritionaustralia.org](http://www.nutritionaustralia.org)

Dietitians Association of Australia: [www.daa.asn.au](http://www.daa.asn.au)

### **5.1.4 Alcohol**

The Australian alcohol guidelines: health risks and benefits (2001):

[www.alcoholguidelines.gov.au/resources.htm](http://www.alcoholguidelines.gov.au/resources.htm)

Treating alcohol problems: guidelines for general practitioners:

[www.health.gov.au/pubhlth/publicat/document/alc\\_treatinggp.pdf](http://www.health.gov.au/pubhlth/publicat/document/alc_treatinggp.pdf)

A guide to the assessment and treatment of alcohol in general practice:

[www.health.nsw.gov.au/public-health/dpb/professionals.htm](http://www.health.nsw.gov.au/public-health/dpb/professionals.htm)

NSW Drug and Alcohol Multicultural Education Centre provides resources for the management of alcohol, tobacco and other drug treatment for patients of different cultures:

[www.damec.org.au](http://www.damec.org.au)

The National Alcohol Strategy:

[www.nationaldrugstrategy.gov.au](http://www.nationaldrugstrategy.gov.au)

### **5.1.5 Physical activity**

National physical activity guidelines for Australians:

[www.health.gov.au/pubhlth/publicat/document/physguide.pdf](http://www.health.gov.au/pubhlth/publicat/document/physguide.pdf)

National Heart Foundation physical activity guidelines:

[www.heartfoundation.com.au/prof/index\\_fr.html](http://www.heartfoundation.com.au/prof/index_fr.html)

The GP Physical Activity Project newsletter 'Getting Australia active':

[www.nphp.gov.au/sigpah](http://www.nphp.gov.au/sigpah)

## 5.2 Patient education, nonpharmacological scripts

A number of patient education resources and materials for each of the SNAP risk factors can be accessed at: [www.healthinsite.gov.au/](http://www.healthinsite.gov.au/)

National Heart Foundation patient education information resources:  
[www.heartfoundation.com.au/heart/index\\_fr.html](http://www.heartfoundation.com.au/heart/index_fr.html)

Enhanced Primary Care Medicare items: [www.health.gov.au/epc](http://www.health.gov.au/epc)

## 5.3 Specific organisations

Guidelines and patient education resources for patients with specific conditions

National Heart Foundation of Australia: [www.heartfoundation.com.au](http://www.heartfoundation.com.au)

Diabetes Australia: [www.diabetesaustralia.com.au](http://www.diabetesaustralia.com.au)

National Stroke Foundation: [www.strokefoundation.com.au/](http://www.strokefoundation.com.au/)

Australian Kidney Foundation: [www.kidney.org.au/](http://www.kidney.org.au/)

Cancer Council Australia: [www.cancer.org.au/default.cfm](http://www.cancer.org.au/default.cfm)

## 5.4 Estimation of cardiovascular risk

The tables in *Appendix 4* were adapted from: *Recommendations for the prevention of coronary heart disease in clinical practice*. The European Societies of Cardiology, Artherosclerosis and Hypertension.

### How to use the colour charts

PROGNOSIS: To estimate a person's absolute 5 year risk of a cardiovascular event (new angina, MI, CHD death, stroke or TIA), find the colour block which best describes your patient's:

- gender
- age
- smoking
- diabetes status (on insulin, oral hypoglycaemics, or fasting blood glucose >8.0 mmol/L reflotron or laboratory measurement)
- BP (mean of two readings on two occasions sufficient for assessing risk but not for establishing pretreatment baseline)
- total cholesterol/HDL ratio (mean of two nonfasting reflotron measurements or one laboratory measurement sufficient for assessing risk but not for establishing pretreatment baseline).

All patients with symptomatic CVD (including angina, MI, CHF, stroke, TIA PVD) or ECG diagnosed LVH are assumed to have a CVD risk greater than 20% in 5 years. Patients with a strong family history of CVD (first degree relative: male with CVD before 55 years, female before 65 years) or obesity (BMI of 30 kg/m<sup>2</sup> or more) are likely to be at greater risk than the tables indicate – consider increasing one colour category. Read off 5 year risk from colour code in key to table.

## 5.5 Short training courses

Check the RACGP website ([www.racgp.org.au](http://www.racgp.org.au)), GPEA ([www.gpea.org.au](http://www.gpea.org.au)) and your local division of general practice for information about training programs for general practice staff. For more information on alcohol and drug training see the NCETA website ([www.nceta.flinders.edu.au](http://www.nceta.flinders.edu.au)). A number of short courses and certificate courses on drug and alcohol, patient education, nutrition and physical activity are available through tertiary institutions including the following:

### **ACT**

Canberra Institute of Technology  
Telephone 02 6207 4916  
Email [satch.campbell@cit.act.edu.au](mailto:satch.campbell@cit.act.edu.au)

### **New South Wales**

Hunter Institute of TAFE  
Telephone 02 4923 7222  
Fax 02 4923 7779  
[www.hunter.tafensw.edu.au/default.htm](http://www.hunter.tafensw.edu.au/default.htm)

Illawarra Institute of TAFE  
Telephone 02 4222 2908  
Fax 02 4226 4748  
[www.illawarra.tafensw.edu.au/default.htm](http://www.illawarra.tafensw.edu.au/default.htm)

Newcastle University  
Telephone 02 4921 8695  
Email [postgrad-MHS@newcastle.edu.au](mailto:postgrad-MHS@newcastle.edu.au)

North Coast Institute of TAFE  
Telephone 02 6773 7700  
[www.nci.tafensw.edu.au](http://www.nci.tafensw.edu.au)

Northern Sydney Institute of TAFE  
Telephone 02 9942 0500

Riverina Institute of TAFE  
Telephone 02 6938 1444  
Email [ritcourseinformation@det.nsw.edu.au](mailto:ritcourseinformation@det.nsw.edu.au)

University of Sydney, Cumberland Campus  
Telephone 02 9351 9343  
Email [c.james@fhs.usyd.edu.au](mailto:c.james@fhs.usyd.edu.au)

University of Western Sydney  
Telephone 02 4736 0019  
Email [k.lambert@uws.edu.au](mailto:k.lambert@uws.edu.au)

Western Institute of TAFE  
Telephone 6338 2424  
[www.wit.tafensw.edu.au](http://www.wit.tafensw.edu.au)

### **Northern Territory**

Batchelor Institute of Indigenous  
Tertiary Education  
Telephone 08 8939 7345  
Email [anne.davies@nt.gov.au](mailto:anne.davies@nt.gov.au)

Northern Territory University  
Casuarina Campus  
Telephone 08 8922 6101  
Email [bonita.moss@ntu.edu.au](mailto:bonita.moss@ntu.edu.au)

### **Queensland**

Barrier Reef Institute of TAFE  
Telephone 1300 1300 84  
Email [barrier.reef@det.qld.gov.au](mailto:barrier.reef@det.qld.gov.au)

Bremer Institute of TAFE (QLD)  
Telephone 07 3817 3000  
Email [bundamba.bremer@tafe.net](mailto:bundamba.bremer@tafe.net)

Gold Coast Institute of TAFE (QLD)  
Telephone 07 5581 8300  
Email [enrolments.gcit@det.qld.edu.au](mailto:enrolments.gcit@det.qld.edu.au)

North Point Institute of TAFE (QLD)  
Telephone 07 3880 2233  
Email [northpoint.enrolments@detir.qld.gov.au](mailto:northpoint.enrolments@detir.qld.gov.au)

Tropical North Institute of TAFE (QLD)  
Telephone 1300 656 959  
Email [info.tnqit@detir.qld.gov.au](mailto:info.tnqit@detir.qld.gov.au)

University of Queensland  
Telephone 07 33655189  
Email [qadrec@sph.uq.edu.au](mailto:qadrec@sph.uq.edu.au)/  
[j.najman@sph.uq.edu.au](mailto:j.najman@sph.uq.edu.au)

### **South Australia**

Flinders University  
Telephone 08 8204 4698  
Email melissa.raven@flinders.edu.au

Flinders University, Sturt Campus  
Telephone 08 82015226  
Email charlotte.decrepigny@flinders.edu.a

Douglas Mawson Institute of TAFE (SA)  
Telephone 08 8303 2617  
Email fiontrem@dmi.tafe.sa.edu.au

Spencer Institute of TAFE (SA)  
Telephone 08 88234 6602  
Email msaunders@arts.com.au

### **Victoria**

Chisholm Institute of TAFE (Victoria)  
Telephone 1800 444 220  
Email enquiries@chisholm.vic.edu.au

Deakin University  
Telephone 03 92446854  
Email adelbian@deakin.edu.au

Goldburn Ovens TAFE  
Telephone 1300 733 111  
Email blee@gotafe.vic.edu.au  
Swinburne University of Technology  
Telephone 03 9214 8370  
Email Joan.Cashion@groupwise.swin.edu.au

Turning Point  
Telephone 03 8413 8413  
Email E&Tinfo@turningpoint.org.au

University of Ballarat  
Telephone 03 5327 8250  
Email p.kinnersly@ballarat.edu.au

### **Western Australia**

Central TAFE  
Telephone 1300 300 822  
Email study@tiwa.com.au

CYO' Connor Institute of TAFE  
Telephone 08 9622 3905  
Email cyono@northam.training.wa.gov.au

East Pilbara Institute of TAFE  
Telephone 08 9158 9400  
Email s\_servs@hedland.edu.au

Midland College of TAFE  
Telephone 08 9274 9203  
Email exstu@midland.training.wa.gov.au

South East Metropolitan College of TAFE  
Telephone 08 9780 7070  
Email Info.Centre@semc.wa.edu.au

University of Western Australia  
Telephone 03 9346 2280  
Email ghulse@cyllene.uwa.edu.au

West Coast College of TAFE  
Telephone 08 9325 7791  
Email kaydeb@west\_coast.training.wa.gov.au

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## Appendix 1. Grading of evidence and recommendations

### Levels of evidence

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Level	Explanation
I	Evidence obtained from a systematic review of all relevant randomised controlled trials
II	Evidence obtained from at least one properly designed randomised controlled trial
III	Evidence obtained from any of the following: <ul style="list-style-type: none"> <li>• well designed pseudo randomised controlled trials (alternate allocation or some other method)</li> <li>• comparative studies with concurrent controls and allocation not randomised (cohort studies), case control studies, or interrupted time series with a control group</li> <li>• comparative studies with historical control, two or more single arm studies, or interrupted time series without a parallel control group</li> </ul>
IV	Evidence obtained from case series, either post- or pre-test and post-test
V	Opinions of respected authorities, based on clinical experience, descriptive studies or reports of expert committees
No evidence	After thorough searching no evidence was found regarding recommendations in general practice for the target disease or condition

### Strength of recommendation

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Strength	Explanation
A	There is good evidence to support the recommendation
B	There is fair evidence to support the recommendation
C	There is poor evidence regarding the inclusion or exclusion of the recommendation but recommendations may be made on other grounds
D	There is fair evidence against the recommendation
E	There is good evidence against the recommendation

The levels of evidence are adapted from the NHMRC. *A guide to the development implementation and evaluation of clinical practice guidelines*, 1998.

The strength of recommendation coding scheme is adapted from the US Preventive Services Task Force *Guide to clinical preventive services*, 1996.

## Appendix 2. SNAP care plan (example)

Page 1

### For patients who meet EPC care planning eligibility requirements

GP prepares 720 ✓ GP review 724 ✓  
 PATIENT NAME \_\_\_ Peter \_\_\_\_\_ Medical Practitioner Dr James Brown  
 DOB \_\_\_ 14 Jun 1951 \_\_\_\_\_ Male ✓ Female ✓  
 Name & contact  
 details if carer \_\_\_ NA \_\_\_\_\_  
 Interpreter required Yes ✓ No ✓ Medical record/file No. G7845 27/07/90  
 Language Required \_\_\_ No \_\_\_\_\_

#### CARE PLAN HISTORY

Is there a current care plan in existence? Y ✓ N ✓ If so, by whom? \_\_\_\_\_  
 Date \_\_\_\_\_  
 Is the patient eligible under Veterans' Affairs NO If yes, please ensure this form is available on request from DVA

#### Problem list (COMPLETE MEDICATION REVIEW SHEET SEPARATELY IF APPROPRIATE)

Principal diagnoses (chronic conditions)	Needs expressed by patient and carer or GP (medical, social, psychosocial)
Ischaemic heart disease	Unstable chest pain
Overweight	Irregular eating habits/ poor diet. Lack of physical activity
Smoking	Desire to quit
High blood pressure	Under control
Dyslipidaemia	Low fat diet

#### HEALTH PROVIDERS/SERVICES INVOLVED IN PATIENT'S CARE

	Current	Others likely to assist
Dietitian		Heart Foundation of Australia
Smoking cessation program		Local walking program
Cardiac rehabilitation		
Cardiologist		

My GP has explained the purpose of the care plan and I give/my carer gives permission to prepare a care plan and discuss my medical history and diagnosis with the providers listed. Y ✓ N ✓ Note any medical or personal information patient wants withheld from others

I do/do not have any medical or other information I want withheld from other participants. Y ✓ N ✓

All participants to retain confidentiality. Y ✓ N ✓

I am aware that there is a fee for the preparation of this care plan and a Medicare rebate will be payable. Y ✓ N ✓

Has a needs assessment (biopsychosocial) been completed? Y ✓ N ✓ If no, appointment for needs assessment has been set for Date / / Time \_\_\_\_\_

## SNAP care plan (example)

### HEALTH CARE PROVIDERS ON THIS TEAM

Care provider	Type of care	Contact No.	Report Summary	Full
Justin (cardiac rehab program)	Education on lifestyle factors, physical activity program, involvement of other family members	9666 7654		√
Jennifer (dietitian)	Nutritional assessment and meal planning advice	9666 4563		√
Allan (cardiologist)	Assessment of ischaemic heart disease (angiography) and review of management	9765 4539		√

\*Provider responsible for distributing report to carer team and patient.

### Multidisciplinary needs

Need	Goal	Tasks	Providers	Review
Overweight Raised cholesterol	Aim for BMI <27, lose 5 kg weight in 2 months Aim for: Cholesterol <4.0 LDL cholesterol <2.5 HDL cholesterol >1.0 Triglyceride <2 mmol/L Aim for waist circumference 94 cm	* Meal plan - regular meals, reduce saturated fat, increase veg & fibre, reduce alcohol, use food diary, info sheets + appointments. * Increase physical activity, start walking daily building up to 45 mins most days. Pedro to look at fun/social ways to be more physically active * Medication review 2 weeks after start plan	Peter Joanne (Peter's wife) Justin (cardiac rehab) Jennifer (dietitian) James (GP)	2 weeks
Raised BP	BP <130/85	* BP check every GP visit	James Allan (cardiologist)	2 weeks
Smoking	Stop	* Provision of advice and information * NRT * Referral to QUIT program	James QUITLINE	2 weeks
Reduce alcohol intake	<21 units week	* Discussions with James * Monitor mood * Monitor for medication problems, check bloods (UAC & LFTs)	James	2 weeks
Chest pain (ischaemic heart disease)	Reduce pain Reduce anxiety Prevent infarction	* Assessment and angiography * Review management	Allan (cardiologist)	6 weeks

Review date for whole plan: 3 months\*.

Copy of plan provided to patient: √

I agree with the goals in this plan. Patient signature: \_\_\_\_\_ Date: \_\_\_\_\_

\* Note: For EPC purposes, the review of a care plan (Item 724) can be performed 3 months after a care plan has been instituted and, if this review is to be claimed as an EPC care plan, it must be done in collaboration with all other members of the EPC multidisciplinary care plan team; if the review is undertaken by the GP alone it should be claimed as a normal consultation item (see: [www.health.gov.au/epc/pdf/exphlth.pdf](http://www.health.gov.au/epc/pdf/exphlth.pdf))

### Appendix 3. Practice SNAP inventory

#### Patient education materials

1. If your practice has patient education materials concerning smoking, nutrition, alcohol and physical activity, please tick which types:

	Pamphlet/ booklet	Computerised leaflet	Posters	Videos	Other
Smoking					
Nutrition					
Alcohol					
Physical activity					

2. What proportion of your patients from culturally and linguistically diverse backgrounds are able to read and/or understand the patient education materials? (tick)

Type of materials:	All	Most	Some	Few	Don't know
Smoking					
Nutrition					
Alcohol					
Physical activity					

3. How frequently do you think patient education resources in the waiting area and consulting room are used by patients? (tick)

Area of practice	Very frequently	Frequently	Sometimes	Rarely	Don't know
Waiting area					
Consulting room					

**4. What can be done to make them more useful?**

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**5. How often do you provide verbal advice to your patients concerning the four risk factor areas?**

	Very frequently	Frequently	Sometimes	Rarely	Don't know
Smoking					
Nutrition					
Alcohol					
Physical activity					

**5.1 Have you had education or training in the clinical management of these four risk factor areas?**

- Smoking  Yes  No
- Nutrition  Yes  No
- Alcohol use  Yes  No
- Physical activity  Yes  No

**5.2 Would you like additional education or training on these four risk factor areas?**

- Smoking  Yes  No
- Nutrition  Yes  No
- Alcohol use  Yes  No
- Physical activity  Yes  No

**5.3 What form would you like this training to take? (tick all that apply)**

- Seminars  Workshops
- Continuous professional development  Lunch time case studies
- Self study learning materials  Practice visits
- Small group discussion sessions  Courses
- Other: \_\_\_\_\_

**6. How frequently do you offer referral to your patients for the following?**

	<b>Never</b>	<b>Sometimes</b>	<b>Often</b>	<b>Very often</b>	<b>Not sure</b>
Smoking cessation					
Nutritional counselling					
Alcohol management					
Physical activity programs					

**6.1 How easy is it to find patient services to refer to for the following?**

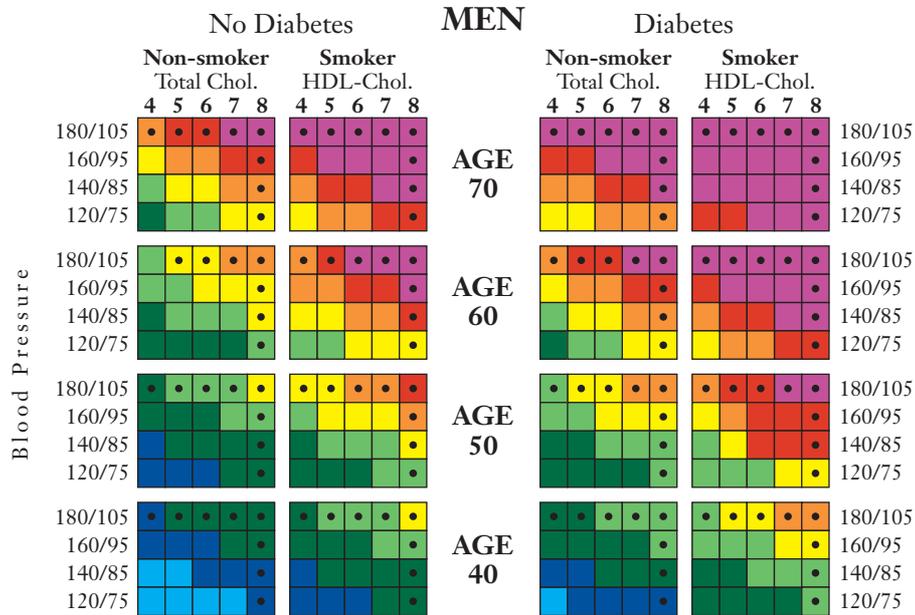
	<b>Very difficult</b>	<b>Difficult</b>	<b>Relatively easy</b>	<b>Very easy</b>	<b>No sure</b>
Smoking cessation					
Nutritional counselling					
Alcohol management					
Physical activity programs					

**6.2 Do you have access to a directory of local and community services relating to the four risk factors?**

- |                   |                              |                             |
|-------------------|------------------------------|-----------------------------|
| Smoking           | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Nutrition         | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Alcohol use       | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Physical activity | <input type="checkbox"/> Yes | <input type="checkbox"/> No |



## Appendix 4. Estimation of cardiovascular risk



### Key to Risk Tables

Prognosis: 5 year CVD risk (non-fatal & fatal)	Benefit 1: CVD events prevented per 100 treated for 5 years*	Benefit 2: NNT for 5 years*	
> 30%	> 10 per 100	< 10	Suggested starting point for discussion with patient about drug treatment.
25–30%	9 per 100	11	
20–25%	7.5 per 100	13	
15–20%	6 per 100	16	
10–15%	4 per 100	25	
5–10%	2.5 per 100	40	
2.5–5%	1.25 per 100	80	
< 2.5%	< 0.8 per 100	> 120	

- Cells with this marker indicate that in patients with very high levels of cholesterol (> about 8.5–9 mmol/L) or blood pressure (> about 170/100 mmHG), the risk equations may underestimate the true risk. **Therefore it is recommended that treatment be considered at lower absolute CVD risks than in other patients**

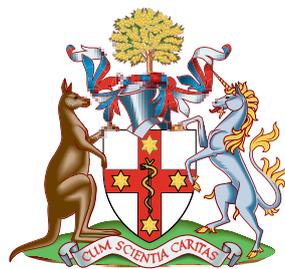
\* Assumes BP reduction of about 12/6 mmHg in patients with BP > 140–150/90, or cholesterol reduction of about 20% in patients with total cholesterol > 5.0–5.5 mmol/L, produces an approximate 30% reduction in CVD risk, whatever the pre-treatment absolute risk.



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# **Estimation of cardiovascular risk**

**Colour charts to estimate a person's absolute 5 year risk of a cardiovascular event**



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