The Royal Australian College of General Practitioners

NACCHO

National guide to

a preventive health assessment for Aboriginal and Torres Strait Islander people

Second edition

National guide to a preventive health assessment for Aboriginal and Torres Strait Islander people, second edition

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National guide to **a preventive health assessment for Aboriginal and Torres Strait Islander people**

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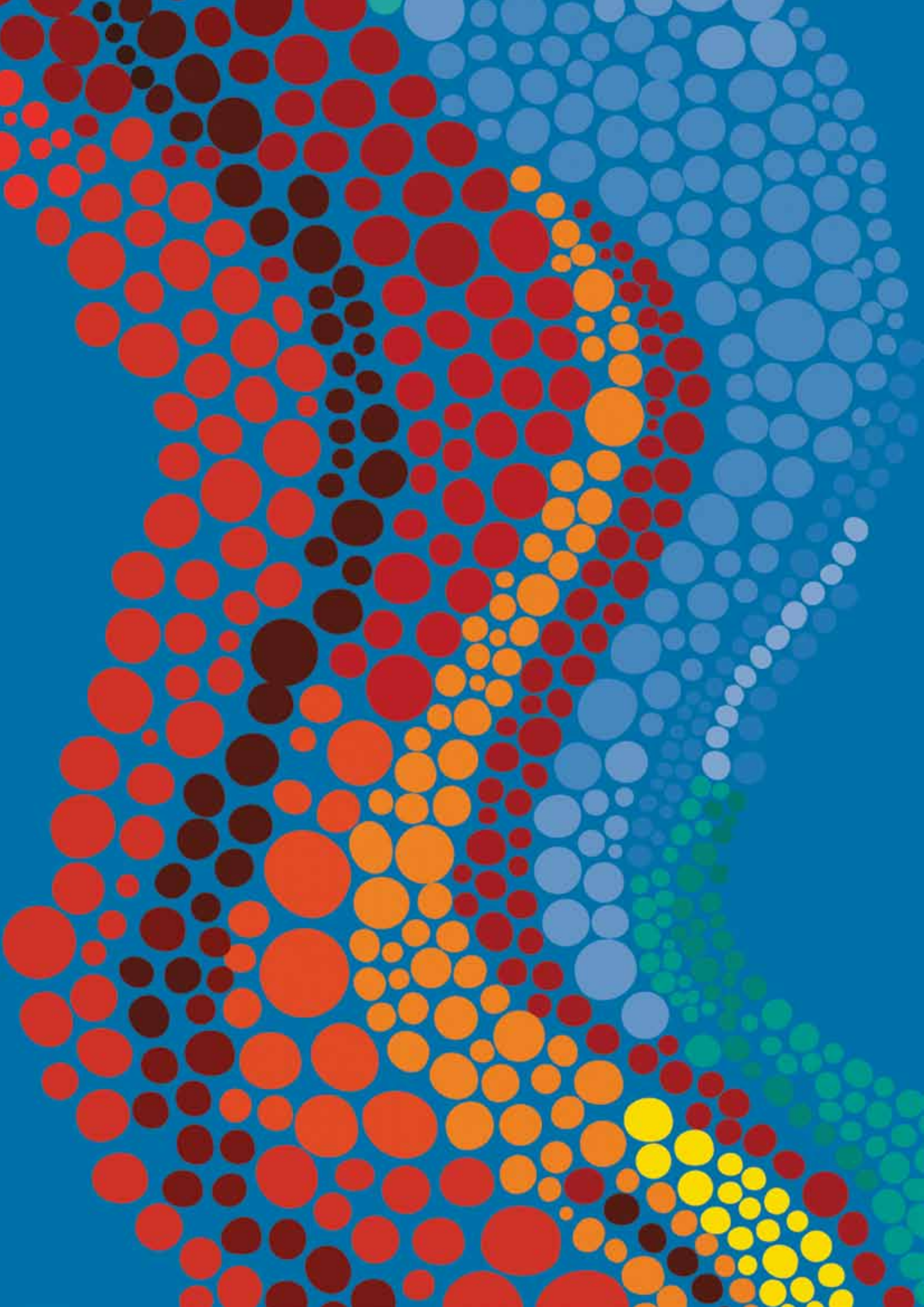

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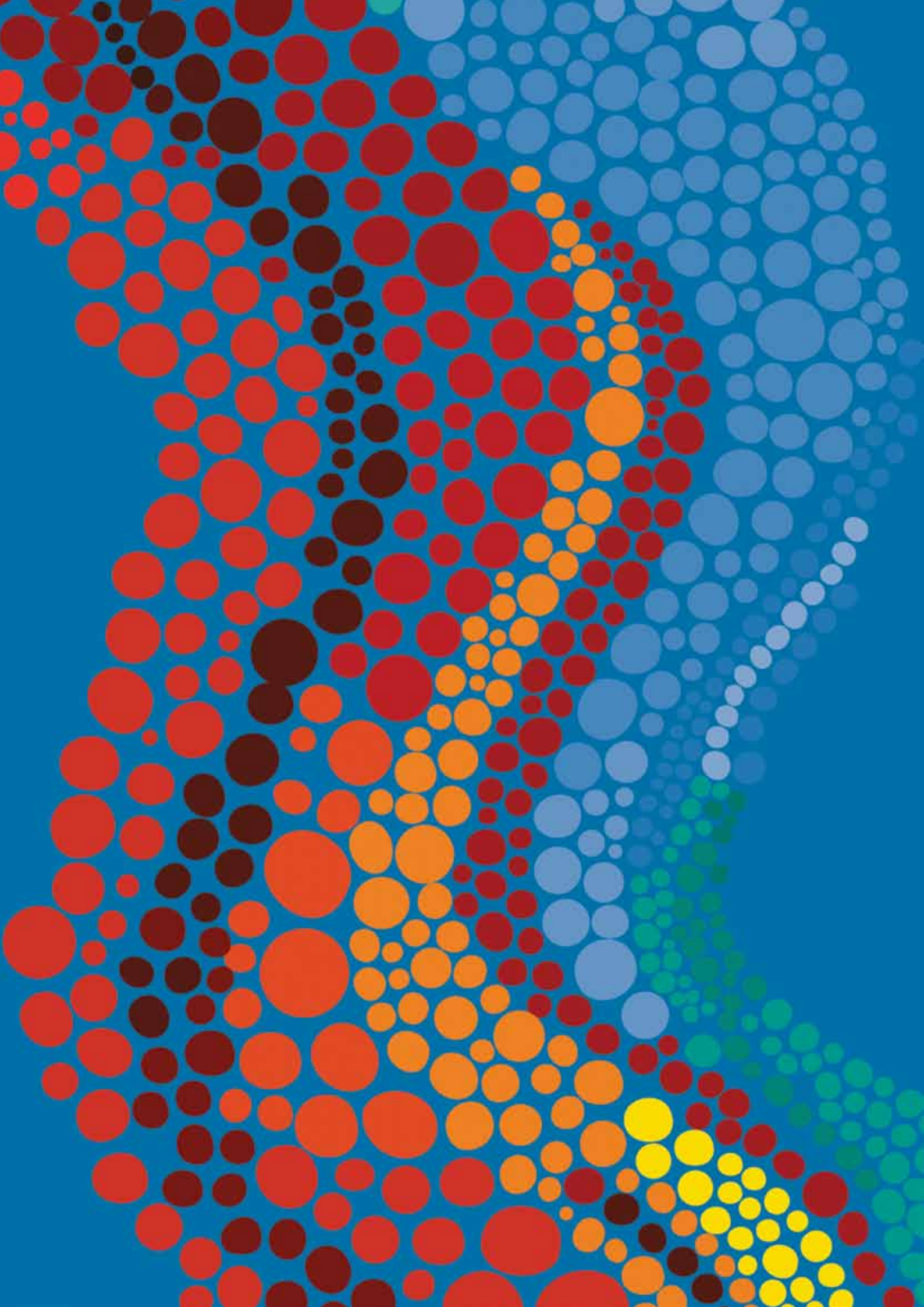


Introduction

The review and updating of the first (2005) edition of the *National guide to a preventive health assessment for Aboriginal and Torres Strait Islander people* ('National Guide') is a joint initiative of the National Aboriginal Community Controlled Health Organisation (NACCHO) and The Royal Australian College of General Practitioners (RACGP) National Faculty of Aboriginal and Torres Strait Islander Health. The National Guide is a practical resource intended for all health professionals delivering primary healthcare to Aboriginal and/or Torres Strait Islander people. Its purpose is to provide GPs and other health professionals with an accessible, user-friendly guide to best practice in preventive healthcare for Aboriginal and Torres Strait Islander patients.

This second edition of the National Guide comprises:

- the National Guide, which contains evidence statements, recommendations, risk calculation tables and an outline of the development of the guide
- the evidence base: the collection of evidence underpinning the guide and recommendations (e-version only) (see the Methodology section 'Searching the evidence base and drafting recommendations')
- a child and adult lifecycle summary chart listing activities recommended at each age group.

The National Guide is available on the NACCHO and the RACGP websites at www.naccho.org.au and at www.racgp.org.au/aboriginalhealth/nationalguide.

Note: This print version of the National Guide does not include the evidence or preamble to a topic (see the full e-version for the evidence base).

The National Guide is being integrated into clinical software over time to support primary healthcare professionals to implement best practice by providing them with accessible, accurate and up-to-date preventive health information relevant to Aboriginal and Torres Strait Islander people. For further information contact the RACGP National Faculty of Aboriginal and Torres Strait Islander Health on 03 8699 0499 or email aboriginalhealth@racgp.org.au.

Purpose

The National Guide is intended for all health professionals delivering primary healthcare to the Aboriginal and Torres Strait Islander population. This includes general practitioners (GPs), Aboriginal and Torres Strait Islander health workers, nurses and those specialists with a role in delivering primary healthcare. The National Guide makes specific recommendations regarding the elements of a preventive health assessment across the lifecycle of the Aboriginal and Torres Strait Islander population.

The aim of the National Guide is to provide an up-to-date, evidence-based national resource that can help inform health providers and policy makers on a defined set of activities that are of particular relevance to Aboriginal and Torres Strait Islander people.

These activities may prevent disease, detect early and unrecognised disease, and promote health in the Aboriginal and Torres Strait Islander population while allowing for variations based on regional and local circumstances. The health status of Torres Strait Islander people is very similar to that of the Aboriginal population, and the information in the National Guide can be applied to both population groups.

How to use the guide

Using the recommendations

All health professionals delivering primary healthcare to Aboriginal and/or Torres Strait Islander patients should use the recommendations to enhance the clinical care they provide. The National Guide aims to complement the RACGP *Guidelines for preventive activities in general practice* (the 'red book') by dealing with health issues that are specific to the Aboriginal and Torres Strait Islander population.

Cross referencing with the RACGP red book

The chosen subject areas in the National Guide represent the key health issues that are amenable to primary healthcare intervention and contribute to morbidity and mortality in the Aboriginal and Torres Strait Islander population. Where issues common in the general Australian population have not been dealt with in this guide (eg. urinary incontinence), GPs are encouraged to cross-reference with the red book, which is available on the RACGP website at www.racgp.org.au/guidelines/redbook. The red book is a synthesis of evidence-based guidelines from Australian and international sources and provides recommendations for everyday use in general practice.

Using local guidelines

Healthcare providers (particularly in regional and remote areas) are also encouraged to refer to local guidelines, where appropriate and available, in order to optimise preventive health assessments. Many of the recommendations in the National Guide describe health problems that may be of concern only in certain regional areas. For example, trichiasis screening is only appropriate for an elderly Aboriginal patient who was raised in a trachoma endemic area (see *Chapter 6: Eye health*). Consequently, many recommendations highlight the importance of clinical discretion in decision making.

Appraising current preventive practice

Healthcare providers should use the National Guide to systematically appraise current preventive practice, especially where recommendations for the general population have previously been applied to Aboriginal and Torres Strait Islander patients. Providers may also benefit by appraising certain screening activities for which there are 'good practice points' (ie. expert opinion based recommendations but little current evidence). Inappropriate preventive interventions may draw resources away from activities known to improve the health of the Aboriginal and Torres Strait Islander population, such as risk factor modification and immunisation programs.

Why preventive health assessments are necessary

A systematic and comprehensive approach to prevention

There is strong evidence that the delivery of clinical preventive health services improves health outcomes. These services include immunisation, screening for asymptomatic disease, chemoprophylaxis (using medication to prevent the onset of disease), counselling and other ways to encourage patient behavioural change, as well as primary healthcare influences over environmental factors.

See the Methodology section 'Developing recommendations'.

Opportunity to improve Aboriginal and Torres Strait Islander health equality

Primary care providers often miss opportunities for the prevention of chronic disease and associated complications in the Aboriginal and Torres Strait Islander

population, and miss opportunities to identify if patients are of Aboriginal and/or Torres Strait Islander origin.

Health service utilisation data indicate that Aboriginal and Torres Strait Islander people are high users of publicly provided services such as public hospitals and community health services and low users of medical, pharmaceutical, dental and other health services that are, for the most part, privately provided.[1]

Overall, in 2008–09, the potentially preventable hospitalisation rate for Aboriginal and Torres Strait Islander people (14 564 per 100 000 population) was 4.9 times the rate for other Australians (2956 per 100 000).[2] Potentially preventive chronic diseases and injury are conditions causing the greatest proportion of excess deaths for Aboriginal and Torres Strait Islander people.[3]

Despite the overall health needs being higher for Aboriginal and Torres Strait Islander people, in 2008–09, average Medicare Benefits Schedule (MBS) expenditure per person was $363 for Aboriginal and Torres Strait Islander people and $621 for non-Indigenous Australians, a ratio of 0.58.[1] The average Pharmaceutical Benefits Schedule (PBS) expenditure per person was $250 for Aboriginal and Torres Strait Islander people and $338 for non-Indigenous Australians, a ratio of 0.74.[1]

When preventive opportunities are missed, this can lead to a higher dependency on hospital care, which increases health costs. The Aboriginal and Torres Strait Islander population has much higher rates of hospital admission for almost every health problem than other Australians.[2] Consequent life expectancy is much lower – Aboriginal and Torres Strait Islander males in 2005–07 had a life expectancy of 67 years, 11.5 years fewer than non-Indigenous males[2] (based on the Australian Bureau of Statistics revised 'direct method' to account for the under-identification of Aboriginal and Torres Strait Islander deaths adopted in 2009).

Return on investment

Many chronic diseases within the Aboriginal and Torres Strait Islander population are unrecognised by patients. This has been well documented for diseases known for their insidious onset, such as diabetes, hypertension, cardiovascular disease and chronic renal failure. The preventive approach requires the 'service to seek the patient' while the patient is asymptomatic. It involves activity for primary prevention (to prevent the onset of disease), secondary prevention (to detect preclinical disease for cure or prevention of disease progression) and to a less extent, tertiary prevention (to minimise the consequences for those who already have disease). Preventive health assessments also involve the assessment of comorbidities in patients who already have a chronic disease.

The preventive approach to health has shown return on investment in non-Indigenous Australians, especially federal expenditure on immunisation, public health campaigns and the incorporation of preventive measures into primary care.[4] Aboriginal and Torres Strait Islander people have a significant capacity to benefit from preventive healthcare. Given the reduced access to preventive healthcare by Aboriginal and Torres Strait Islander people and the huge burden of undiagnosed disease, effort needs to focus on measures to ensure that Aboriginal and Torres Strait Islander patients who are symptomatic of disease, as well as those who do not yet know they have disease (subclinical), have access to help.

Identifying Aboriginal and Torres Strait Islander patients

Implementing preventive health assessments requires healthcare providers to identify the target population. Research shows that where general practices take systematic action to improve their identification processes, there is a corresponding increase in the number of correctly identified patients.[5] Identifying Aboriginal and Torres Strait Islander status is a necessary precondition for participating in the *Closing the Gap* initiative, agreed by the Australian Government and the Council of Australian Governments in 2008.[6]

Without practice awareness, a patient who is of Aboriginal and/or Torres Strait Islander origin cannot benefit from the measures in the Australian Government's Indigenous Chronic Disease Package.[6] These include key measures available under the Practice Incentives Program Indigenous Health Incentive and PBS Co-payment Measure. For more information see www.medicareaustralia.gov.au/provider/incentives/pip/forms-guides.jsp#N10068.

The RACGP paper, Identification of Aboriginal and Torres Strait Islander people in Australian general practice, assists health professionals in identifying Aboriginal and Torres Strait Islander patients; this is available at www.racgp.org.au/aboriginalhealth.[5]

All health professionals have an important role in facilitating the identification of Aboriginal and Torres Strait Islander patients. In order for a person to identify as being Aboriginal and/or Torres Strait Islander and accept this being recorded on their medical records, a culturally supportive and culturally safe environment needs to be established and continuously demonstrated. Several guidelines have been developed to assist GPs with this issue.[5,7,8]

Implementing preventive health interventions

Most preventive interventions are efficiently delivered opportunistically in the clinical encounter where primary healthcare services are available. Others are delivered through integrated approaches between primary healthcare providers and other services such as in the planning and delivery of breast cancer screening.

Using multiple strategies

Implementing preventive health assessment and interventions ideally involves strategies for both patients and healthcare providers. Usually multiple strategies are most effective, as exemplified by those used to increase adult vaccination (see *Chapter 11: Respiratory health*). These strategies may include opportunistic screening (case finding) and reminder systems within clinic settings, as well as outreach programs such as vaccination in non-traditional settings.

A preventive assessment may be undertaken in a single session between patient and health provider, which may or may not simultaneously address other concerns the patient may have, or be delivered incrementally over a number of sessions. Whether clinic based or community based, systems used to deliver a preventive assessment need to support a holistic assessment of the patient in recognition of the interdependence of many risk factors and determinants of disease.

Undertaking interventions

A preventive health assessment should be undertaken by healthcare providers who have the capacity to undertake, or to arrange for, appropriate management of any abnormalities found during the assessment. Providers should be aware of the potential psychosocial impact of preventive care, particularly when screening results in the diagnosis of a new condition. Informed consent should

be obtained for the screening and adequate counselling provided when the patient is advised of the result.

Appropriate health policies

A supportive health policy is critical to implementing a preventive health assessment. Examples include financial incentives and workforce support. Those who have been screened need to be treated, so an effective screening program will increase the demand for care, yet many health services for Aboriginal and Torres Strait Islander people are under-resourced. Plans to reduce premature and excess Aboriginal and Torres Strait Islander morbidity and mortality need to include investment in the management of previously unrecognised diseases.

Medicare and the Practice Incentives Program Indigenous Health Incentive

General practitioners may undertake preventive activities recommended in the National Guide as part of their usual consultations. Medicare benefits are payable for a medical examination or test on a symptomless patient by that patient's own medical practitioner in the course of normal medical practice, to ensure the patient receives any medical advice or treatment necessary to maintain his/her state of health.

Medicare rebates for preventive health assessments are available for all Aboriginal and/or Torres Strait Islander people of any age through an annual health assessment (Medicare Item 715). General practitioners are advised to check the requirements in the current online MBS before claiming these items. They need to be aware of, and comply with, the requirements of the specific MBS descriptors when providing services. The National Guide contains advice on almost all elements of the requirements to claim this rebate.

Other MBS rebates can support preventive health assessments of the Aboriginal and Torres Strait Islander population, including:

- telehealth rebates (eg. item 2100)
- follow up assessments by allied health professionals including Aboriginal and Torres Strait Islander health workers (AHWs) across Australia (eg. item 81300) or AHWs in the Northern Territory only or practice nurses (eg. item 10987)*
- follow up of GP management plans by AHWs across Australia (eg. item 10950) or AHWs in the Northern Territory only (eg. item 10997)*
- immunisation by AHWs in the Northern Territory only (eg. item 10988)*
- antenatal services in RRMA 3–7 areas by AHWs in the Northern Territory only* (or midwives/nurses) (eg. 16400).

In addition, preventive health assessments can be supported through 'CTG' scripts, which provide copayment relief for PBS prescriptions for patients who identify as Aboriginal and/or Torres Strait Islander. Health services can also receive incentive payments for identifying Aboriginal and/or Torres Strait Islander patients and offering these patients a health assessment. The Practice Incentives Program is outlined at www.medicareaustralia.gov.au/provider/incentives/pip/index.jsp.

* Check MBS eligibility requirements. The Australian Health Practitioner Regulation Agency is currently nationally registering Aboriginal and Torres Strait Islander health practitioners, which may affect the eligibility of AHWs (those not registered as 'practitioners') to claim MBS rebates, while broadening eligibility for practitioners.

What's new in the second edition?

The format of the second edition of the National Guide has been significantly revised to give some structure to the different types of preventive activities delivered by primary healthcare providers. All the evidence underpinning the recommendations is included in the preamble to the recommendations, which is available at www.racgp.org.au/aboriginalhealth/nationalguide.

The format of the National Guide is now also better aligned with the RACGP red book. The guide aims to complement the red book by dealing with health issues that are specific to the Aboriginal and Torres Strait Islander population. Where issues common in the general Australian population have not been dealt with in this National Guide (eg. urinary incontinence), health professionals are encouraged to cross reference with the red book, which is available on the RACGP website at www.racgp.org.au/guidelines/redbook.

New chapters

Topic	Scope
Gambling	Recommends interventions to prevent gambling related harms: the identification and management of problem gambling and gambling prevention strategies including community activities
The health of young people	Focuses on three key preventive health issues for young people: psychosocial assessment, unplanned pregnancy and illicit drug use
Rheumatic heart disease	Provides recommendations for all people in addition to those with a history of acute rheumatic fever/rheumatic heart disease and communities where Group A streptococcal infections are common and acute rheumatic fever is prevalent
Antenatal care	Focuses on five key preventive health issues for pregnant women: general assessment at the first antenatal visit, smoking cessation, alcohol consumption, genitourinary and bloodborne virus infections and nutritional assessment and supplementation
Mental health	Focuses on screening for depression and suicide prevention
Preventive health for the elderly	Focuses on three key preventive health issues for elderly people: osteoporosis, falls and dementia

Key changes to existing chapters

Topic	Key changes
Smoking	New recommendations include assessing smoking status regularly, assessing level of nicotine dependence and implementing a system to identify all smokers and document tobacco use
Overweight/obesity	New behavioural recommendations for overweight/obese people including assessing the risk/benefit of orlistat and bariatric surgery, and the need to advocate for community based interventions to increase access to healthy food
Physical activity	New behavioural recommendations for people that are insufficiently active, have diabetes and/or cardiovascular disease. Levels of physical activity align with the Australian National Physical Activity Guidelines 2010
Alcohol	New recommendations include screening for hazardous drinking in high risk groups, considering screening for people 10–14 years and advising women to limit their alcohol intake to no more than 2 standard drinks/day if they choose to drink while breastfeeding. Health professionals to promote community-led strategies to reduce alcohol supply
Child health	Includes a significant number of key changes under immunisation, anaemia, growth failure and childhood kidney disease
Dental health	New recommendations include non-dental professionals undertaking oral health reviews in addition to regular dental health professional reviews, application of fluoride varnish for 0–5 year olds, and antibiotic prophylaxis prior to dental procedures for people at high risk of endocarditis. Health professionals to advocate for fluoridation of the community water supply

Eye health	New recommendations for eye examinations and visual acuity assessments throughout the lifecycle as well as specialised assessments for people with cataracts or diabetes. Advice for smokers and reducing ocular exposure to UV-B light to reduce cataracts New trachoma and trichiasis recommendations for those in trachoma endemic areas include community screening programs, eye examinations for adults >40 years and prevention and control strategies. Assessing housing situations for overcrowding and providing support is also relevant for people outside of trachoma endemic areas
Hearing loss	New recommendations include various vaccinations for children aged <15 years and pregnant women, providing hearing screening throughout the lifecycle, and new behavioural, chemoprophylaxis and environmental recommendations
Sexual health and bloodborne viruses	Adds general prevention advice that includes behavioural and environmental recommendations and screening for chlamydia, gonorrhoea, trichomonas vaginalis, syphilis and hepatitis B. Updated immunisation advice has been included for hepatitis B, human papilloma virus, hepatitis A, hepatitis C and human immunodeficiency virus
Respiratory health	This chapter focuses on five key preventive respiratory health issues: pneumococcal disease, influenza, asthma, chronic obstructive pulmonary disease (COPD), bronchiectasis and suppurative lung disease. Asthma, bronchiectasis and suppurative lung disease are new topics New recommendations for influenza prevention, encouraging good hygiene practice and minimising exposure risk for healthcare workers. Other changes include consideration of chemoprophylaxis for people at high risk of influenza complications and community based strategies to improve vaccination uptake New recommendations for pneumococcal disease prevention include promotion of strategies to improve pneumococcal vaccination uptake such as reminder/recall systems and community awareness New recommendations for COPD include offering vaccination, screening for symptoms of COPD, discussing smoking cessation and minimising other risk factors for COPD and pharmacotherapy to improve quality of life
Cardiovascular disease	This chapter focuses on recommendations to determine the absolute risk for cardiovascular disease (CVD) based on multiple risk factor assessment for people without an established diagnosis of cardiovascular disease. Framingham, non-Framingham risk factors and clinically high risk conditions are presented as well as recommendations for chemoprophylaxis. Recommendations for those with an established diagnosis of CVD are also presented. The Australian cardiovascular risk charts are given in Appendix 1
Chronic kidney disease	New recommendations include screening for chronic kidney disease (CKD) risk factors for those without risk, screening for CKD with eGFR and urinary albumin-creatinine ratio for those with a risk factor, and supporting population-based strategies to reduce scabies and pyoderma among children. Numerous behavioural and chemoprophylaxis recommendations have also been included
Diabetes prevention	New recommendations include screening for diabetes from >18 years of age in regions with high diabetes prevalence and/or with high risk conditions, but consider an AUSDRISK assessment only in populations with low prevalence. Behavioural recommendations focus on diet, physical activity and breastfeeding. Pharmacotherapy is discussed for people with a high risk condition and advocacy for community based interventions are recommended
Cancer	Focuses on five areas for prevention and early detection of cancer: cervical, breast, liver, prostate and bowel cancer. Liver, prostate and bowel cancer are new topics New recommendations for cervical cancer include promoting human papilloma virus (HPV) vaccination and commencing Pap screening regardless of HPV vaccination status. Other recommendations include assessing smoking status and offering a sexual health review New recommendations for breast cancer include discussing familial breast cancer and breast awareness, while mammographic screening differs depending on age and level of risk. New behavioural recommendations cover physical activity, diet, alcohol consumption, smoking and breastfeeding. Hormone replacement therapy and other pharmacotherapy are discussed

Chapter 1: Lifestyle

Smoking

Recommendations: Primary prevention				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Screening	People aged ≥10 years	Smoking status should be assessed for every patient over 10 years of age on a regular basis	Opportunistic and as part of an annual health assessment	IA
	Current smokers	A system for identifying all smokers and documenting tobacco use should be used in every health service	As part of a systematic health service approach	IIB
		Assess the level of nicotine dependence to help predict relapse to smoking and guide intervention choice (eg. Fagerström test: see Resources)	Opportunistic	GPP
Behavioural	Non-smokers	Advise non-smokers to limit their exposure to tobacco smoke, especially parents of babies, young children and pregnant women Parents who smoke should be counselled not to smoke in the house or in a confined space such as a motor vehicle	Opportunistic	IIIC

Recommendations: Interventions for smokers				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Behavioural	Current smokers	All patients who smoke, regardless of the amount they smoke and whether they express a desire to smoke or not, should be offered brief cessation advice at every visit (consider using the 5As framework – see Chapter 1: Lifestyle, introduction)	Opportunistic at every visit and as part of an annual health assessment	IA
		Brief interventions should be adapted to local cultural setting (see Resources: SmokeCheck)	N/A	GPP
		Smoking cessation counselling should be offered to all people at every opportunity, and if possible, should comprise at least four face-to-face or group support sessions	Opportunistic	IA
		Consider referral to a proactive smoking cessation telephone service such as a quitline, particularly for people with limited access to face-to-face counselling	Opportunistic	IIA
		Make available tailored self help quit smoking materials, both print and electronic	Opportunistic	IB
	People who have stopped smoking in the past year	Offer follow up visits for smokers attempting to quit	Within 1 week of quitting Then within 1 month of abstinence Then opportunistic for at least 1 year	IIC
	Pregnant women who are current smokers	Offer intensive smoking cessation counselling (see Chapter 9: Antenatal care, for detailed recommendations)		IA–IIIC

Chemoprophylaxis	Current smokers	Recommend smoking cessation pharmacotherapies to patients interested in quitting. First line treatments are NRT, bupropion and varenicline Pregnant women may be offered NRT if the benefits outweigh the risks (see Chapter 9: Antenatal care)	Opportunistic	IA GPP
Environmental		Complement the above individual based strategies with a community based approach to tobacco control (eg. promotion of smoke free workplaces)		IIIC
		Promote training of Aboriginal and Torres Strait Islander health workers in brief interventions for smoking cessation to increase quit rates	N/A	GPP

Table 1.1. The 5As model for behavioural and other interventions related to lifestyle risk factors

Assess Ask about/assess behavioural health risk(s) and factors affecting choice of behaviour change goals/methods
Advise Give clear, specific, and personalised behaviour change advice, including information about personal health harms and benefits. It recognises that the health practitioner can be a catalyst for action and can enhance motivation for change
Agree* Collaboratively select appropriate treatment goals and methods based on the patient's interest in and willingness to change the behaviour. This involves joint consideration of treatment options, consequences and patient preferences and setting management goals
Assist Using behaviour change techniques (self help and/or counselling), aid the patient in achieving agreed upon goals by acquiring the skills, confidence and social/environmental supports for behaviour change, supplemented with adjunctive medical treatments when appropriate (eg. pharmacotherapy for tobacco dependence)
Arrange Schedule follow up contacts (in person or by telephone) to provide ongoing assistance/support and to adjust the treatment plan as needed, including referral to more intensive or specialised treatment. Follow up visits often involve repeating the preceding 4As
* Some models omit the 'Agree' component and include an initial 'Ask' component in which risk factors are identified

Overweight/obesity

Recommendations: Overweight/obesity				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Screening	All people aged <18 years	Assess BMI using age and sex specific centile charts (see Chapter 2: Child health and Resources)	Opportunistic and as part of an annual health assessment	GPP
	All people aged ≥18 years	Assess BMI and waist circumference (see Table 1.2) Groups associated with improved outcomes from BMI/waist circumference monitoring include: • individuals seeking advice on weight management • those with conditions associated with overweight/ obesity (CVD, diabetes, stroke, gout, liver or gallbladder disease)	Opportunistic and as part of an annual health assessment	GPP 1B
Behavioural	All people aged ≥18 years	Provide brief advice to promote healthy eating and physical activity as per Australian guidelines (see Table 1.1 and Chapter 1: Physical activity)	Opportunistic	GPP
	Adults with overweight/ obesity	Develop a weight management plan that must include: • targeted information as per Australian dietary guidelines (see Table 1.3) • goal setting • at least one follow up consultation	Opportunistic and as part of an annual health assessment	IB
		Encourage regular self weighing		IC
		Encourage a net energy deficit through combined dietary and physical activity interventions as per Australian dietary and physical activity guidelines		IB
		Consider referral to specialist services, dietitian and/or exercise physiologist if available		GPP
		Individual or group based psychological interventions* are recommended in combination with dietary and physical activity advice		IA
	Children with overweight/ obesity	Develop a targeted weight management plan as for adults. This plan must involve at least one parent/carer and aim to change the whole family's lifestyle	Opportunistic and as part of an annual health assessment	IB
		Except in severe obesity, weight maintenance rather than weight loss is recommended for healthy growth and development Recommend referral for specialist review for children with severe obesity		IVD
Chemoprophylaxis	People aged ≥18 years with one or more weight related comorbidities present (severe mobility restriction, arthritis, type 2 diabetes) and a BMI ≥28 kg/m^2	Assess risk/benefit of orlistat on an individual basis in conjunction with lifestyle interventions	Opportunistic and as part of an annual health assessment	IA

Surgical	People aged ≥18 years with one or more weight related comorbidities present (as above) and a BMI ≥35 kg/m^2	Assess risk/benefit of bariatric surgery on an individual basis in conjunction with lifestyle interventions	Opportunistic	IIC
Environmental	Communities	Advocate for multifactorial and coordinated community based interventions to increase access to healthy and nutritious food (eg. subsidised healthy food in stores)	N/A	GPP

* Cognitive focused behavioural interventions include: situational control and stimulus control, avoiding cues to overeating, cognitive reframing and reinforcement techniques, self recording of calorie intake and eating behaviours, goal setting and relapse prevention strategies

Table 1.2. Combining measures to assess obesity and disease risk* in adults

Classification	Body mass index (kg/m^2)	Disease risk (relative to normal measures)	
		Waist circumference Men 94–102 cm Women 80–88 cm	Waist circumference Men >102 cm Women >88 cm
Underweight	<18.5	–	–
Healthy weight	18.5–24.9	–	Increased
Overweight	25.0–29.9	Increased	High
Obesity	30.0–39.9	High to very high	Very high
Severe obesity	>40	Extremely high	Extremely high

* Risk of type 2 diabetes, elevated blood pressure and cardiovascular disease
Source: NHMRC 2003a[2]

Table 1.3. 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 and 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
- Choose store foods that are most like traditional bush foods*
- Enjoy traditional bush foods whenever possible*
- And take care to:
  - limit saturated fat and moderate total fat intake
  - choose foods low in salt
  - limit your alcohol intake if you choose to drink
  - consume only moderate amounts of sugars and foods containing added sugars

Source: NHMRC 2003b[28]
* Recommendations specific to some Aboriginal and Torres Strait Islander communities

Physical activity

Recommendations: Physical activity				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Screening	All people	Assess current level of physical activity	Opportunistic and as part of an annual health assessment	IB
Behavioural	All people	For patients who are insufficiently active give targeted advice and written information. This should include the following: • determine existing preferred physical activities and invite patients to propose new activities • ask the patient the amount/frequency of activity they feel is achievable and set exercise goals aiming to achieve National Physical Activity Guideline recommendations (see Table 1.4) • record these goals and provide patients with a written copy • consider cognitive behavioural support and follow up • consider additional social support (eg. buddy system, involvement in a group activity, referral for coaching)		
	People with diabetes	For sedentary people, a gradual introduction and initial low intensity of physical activity with slow progressions in volume and intensity is recommended Those on insulin should be given individualised advice on avoiding hypoglycaemia when exercising (eg. adjustment of carbohydrate intake, reduction of insulin dose, and choice of injection site) Consider referral to an exercise physiologist for coaching if facilities are available	Opportunistic and as a part of an annual diabetes assessment	GPP
	People with cardiovascular disease	Those with recent acute coronary syndrome event or revascularisation surgery (CABG, PCI) should be advised to participate in a short period (up to 12 weeks) of supervised exercise rehabilitation	Opportunistic	IA
		Those who are well compensated and clinically stable should commence an initial low intensity of physical activity with slow progressions in volume and intensity Consider referral to an exercise physiologist for coaching if facilities are available		IIB
Environmental	All people	Refer to appropriate community based physical activity programs and encourage use of public facilities that promote activity (eg. advocate for increased availability of sports and recreational facilities in remote communities)	Opportunistic and as part of an annual health assessment	IB

Table 1.4. Australian physical activity guidelines: Recommendations by age group

Age group	Recommendation
Under 2 years	For children under 1 year supervised floor based play in safe environments should be encouraged from birth For children under 2 years no time watching television or using other electronic media
2–5 years	Toddlers and preschoolers should be physically active every day for at least 3 hours, spread throughout the day Watching television and the use of other electronic media (DVDs, computer and other electronic games) should be limited to less than 1 hour per day
5–12 years	At least 60 minutes (and up to several hours) of moderate to vigorous physical activity every day No more than 2 hours per day using electronic media for entertainment (eg. computer games, TV, internet), particularly during daylight hours
12–18 years	At least 60 minutes of moderate to vigorous physical activity every day No more than 2 hours per day using electronic media for entertainment (eg. computer games, TV, internet)
18–54 years	The following 4 steps are recommended: • Think of movement as an opportunity, not an inconvenience • Be active every day in as many ways as you can • Put together at least 30 minutes of moderate physical activity on most, preferably all days. 30 minutes can be accumulated throughout the day in 10–15 minute sessions or done in one session • If you can, also enjoy some regular vigorous activity for extra health and fitness
55 years and over	Older people should do some form of physical activity, no matter what their age, weight, health problems or abilities Older people should be active every day in as many ways as possible, doing a range of physical activities that incorporate fitness, strength, balance and flexibility Older people should accumulate at least 30 minutes of moderate physical activity on most, preferably all days. Sedentary people may need to gradually build up to 30 minutes or more Older people who have stopped physical activity, or who are starting a new physical activity, should start at a level that is easily manageable and gradually build up the recommended amount, type and frequency of activity Older people who continue to enjoy a lifetime of vigorous physical activity should carry on doing so in a manner suited to their capability into later life, provided recommended safety procedures and guidelines are adhered to

Source: Department of Health and Ageing 2010[92]

Alcohol

Recommendations: Alcohol				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Screening	All people aged ≥15 years	Ask about the quantity and frequency of alcohol consumption to detect hazardous drinkers (see Table 1.5) Focus particularly on the following high risk groups: • adolescents and young adults • women who are pregnant or planning a pregnancy • illicit drug users • those with a family history of alcohol dependence • people with medical conditions made worse by alcohol (chronic liver disease, hypertension, other major organ disease) • people suffering from mental illness made worse by alcohol such as anxiety and depression	As part of an annual health assessment Opportunistic	1B I–IIIB
		Consider the use of structured questionnaires such as AUDIT, AUDIT-C or IRIS to assess drinking (see Resources – these tools may require some adaptation to local community needs)	As part of an annual health assessment	1B
	People aged 10–14 years	Consider sensitive and age appropriate alcohol intake screening in aged 10–14 years (see Chapter 3: The health of young people) Parental or carer involvement may be required and referral should be considered	As part of an annual health assessment	IIIB
	People with hazardous and harmful drinking levels	Review for comorbid disease and other chronic disease risk factors	As part of an annual health assessment	1A
Behavioural	People with hazardous and harmful drinking levels	Offer brief interventions. Consider using tools such as FLAGS and 5As approach (see Table 1.1 and 1.6 and Chapter 1: Lifestyle, introduction) Brief interventions alone are not sufficient for people with severe alcohol related problems or alcohol dependence who require referral or extended intervention. (Treatment specific guidelines should be consulted in these circumstances)	Opportunistic and as part of an annual health assessment	IA
	Women who are pregnant, breastfeeding, seeking pre-conception counselling	Advise to abstain from alcohol, emphasising the risks to the unborn child Advise breastfeeding mothers that not drinking is the safest option, especially in the first month postpartum. For those choosing to drink, alcohol intake should be limited to no more than two standard drinks per day. Continue to promote breastfeeding	Pregnant women: At first and subsequent antenatal visits as appropriate For all others opportunistic and as part of an annual health assessment	IA
Environmental		Promote community led strategies to reduce alcohol supply including: • advocacy for 'dry communities' • restrictions to liquor licensing hours • better policing of responsible service of alcohol • community development initiatives		GPP

Table 1.5. National Health and Medical Research Council guidelines for safer alcohol use

For healthy men and women, drinking no more than two standard drinks on any day reduces the lifetime risk of harm from alcohol related disease or injury
For healthy men and women, drinking no more than four standard drinks on a single occasion reduces the risk of alcohol related injury arising from that occasion
For children and young people under 18 years of age, not drinking alcohol is the safest option: • parents and carers should be advised that children under 15 years of age are at the greatest risk of harm from drinking and that for this age group, not drinking alcohol is especially important • for young people aged 15–17 years, the safest option is to delay the initiation of drinking for as long as possible
Maternal alcohol consumption can harm the developing fetus or breastfed baby: • for women who are pregnant or planning a pregnancy, not drinking is the safest option • for women who are breastfeeding, not drinking is the safest option
Source: NHMRC 2009[93]

Table 1.6. The FLAGS framework for brief intervention

Feedback	• Provide individualised feedback about the risks associated with continued drinking, based on current drinking patterns, problem indicators, and health status • Discuss the potential health problems that can arise from risky alcohol use
Listen	• Listen to the patient's response • This should spark a discussion of the patient's consumption level and how it relates to general population consumption and any false beliefs held by the patient
Advice	• Give clear advice about the importance of changing current drinking patterns and a recommended level of consumption • A typical 5–10 minute brief intervention should involve advice on reducing consumption in a persuasive but non judgemental way • Advice can be supported by self help materials, which provide information about the potential harms of risky alcohol consumption and can provide additional motivation to change
Goals	• Discuss the safe drinking limits and assist the patient to set specific goals for changing patterns of consumption • Instil optimism in the patient that his or her chosen goals can be achieved • It is in this step, in particular, that motivation-enhancing techniques are used to encourage patients to develop, implement and commit to plans to stop drinking
Strategies	• Ask the patient to suggest some strategies for achieving these goals • This approach emphasises the individual's choice to reduce drinking patterns and allow them to choose the approach best suited to their own situation • The individual might consider setting a specific limit on alcohol consumption, learning to recognise the antecedents of drinking, and developing skills to avoid drinking in high risk situations, pacing one's drinking and learning to cope with everyday problems that lead to drinking
Source: Haber P, Lintzeris N, Proude E, Lopatko O 2009[97]	

Gambling

Recommendations: Gambling				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Screening	All people aged >12 years	Consider asking patients if they participate in gambling activities (eg. 'pokies', cards, roulette, blackjack and other table gambling, lotteries, sport associated gambling) For those who are gambling, screen for problems by asking a simple question such as: 'Have you ever had an issue with your gambling?' Specific groups at risk of problem gambling include people with stress related medical problems, mental health issues, substance misuse	Opportunistic and as part of an annual health assessment	GPP
	Young people aged 12–24 years	Consider screening young people for gambling behaviours as part of general screening tools such as HEEADSSS (see Chapter 3: The health of young people)		GPP
	High risk groups such as young people or adults with mental health or substance use problems	Consider use of a validated measurement tool for problem gambling as part of a community based program (see Resources)		GPP
	Children with parents/siblings who are known to have problem gambling	Assess the impact of family gambling on children	Opportunistic	GPP
Behavioural	All people identified with problem gambling	Management options for problem gambling include: • brief treatments and motivational interviewing aimed at promoting behaviour change • cognitive behavioural therapy • treatment of coexistent and complicating factors such as depression and substance abuse • referral to gambling support helplines and websites (see Resources) • referral to gambling treatment centres	Opportunistic	GPP
Environmental	Young people aged from 12 years	Where appropriate, engage with local school authorities and support implementation of school based gambling prevention strategies Encourage teachers, parents and healthcare professionals to be more aware of adolescent gambling	N/A	IIIB
	Communities	Adopt or support community focused activities (eg. community campaigns) that promote strategies to control gambling and related harms	N/A	GPP

Chapter 2: Child health

Immunisation

Recommendations: Immunisation				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Immunisation*	All children	Conduct regular postnatal review of all infants and offer vaccination	As per Australian standard vaccination schedule	IA
		Use the catch-up schedule for all children behind in their vaccination schedule	Opportunistic	IA
Environmental		Implement provider/system based interventions: review vaccination status at each clinic visit and make a documented plan for the next vaccination	Every visit	IA
		Ascertain local clinic vaccination rates via audits of health records and Australian Childhood Immunisation Register records	N/A	IA
		Implement recall and reminder systems and computer prompts for staff and patients to address immunisation gaps, particularly in the first 12 months	N/A	IA
		Implement an adverse events reporting system	N/A	IA
		Increase access to vaccinations via: • fast tracking children presenting for immunisation • training and reminders for staff to screen and offer vaccinations • providing home visits and mobile clinics for immunisation If resources are limited, focus particularly on vaccinations due in the first 12 months	N/A	IA
		Increase community demand for vaccinations by: • promoting vaccination to parents, child care staff, and community workers such as Aboriginal and Torres Strait Islander liaison officers • using posters and other visual materials in public places • personalising health records • giving all parents/carers a record in card or book form of their child's immunisation status • commencing promotional activities for parents of neonates early and in places where parents of very young babies attend	Ongoing	IA

* Vaccination should be implemented according to best practice recommendations in the Australian Immunisation Handbook and state and territory immunisation schedules

Anaemia

Recommendations: Anaemia				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Screening	All children aged >6 months from communities with a high prevalence of iron deficiency anaemia (IDA) Children in other areas with risk factors: • history of low birthweight or pre-term birth • maternal anaemia • twin • failure to thrive • chronic infections	Take a nutritional history asking about intake of iron rich foods such as meat and fortified cereals, leafy green vegetables and vitamin C intake with meals	At age 6–9 months and repeat at 18 months	GPP
		Perform haemoglobin (Hb) via point-of-care capillary sample or venous blood (including blood film)*†	Test at age 6–9 months and repeat at 18 months	GPP
			More frequent testing if IDA is diagnosed	IIC
Behavioural	Babies born without risk factors for IDA (see below)	Recommend exclusive breastfeeding to 6 months	Opportunistic	IB
	Babies born with low birthweight (<2500 g), prematurity (<37 weeks) or to mothers who had maternal anaemia	Recommend exclusive breastfeeding to 4 months		GPP
	All babies	Introduce iron rich foods at weaning. Examples include meat (three serves per week), fortified cereals, leafy green vegetable, eaten with vitamin C rich food (eg. fresh citrus fruit) Also discuss withholding cow's milk until 12 months of age and avoiding tea		IB
Chemoprophylaxis	Babies aged <6 months with IDA risk factors as above	Consider oral iron supplementation in consultation with a paediatrician		GPP
	Children aged 6 months to 16 years in areas with high rates of hookworm infections	Consider use of single dose albendazole as part of a systematic child health surveillance program in consultation with local public health units Refer to Australian Therapeutic Guidelines for dosing regimen[64]	Every 6 months	GPP
Environmental	Children with IDA	Include children on recall registers for regular review and Hb repeat testing as per above	N/A	GPP
	Communities with a known high prevalence of IDA	Advocate for and support nutritional programs that remove financial barriers to improved nutrition and improve the range and accessibility of healthy foods alongside the food strategies recommended above (see Chapter 1: Lifestyle, section on overweight/obesity)	Immediately and ongoing	IA

* Diagnose IDA using erythrocyte indices (eg. blood film, mean cell volume) and Hb levels of less than 110 g/L in children over 6 months of age. Consult local laboratories for reference limits of Hb levels in children >2 years

† There are jurisdictional differences in the screening for anaemia (eg. Queensland and the Northern Territory) and local guidelines should be consulted

Growth failure

Recommendations: Growth failure				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Screening	All children	Recommend growth monitoring (including weight, length, head circumference, nutritional and psychosocial assessment to coincide with child health visits for immunisation* (see Table 2.1)	At 2, 4, 6, 12, 18, 24 and 36 months and between 4 and 5 years Monitor weight more frequently if there are concerns	IA
Behavioural	All children	Discuss growth monitoring findings with the family, explaining how weight gains are linked to good health and always link the discussion with any nutritional intervention currently being undertaken	Opportunistic	IA
		Assess developmental milestones (gross motor, fine motor, speech and language, social interactions) with growth monitoring checks Consider using parent report questionnaires and questions in patient held record (see Chapter 7: Table 7.1) Maintain a high index of suspicion in children with following risk factors: possible fetal alcohol syndrome, microcephaly, convulsions and prematurity	At 2, 4, 6, 12, 18, 24 and 36 months, and between 4 and 5 years	IA
	Mothers	Promote breastfeeding by discussing the health benefits, use of peer support, face-to-face health professional and postnatal home visits	Opportunistic	IB
	All families	Provide nutrition education counselling targeting both families and community workers	Opportunistic	IB
		Counselling should focus on behaviour change, be community driven and integrated with other preventive child health programs Consider referral to a dietitian if simple measures are not helpful		GPP
	Children in families experiencing socioeconomic hardship or psychosocial stress	Provide home visiting support by referral to an early intervention program	Opportunistic	IA
		Ensure regular communication between primary healthcare staff and other agencies so that nutritional support programs are integrated with psychosocial support		GPP
Chemoprophylaxis	Children living in areas with high rates of helminth infections	Recommend anti-helminth treatment with a single dose of albendazole Refer to Australian Therapeutic Guidelines for dosing regimen[64]	Opportunistic	IA
Environmental		Community food supplementation programs may be used short term to overcome issues of lack of food security, providing they have the support of the community and are part of a multifaceted intervention	N/A	IA

* Correction for prematurity must be made until 18 months for head circumference, 2 years for weight and 40 months for height. Measure length if <2 years and height if >2 years. Measure head circumference until 36 months of age and body mass index (BMI) from 2 years of age. Be sure equipment is calibrated and measurements are accurately done[78]

Table 2.1. Conducting a growth monitoring action plan

- Document carer concerns and the barriers they perceive to breastfeeding and healthy nutrition
- Explore issues of finances, transport, home storage (refrigerator) availability, numbers of people living at home, food preferences, food preparation equipment availability, facilities to maintain hygiene and hygiene practices
- Involve the carer in finding solutions to problems, and focus on finding solutions that are practical and context specific, paying particular attention to family needs and resources
- Give information about appropriate weaning foods and amounts
- Consider linking the child to a team approach involving an Aboriginal and Torres Strait Islander health worker, community nurse, family support worker and dietitian if there are indications that the child is at risk of FTT or showing early signs of growth faltering
- Document review dates and begin next review by review of previous action plan

Childhood kidney disease

Recommendations: Childhood kidney disease				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Screening	All children without a high risk condition	Routine urinalysis or blood pressure screening for kidney disease is not recommended unless there is a clinical indication	N/A	IA
	Children living in areas with high rates of infectious skin disease (scabies and impetigo)	Check the skin for scabies and impetigo and treat according to management guidelines	Opportunistic and as part of an annual health assessment	GPP
	Children with first episode UTI	Assess need for imaging tests based on treatment response within 48 hours and whether atypical features are present (see Table 2.2)	As needed	IB
	Children with pre-pubertal and pubertal onset diabetes	Check albumin to creatinine ratio (ACR) using single voided specimen, morning specimen preferred	5 years after diagnosis or at age 11 years, or at puberty (whichever is earlier), then annually thereafter	IA
Behavioural	Children who have had at least one episode of UTI	Identify and correct predisposing factors for recurrence (including constipation, dysfunctional elimination syndromes, poor fluid intake and delays in voiding)	As needed	IA
Chemo-prophylaxis	Children living in areas with high rates of infectious skin disease (scabies and impetigo)	Treat household contacts of someone with scabies with 5% permethrin cream if over 2 months old and sulphur 5% or crotamiton cream if <2 months of age In communities where there are outbreaks of infected scabies, offer all household contacts of people with impetigo a single dose of benzathine penicillin G (see Resources)	As needed	IIIC
Environmental	Children living in areas with high rates infectious skin disease (scabies and impetigo)	Promote good hygiene practices at home Refer to relevant housing support services to promote access to adequate washing facilities and toilets	Opportunistic	IA
		Community based interventions that use screening and immediate treatment for skin sores and scabies in targeted age groups should be combined with simultaneous treatment of the whole community for scabies (see Resources)	N/A	IA

Table 2.2. Recommended imaging following first presentation with UTI

Infants younger than 6 months		
Test	**Responds well to treatment within 48 hours**	**Atypical UTI***
Ultrasound during the acute infection	No	Yes
Ultrasound within 6 weeks	Yes	No
DMSA 4–6 months following the acute infection	No	Yes
MCUG	No	Yes
Children aged 6 months to 3 years		
Test	**Responds well to treatment within 48 hours**	**Atypical UTI***
Ultrasound during the acute infection	No	Yes
Ultrasound within 6 weeks	No	No
DMSA 4–6 months following the acute infection	No	Yes
MCUG	No	No
Children aged 3 years or more		
Test	**Responds well to treatment within 48 hours**	**Atypical UTI***
Ultrasound during the acute infection	No	Yes
Ultrasound within 6 weeks	No	No
DMSA 4–6 months following the acute infection	No	No
MCUG	No	No

DMSA = dimercaptosuccinic acid scan (an intravenous radionuclide scan for assessing renal function), MCUG = micturating cystourethrogram

* Atypical UTI features include: the patient is seriously ill, poor urine flow, abdominal or bladder mass, raised creatinine, septicaemia, failure to respond to treatment with suitable antibiotics within 48 hours, infection with non-E. coli organisms

† MCUG should not be performed routinely but should be considered if any of the following features are present: dilatation on ultrasound, poor urine flow, non-E. coli infection, family history of VUR

Source: National Collaborating Centre for Women's and Children's Health, 2007.[127] Refer to this resource for imaging recommendations for recurrent UTI

Chapter 3: The health of young people

Psychosocial

Recommendations: Psychosocial assessment				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/strength of evidence**
Screening	All young people aged 12–24 years	Conduct a psychosocial assessment to obtain a holistic assessment of health and to determine risk factors affecting wellbeing Useful tools include the HEEADSSS assessment (see Appendix 3.2)	Opportunistic and as part of an annual health assessment	GPP

Unplanned pregnancy

Recommendations: Unplanned pregnancy				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/strength of evidence**
Screening	All young people aged 12–24 years	Ask if sexually active and identify at risk sexual behaviours (eg. unprotected sexual intercourse: see Chapter 8: Table 8.1)	Opportunistic and as part of an annual health assessment (including psychosocial assessment)	GPP
Behavioural	All young people	Provide anticipatory guidance* and sexual health education, tailoring the information according to whether a young person is sexually active or not (see Chapter 8: Sexual health and bloodborne viruses) Discussion should include the following: • sexual development and sexual feelings • prevention of unplanned pregnancies including abstinence • resisting sexual and peer pressure • methods of reversible contraception, access to and use of emergency contraception	Opportunistic and as part of an annual health assessment	GPP
	Young people who are considering initiating sexual activity or who are sexually active	Recommend use of and/or provide condoms Discuss the proper methods for condom usage	Opportunistic and as part of an annual health assessment	IIIC
	Young people engaging in risky sexual behaviour	Use individual behaviour change techniques such as brief interventions (eg. information giving, motivational interviewing) and cognitive behavioural therapy	Opportunistic	GPP
		Offer or refer to theory based pregnancy prevention/education programs to improve knowledge and increase contraceptive use. Examples include social cognitive theory,† motivational interviewing program, AIDS risk reduction model (see Table 3.1)		IA

Recommendations: Unplanned pregnancy (continued)				
	Parents or guardians of young people	Provide health guidance to parents and other guardians regarding youth sexual health following the principles of anticipatory guidance*	At least once at early, middle and late adolescence	GPP
Chemoprophylaxis	Young females who are sexually active or considering initiating sexual activity	Assess suitability for and offer hormonal contraception. Methods include the oral contraceptive pill and long acting reversible contraception (ie. progestogen only injections, progestogen only subdermal implants, progestogen only IUDs)	Opportunistic	IIIC
	Young females who have had unprotected intercourse	Conduct a detailed history to assess the context Discuss and recommend emergency contraception as necessary Arrange for appropriate follow up	Opportunistic	IIB
Environmental	N/A	Promote youth friendly primary healthcare services	N/A	GPP

* Anticipatory guidance is a developmentally based counselling technique that focuses on a young person's stage of development. Counselling is focused towards gaining a better understanding of young people's physical growth, psychosocial and psychosexual development. It emphasises the importance of the young person becoming actively involved in decisions regarding their healthcare[11]

† Social cognitive theory is a learning theory based on the idea that people learn by watching what others do and do not do

Table 3.1. The AIDS risk reduction model

This model has three stages and is based on several other behaviour change theories, including the health belief model, 'efficacy' theory, emotional influences and interpersonal processes. The three stages outlined below are behaviour labelling, commitment to change and taking action

Stage	Influences
1. Recognition and labelling of one's behaviour as high risk	• Knowledge of sexual activities associated with HIV transmission • Believing that one is personally susceptible to contracting HIV • Believing that having AIDS is undesirable • Social norms and networking
2. Making a commitment to reduce high risk sexual contacts and to increase low risk activities	• Cost and benefits • Enjoyment (eg. will the changes affect my enjoyment of sex?) • Response efficacy (eg. will the changes successfully reduce my risk of HIV infection?) • Self efficacy • Knowledge of the health utility and enjoyability of a sexual practice, as well as social factors (group norms and social support), are believed to influence an individual's cost and benefit and self efficacy beliefs
3. Taking action: • information seeking • obtaining remedies • enacting solutions Depending on the individual, phases may occur concurrently or phases may be skipped	• Social networks and problem solving choices (self help, informal and formal help) • Prior experiences with problems and solutions • Level of self esteem • Resource requirements of acquiring help • Ability to communicate verbally with sexual partner • Sexual partner's beliefs and behaviours

Source: Family Health International 2002[39]

Illicit drug use

Recommendations: Illicit drug use				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Immunisation	All young people aged 12–24 years	Review hepatitis B immunisation and immune status and offer vaccination where indicated (see Chapter 8: Sexual health and bloodborne viruses)	As per Australian standard vaccination schedule	GPP
Screening	All young people	Assess for presence of risk factors for illicit drug use (see Table 3.2)	As part of an annual health assessment	GPP
	Young people with risk factors for drug use (see Table 3.2)	Administer one of the following questionnaires to ascertain drug use: • CRAFFT screening tool (≤21 years) • IRIS tool (≥18 years) • Substances and Choice scale (13–18 years (see Resources)	Opportunistic	IIIB
Behavioural	Young people with multiple risk factors for drug use (see Table 3.2)	Refer for preventive case management where services are available*	Opportunistic	IB
	Young people who are using illicit drugs	Provide brief interventions (eg. in conjunction with administration of one of the above screening questionnaires). (See also the 5As framework Chapter 1: Lifestyle, introduction)	Opportunistic	IIIB
		Refer to drug education programs based on social learning theories (eg. life skills program, peer education, youth sport/recreation program)	Opportunistic	IIB
	Families of young people who are using illicit drugs	Consider referral where appropriate to parent education programs and family intervention therapy to encourage healthy family development and reduction of parent-adolescent conflict	Opportunistic	IIB
	Young people who are using injecting drugs	Refer to needle and syringe exchange programs where appropriate	Opportunistic	IB
Environmental	N/A	Promote school completion	N/A	GPP
		Promote access to community and school based drug education programs (based on social learning theories)		IB
		Promote youth friendly, primary healthcare services Support increased access to youth workers		GPP
		Support community driven illicit drug use prevention programs (especially valuable for inhalant abuse)		IIB
		Support and promote community engagement strategies such as mentorship		IB
		Support supervised injecting centres		IIB

* Preventive case management involves the coordinated delivery of intensive services tailored to meet a range of developmental needs. It requires intensive case management through coordinating family intervention, after school activity, mentoring, tutoring, individual psychiatric assessment and counseling. The approach therefore will involve complex coordination across a range of service types such as health, juvenile justice, education, and substance abuse. Key aspects are to assess needs, identify relevant services, coordinate service delivery and monitor outcomes. The young person (and if possible the family) should be involved in developing the service delivery objectives.[44] This can be similar to developing a care plan for people with chronic conditions

Table 3.2. Risk factors for illicit drug use

Individual influences
• Not completing secondary school • Unemployment • Delinquency • Residing in remote and very remote areas • Favourable attitudes to drug use • Sensation seeking and adventurous personality • Relationships with peers involved in drug use • Low involvement in activities with adults
Family influences
• Parental conflict • Parent-adolescent conflict • Parental attitudes to drug use and rules around drug use • Alcohol and drug problems in the family
Community influences
• Perceived and actual level of community drug use • Community disadvantage and disorganisation • Availability of drugs within the community • Positive media portrayal of drug use

Sources: Loxley W, Toumbourou J, Stockwell T, Haines B, Scott K, Godfrey C, et al 2004 and Australian Institute of Health and Welfare 2005[44,53]

Appendix 3.1. Stages of adolescent development

	Early (10–13 years)	Middle (14–17 years)	Late (18–21 years)
Central question	'Am I normal?'	'Who am I?' 'Where do I belong?'	'Where am I going?'
Major developmental issues	• Coming to terms with puberty • Struggle for autonomy commences • Same-sex peer relationships all important • Mood swings	• New intellectual powers • New sexual drives • Experimentation and risk taking • Relationships have self centred quality • Need for peer group acceptance • Emergence of sexual identity	• Independence from parents • Realistic body image • Acceptance of sexual identity • Clear educational and vocational goals, own value system • Developing mutually caring and responsible relationships
Main concerns	• Anxieties about body shape and changes • Comparison with peers	• Tensions between family and adolescent over independence • Balancing demands of family and peers • Prone to fad behaviour and risk taking • Strong need for privacy • Maintaining ethnic identity while striving to fit in with dominant culture	• Self responsibility • Achieving economic independence • Deciding on career/vocation options • Developing intimate relationships
Cognitive development	• Still fairly concrete thinkers • Less able to understand subtlety • Daydreaming common • Difficulty identifying how their immediate behaviour impacts on the future	• Able to think more rationally • Concerned about individual freedom and rights • Able to accept more responsibility for consequences of own behaviour • Begins to take on greater responsibility within family as part of cultural identity	• Longer attention span • Ability to think more abstractly • More able to synthesise information and apply it to themselves • Able to think into the future and anticipate consequences of their actions

Source: Chown P, Kang M, Sanci L, Newnham V, Bennett DL 2008[1]

Appendix 3.2. HEEADSSS assessment

Assessment area	Suggested questions
H – Home	**Explore home situation, family life, relationships and stability**
	Where do you live? Who lives at home with you?
	Who is in your family (parents, siblings, extended family)?
	What is your/your family's cultural background?
	What language is spoken at home? Does the family have friends from outside its own cultural group/from the same cultural group?
	Do you have your own room?
	Have there been any recent changes in your family/home recently (eg. moves, departures)?
	How do you get along with mum and dad and other members of your family?
	Are there any fights at home? If so, what do you and/or your family argue about the most?
	Who are you closest to in your family?
	Who could you go to if you needed help with a problem?
E – Education/ Employment	**Explore sense of belonging at school/work and relationships with teachers/peers/ workmates, changes in performance**
	What do you like/not like about school (work)? What are you good at/not good at?
	How do you get along with teachers/other students/workmates?
	How do you usually perform in different subjects?
	What problems do you experience at school/work?
	Some young people experience bullying at school: have you ever had to put up with this?
	What are your goals for future education/employment?
	Any recent changes in education/employment?
E – Eating/Exercise	**Explore how they look after themselves, eating and sleeping patterns**
	What do you usually eat for breakfast/lunch/dinner?
	Sometimes when people are stressed they can overeat, or under eat: do you ever find yourself doing either of these?
	Have there been any recent changes in your weight? In your dietary habits?
	What do you like/not like about your body?
	If screening more specifically for eating disorders you may ask about body image, the use of laxatives, diuretics, vomiting, excessive exercise, and rigid dietary restrictions to control weight.
	What do you do for exercise?
	How much exercise do you get in an average day/week?
A – Activities/peer relationships	**Explore their social and interpersonal relationships, risk taking behaviour, as well as their attitudes about themselves**
	What sort of things do you do in your free time out of school/work?
	What do you like to do for fun?
	Who are your main friends (at school/out of school)?
	Do you have friends from outside your own cultural group/from the same cultural group?
	How do you get on with others your own age?
	How do you think your friends would describe you?
	What are some of the things you like about yourself?
	What sort of things do you like to do with your friends?
	How much television do you watch each night?
	What's your favourite music?
	Are you involved in sports/hobbies/clubs?

Appendix 3.2. HEEADSSS assessment (continued)

D – Drug use/ cigarettes/alcohol	**Explore the context of substance use (if any) and risk taking behaviours** Many young people at your age are starting to experiment with cigarettes/drugs/alcohol. Have any of your friends tried these or other drugs like marijuana, injecting drugs, other substances? How about you, have you tried any? If Yes, explore further How much do you use and how often? How do you (and your friends) take/use them? Explore safe/unsafe use, binge drinking, etc. What effects does drug taking or smoking or alcohol have on you? Has your use increased recently? What sort of things do you (and your friends) do when you take drugs/drink? How do you pay for the drugs/alcohol? Have you had any problems as a result of your alcohol/drug use (with police, school, family, friends)? Do other family members take drugs/drink?
S – Sexuality	**Explore their knowledge, understanding, experience, sexual orientation and sexual practices – look for risk taking behaviour/abuse** Many young people your age become interested in romance and sometimes sexual relationships. Have you been in any romantic relationships or been dating anyone? Have you ever had a sexual relationship with a boy or a girl (or both)? – If Yes, explore further (If sexually active) What do you use to protect yourself (condoms, contraception)? What do you know about contraception and protection against STIs? How do you feel about relationships in general or about your own sexuality? (For older adolescents) Do you identify yourself as being heterosexual or gay, lesbian, bisexual, transgender or questioning? Have you ever felt pressured or uncomfortable about having sex?
S – Suicide/Self harm/ depression/mood	**Explore risk of mental health problems, strategies for coping and available support** Sometimes when people feel really down they feel like hurting, or even killing themselves. Have you ever felt that way? Have you ever deliberately harmed or injured yourself (cutting, burning or putting yourself in unsafe situations eg. unsafe sex)? What prevented you from going ahead with it? How did you try to harm/kill yourself? What happened to you after this? What do you do if you are feeling sad, angry or hurt? Do you feel sad or down more than usual? How long have you felt that way? Have you lost interest in things you usually like? How do you feel in yourself at the moment on a scale of 1 to 10? Who can you talk to when you're feeling down? How often do you feel this way? How well do you usually sleep? It's normal to feel anxious in certain situations – do you ever feel very anxious, nervous or stressed (eg. in social situations)? Have you ever felt really anxious all of a sudden – for what particular reason? Do you worry about your body or your weight? Do you do things to try and manage your weight (eg. dieting)? Sometimes, especially when feeling really stressed, people can hear or see things that others don't seem to hear or see. Has this ever happened to you? Have you ever found yourself feeling really high energy or racey, or feeling like you can take on the whole world?
S – Safety	Sunscreen protection, immunisation, bullying, abuse, traumatic experiences, risky behaviours
S – Spirituality	Beliefs, religion, What helps them relax, escape? What gives them a sense of meaning?

Sources: Goldenring J, Rosen D 2004 and Sanci L 2001[14,76]

Chapter 4: Dental health

Recommendations: Dental health				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Screening	Children aged 0–5 years	Recommend regular review with a dental health professional Non-dental health professionals are encouraged to undertake an oral health review including the assessment of teeth, gums and oral mucosa as part of a regular health assessment (see Table 4.1)	Opportunistic and as part of an annual health assessment	IVC
	People aged 6–18 years		Annually	IVC
	Adults with poor oral health and/or risk factors for dental disease (see Table 4.2) People with diabetes, immunosuppression, haematological conditions, bleeding disorders or anticoagulant therapy		Annually	IVC
	All pregnant women		At first antenatal visit (see Chapter 9: Antenatal care)	IVC
	Adults with good oral health		2 yearly	IVC
	Those with past history of rheumatic heart disease and cardiovascular abnormalities	Refer to a dental professional and undertake an oral health review as part of a regular health assessment (see Table 4.1) with appropriate oral hygiene advice to minimise oral bacterial levels	6–12 monthly	IVC
Chemoprophylaxis	Children aged 0–5 years	Recommend use of fluoride containing toothpaste at least once daily, from the time the teeth start to erupt Use a smear of paste for children under 2 years and a pea-size amount for children 2+ years. Toothpaste with a fluoride concentration of 1000 ppm is recommended unless there is a risk of fluorosis	Opportunistic	IA
	Children aged 0–5 years where families have evidence of dental caries, poor oral hygiene	Refer to dental professional for regular application of fluoride varnish If resources do not permit then continue daily use of fluoride toothpaste and provide dietary advice as per Table 4.1	At least every 6 months from when the teeth erupt, and for a period of not less than 24 months	IB
	People aged >5 years at high risk of dental caries (see Table 4.2)		2–4 times per year for professional application	IA
	People at high risk of endocarditis (rheumatic heart disease, previous infective endocarditis, prosthetic cardiac valves, certain forms of congenital heart disease, cardiac transplantation)	Recommend antibiotic prophylaxis prior to dental procedures. See management guidelines for specific advice[13]	Opportunistic	GPP
Environmental	Communities	Advocate for fluoridation of community water supply		1A

Table 4.1. Advice for good oral health practices

While review with dental professionals is recommended to comprehensively assess for caries risk and the presence of disease, the following general principles are recommended for non-dental health professionals
Assessment
Visual inspection of teeth for evidence of caries, periodontal disease, assessment of maternal caries and/or poor oral hygiene
Assess oral hygiene practices, consumption of sucrose and sweetened drinks especially in baby bottles, 'honey on the dummy' or other sweet substances such as glycerine on the dummy, intake of sugared medicines
Assess access to fluoridated water supply
Advice
Brush teeth twice daily with a soft toothbrush and fluoride toothpaste and advise to spit, not rinse, excess paste
Advise about the hazards of high carbohydrate and acidic between meal snacks and drinks
Advise against high and regular consumption of black cola, sweetened fizzy drinks and sports drinks, with water being the preferred drink
Promote breastfeeding, with weaning to a baby-cup, not a bottle
If bottles are used, advise against the use of any fluid apart from water and do not put baby to sleep with a bottle
Advise about smoking cessation and limiting alcohol consumption
Use sugar free chewing gum for saliva stimulation
Use a mouth guard when playing contact sport
Recommend regular dental check-up
Source: The RACGP 2009[27]

Table 4.2. Risk factors for dental disease

- Poor oral hygiene practices (eg. no/irregular toothbrushing, use of hard toothbrush, no use of fluoride toothpaste, incorrect brushing technique)
- Poor diet and nutrition (eg. high and regular consumption of sucrose and carbohydrate containing foods and drinks, especially black cola, sweetened fizzy drinks)
- Salivary composition and flow: if poor then there is less protective effect from saliva
- Low exposure to fluoride
- Xerostomia or dry mouth can also contribute to development of dental caries. Risk factors for xerostomia include use of common medications, particularly antidepressants, antihistamines and antihypertensives; radiotherapy and chemotherapy for cancers of the head and neck; Sjögren syndrome; HIV infection; and diabetes, particularly in people with poor glycaemic control
- High consumption of acidic foods and drinks such as sports drinks and juices can contribute to tooth erosion; bulimia is also an erosion risk factor
- General risk factors for periodontal disease include smoking, diabetes, advancing age, stress and poor oral hygiene
- Tobacco smoking and alcohol consumption are risk factors for the development of oral cancer
- HIV infection can also contribute to a greater risk of periodontal disease, oral ulceration and cancer
- Other modifying risk factors can include age, socioeconomic status and access to oral health services

Chapter 5: Rheumatic heart disease

Recommendations: Rheumatic heart disease

Preventive intervention type	Who is at risk?	What should be done?	How often?	Level/ strength of evidence
Screening	All people	Recommend auscultation of the heart to assess for previously undiagnosed RHD Echocardiography is not currently recommended to screen for previously undiagnosed RHD*	Opportunistic and as part of an annual health assessment	GPP
	All people with a past history of ARF or murmurs suggestive of valve disease	Referral for echocardiography and subsequent follow up is recommended. See management guidelines for specific advice[3]	As per management guidelines [3]	GPP
Behavioural	People with a past history of ARF or RHD	Advise that the rate for recurrence of ARF is 50% and that there is a need for prophylactic antibiotics (see below)	Opportunistic	GPP
		Recommend dental hygiene, and regular review (see Chapter 4: Dental health)	6–12 monthly	GPP
Chemoprophylaxis	All people in high risk communities where GAS infections are common and ARF is prevalent	Any sore throat should be treated as if it is a GAS pharyngitis infection with a single intramuscular benzathine penicillin injection (preferred) or 10 days of oral penicillin (see specific management guidelines[18]) Where possible this should be based on confirmation with a throat swab culture	Opportunistic	GPP
	All people with GAS pharyngitis	Treat with 10 days of oral penicillin or a single intramuscular benzathine penicillin injection (see specific management guidelines[18]) There is no need to treat family contacts of those with GAS pharyngitis	Opportunistic	IA
	All people with ARF/RHD	Identify patients for secondary antibiotic prophylaxis through inclusion in local recall systems and centralised rheumatic fever register where one exists	Opportunistic	GPP
		Categorise patients according to their priority status (see Table 5.3) and implement a tailored secondary prevention strategy (see management guidelines for priority specific recommendations[3])	As per individual recall plan	IA
		Recommend antibiotic prophylaxis for dental and other high risk procedures for those with established RHD (see Chapter 4: Dental health, and management guidelines[18])		GPP
Environmental	Communities where GAS infections are common and ARF is prevalent	Assess for overcrowding and refer to social support services for housing assistance if indicated (see Chapter 7: Hearing loss) If high rates of impetigo and underlying scabies, consider community healthy skin program (see Chapter 2: Child health)	N/A	IIIB

* Echocardiography is likely to be a superior strategy to auscultation and lead to improved case detection of subclinical RHD. The optimal echocardiography based screening strategy, however, is the subject of ongoing research and until the outcomes of this research is known routine echocardiography screening is not recommended (see preamble for more details)

Table 5.1. Australian guideline criteria for acute rheumatic fever

	High risk groups*	All other groups
Initial episode of ARF	Two major or one major and two minor manifestations Plus Evidence of a preceding GAS infection†	
Recurrent attack of ARF in a patient with known past ARF or RHD	2 major or 1 major and 1 minor or 3 minor manifestations Plus Evidence of a preceding GAS infection†	
Probable ARF (first episode or recurrence)	A clinical presentation that falls short by either 1 major or 1 minor manifestation, or in the absence of streptococcal serology results, but one in which ARF is considered the most likely diagnosis. Such cases should be further categorised according to the level of confidence with which the diagnosis is made: • highly suspected ARF • uncertain ARF	
Major manifestations	Carditis (including evidence of rheumatic valvulitis on echocardiogram) Polyarthritis or aseptic mono-arthritis or polyarthralgia‡ Chorea§ Erythema marginatum# Subcutaneous nodules	Carditis (excluding subclinical evidence of rheumatic valve disease on echocardiogram) Polyarthritis‡ Chorea§ Erythema marginatum Subcutaneous nodules
Minor manifestations	Mono-arthralgia Fever ≥38°C¶ ESR ≥30 mm/hr or CRP ≥30 mg/L Prolonged P-R interval on ECG**	Fever ≥38°C¶ Polyarthralgia or aseptic mono-arthritis‡ ESR ≥30 mm/hr or CRP ≥30 mg/L Prolonged P-R interval on ECG**

ARF = acute rheumatic fever, CRP = C-reactive protein, ECG = electrocardiogram, ESR = erythrocyte sedimentation rate, GAS = group A streptococcus infection, RHD = rheumatic heart disease

* High risk groups are those living in communities with high rates of ARF (incidence >30 per 100 000 per year in those aged 5–14 years) or RHD (all-age prevalence >2 per 1000). Aboriginal and Torres Strait Islander people living in rural or remote settings are known to be at high risk

† Elevated or rising antistreptolysin O or other streptococcal antibody, or a positive throat culture or rapid antigen test for GAS

‡ A history of arthritis is sufficient to satisfy this manifestation. Other causes of arthritis/arthralgia should be carefully excluded

§ Rheumatic (Sydenham) chorea does not require other manifestations or evidence of preceding GAS infection, provided other causes of chorea are excluded

Erythema marginatum is a distinctive rash. Care should be taken not to label other rashes, particularly non-specific viral exanthemas, as erythema marginatum

¶ Oral, tympanic or rectal temperature ≥38°C on admission or documented during the current illness

** Note that if carditis is present as a major manifestation, prolonged P-R interval cannot be considered an additional minor manifestation in the same person

Source: Rheumatic Heart Disease Australia 2012[3]

Table 5.2. World Heart Federation criteria for echocardiographic diagnosis of rheumatic heart disease

1. Echocardiographic criteria for individuals ≤20 years of age
Definite RHD (either A, B, C or D)
A. Pathological MR* and at least 2 morphological features of RHD of the mitral valve†
B. MS mean gradient ≥4 mmHg (must exclude congenital mitral valve anomalies)
C. Pathological AR‡ and at least 2 morphological features of RHD of the aortic valve§ (must exclude bicuspid aortic valve and dilated aortic root)
D. Borderline disease of both aortic and mitral valve#
Borderline RHD (either A, B or C) (in high risk populations only)
A. At least two morphological features of RHD of the mitral valve† without pathological MR or MS
B. Pathological MR*
C. Pathological AR†
Normal echocardiographic findings (all of A, B, C and D)
A. MR that does not meet all four Doppler criteria (physiological MR)*
B. AR that does not meet all four Doppler criteria (physiological AR)‡
C. An isolated morphological feature of RHD of the mitral valve (eg. valvular thickening), without any associated pathological stenosis or regurgitation
D. Morphological features of RHD of the aortic valve§ (eg. valvular thickening), without any associated pathological stenosis or regurgitation
2. Echocardiographic criteria for individuals >20 years of age
Definite RHD (either A, B, C or D)
A. Pathological MR* and at least 2 morphological features of RHD of the mitral valve†
B. MS mean gradient ≥4 mmHg (must exclude congenital mitral valve anomalies)
C. Pathological AR‡ and at least two morphological features of RHD of the aortic valve§ (must exclude bicuspid aortic valve and dilated aortic root)
D. Pathological AR‡ and at least two morphological features of RHD of the mitral valve†

AR = aortic regurgitation, MR = mitral regurgitation, MS = mitral stenosis, RHD = rheumatic heart disease

* Pathological MR is defined as meeting all four of the following doppler criteria: (A) seen in 2 views; (B) in at least one view, jet length 2 cm; (C) peak velocity ≥3 m/s; (D) pan-systolic jet in at least one envelope

† Morphological features of RHD in the mitral valve: anterior mitral valve leaflet thickening ≥3 mm (age specific), chordal thickening, restricted leaflet motion, excessive leaflet tip motion during systole

‡ Pathological aortic regurgitation is defined as meeting all four of the following doppler criteria: (A) seen in 2 views; (B) in at least one view, jet length 2 cm; (C) peak velocity ≥3 m/s; (D) pan-systolic jet in at least one envelope

§ Morphological features of RHD in the aortic valve: irregular or focal thickening, coaptation defect, restricted leaflet motion, prolapse

Combined AR and MR in high prevalence regions and in the absence of congenital heart disease is regarded as rheumatic

Source: Rheumatic Heart Disease Australia 2012[3]

Table 5.3. Priority classifications for developing management plans

Classification	Criteria
Priority 1 (severe)	Any of the following: • severe valvular disease • moderate/severe valvular lesion with symptoms • mechanical prosthetic valves, tissue prosthetic valves and valve repairs including balloon valvuloplasty
Priority 2 (moderate)	Any moderate valve lesion in the absence of symptoms and with normal LV function
Priority 3 (mild)	ARF with no evidence of RHD **or** trivial to mild valvular disease
Priority 4 (inactive)	Patients with a history of ARF (no RHD) for whom secondary prophylaxis has been ceased

Source: Rheumatic Heart Disease Australia 2012[3]

Chapter 6: Eye health

Visual acuity

Recommendations: Visual acuity				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Screening	Infants aged <6 months	Conduct a general eye examination. Refer if red eye reflex absent or other abnormality found	As part of a newborn and 3–6 month health assessment	GPP
	Children aged 4–5 years	Screen for visual acuity (VA) (use E chart if required) Refer if VA is less than 6/9 or there is a two line difference between eyes	Opportunistic and once only at routine health assessment	GPP
	All adults aged >40 years People with poor near-vision (presbyopia)	Near and far visual acuity assessment is recommended to detect visual loss due to presbyopia or cataract The use of near test material and Snellen chart (and E chart if required) is recommended for testing visual acuity If unable to see normal sized print (type) refer to optometrist or ophthalmologist for assessment and probable reading glasses	Annually as part of an adult health assessment	GPP Snellen IC E chart IIIC
	People with cataract	If visual acuity is worse than 6/12 or when function is impaired refer to an ophthalmologist for assessment and possible cataract surgery	Opportunistic	GPP
	People with diabetes	Undertake visual acuity and retinal assessment by trained assessor as indicated in diabetic management guidelines Retinal photography by trained primary care staff combined with external review by an ophthalmologist is a useful strategy for comprehensive screening	Annually	IA GPP
Behavioural	Current smokers	Advise smoking cessation to reduce the risk of developing cataracts (see Chapter 1: Lifestyle, section on smoking)	Opportunistic	IIIC
	All people	Recommend reduced ocular exposure to UV-B light to reduce risk of cataract (eg. wearing sunglasses)	Opportunistic	IIIC

Trachoma and trichiasis

Recommendations: Eye health				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Screening	People living where trachoma is endemic (>5% prevalence of active trachoma in young children)	Implement a community screening program in partnership with regional population health units to assess the prevalence of active trachoma No community screening is required where prevalence is below 5% of children for 5 consecutive years	As per national guideline recommendations (see Resources)	GPP
	Adults aged >40 years raised in trachoma endemic area	Perform eye examination to ascertain corneal scarring and/or the presence of trichiasis	2 yearly (age 40–54 years) Yearly (age 55+ years)	GPP
		Those with trichiasis,* refer to an ophthalmologist for surgery	N/A	IIIB
Behavioural	All children from trachoma endemic areas	Recommend to families the importance of the following in the prevention and control of trachoma: • facial cleanliness of children • effective rubbish disposal and other fly control measures • regular screening, and treatment of infection	Opportunistic and as part of an annual child health assessment	IIB
Chemoprophylaxis	People living where trachoma is endemic (>5% prevalence of active trachoma in young children)	Treat case and all household contacts using community based single dose azithromycin (A) on an annual basis	As per state and territory protocols	IA
Environmental	All people	Assess housing situation for overcrowding and refer to social support services for housing assistance if indicated. (See Chapter 7: Hearing loss)	N/A	GPP
	Remote communities	Implement joint health promotion strategies with state/territory government public health units and local shire councils for fly control strategies and other environmental health standards	As per state/ territory government plans	GPP

* Trichiasis is diagnosed when at least one eyelash rubs on the eyeball, or there is evidence of recently removed eyelashes because of eyelash in-turning[30]

Chapter 7: Hearing loss

Recommendations: Hearing loss

Preventive intervention type	Who is at risk?	What should be done?	How often?	Level/ strength of evidence
Immunisation	Children aged <15 years	Vaccination is recommended to prevent infections that may lead to congenital or acquired hearing loss (rubella, measles, *H. influenzae* type b, meningococcus). (See Chapter 2: Child health)	As per National Immunisation Program Schedule (NIPS) and state/ territory schedules	IA
		Pneumococcal conjugate vaccination (13-valent PCV) is recommended during infancy to prevent invasive disease, pneumonia and acute otitis media*[17]	Age 2, 4 and 6 months, as per NIPS and state/territory schedules	I–IIA
		Annual influenza vaccination (inactivated virus) is recommended for any person ≥6 months of age who wishes to reduce the likelihood of becoming ill with influenza. Vaccination may reduce the incidence of acute otitis media as a secondary complication of influenza	As per NIPS and state/territory schedules	IC
	All pregnant women	Offer testing for rubella immunity and syphilis serology to prevent infections which may lead to congenital hearing loss	See Chapter 9: Antenatal care	N/A
Screening	Newborn infants	Ensure parents of newborn infants are aware of the universal neonatal hearing screening program being implemented in each state/territory and have had their newborn screened for congenital hearing impairment	Prior to age 1 month	IC
	Children aged <15 years	Encourage parents to be aware of child developmental milestones in the early detection of hearing loss (see Table 7.1). Parental suspicion of hearing loss should always be investigated (see Table 7.2). Where relevant, provide advice regarding free hearing assessment (see below)	Opportunistic, antenatal and postnatal checks, and as part of an annual health assessment	GPP
		Conduct ear examinations (otoscopy) in order to detect unrecognised acute or chronic otitis media. If detected, refer to clinical practice guidelines for management (see Resources)	Opportunistic and as part of an annual health assessment	GPP
	Children aged <5 years and older children at high risk of hearing impairment†	Monitor for hearing loss	Opportunistic and as part of an annual health assessment	GPP
		Use the following audiological tools to monitor for hearing loss: simplified parental questionnaires (see Table 7.1), and pneumatic otoscopy or tympanometry (in children older than 4 months of age). These methods do not assess hearing Pneumatic otoscopy or tympanometry is used to identify otitis media with effusion (with possible conductive hearing loss). Refer to clinical practice guidelines for the identification and management of otitis media with effusion (see reference 1 and 2 and Resources). Those with suspected hearing loss (or caregiver concerns) should be referred as shown in Table 7.2	Opportunistic and as part of an annual health assessment	GPP
	School entry aged children	The routine hearing screening of all children upon commencement of their first year of compulsory schooling may have limited public health value and is not encouraged	N/A	GPP
	Adults aged >15 years	Monitor for hearing impairment by questioning, provide advice regarding free hearing assessment, and make referrals when appropriate	As part of an annual health assessment	GPP
	All people	Inform patients that free hearing assessment (and rehabilitation/hearing aids if hearing loss is confirmed) can be obtained as part of the Australian Government Hearing Services Program and the Community Services Obligation (check eligibility criteria‡)	Opportunistic	GPP

Recommendations: Hearing loss (continued)

Behavioural	Pregnant women and postnatal period	Promote exclusive breastfeeding for at least 4 months (and preferably to 6 months) to reduce the risk of infants acquiring acute otitis media. Refer women to breastfeeding support programs if needed	Opportunistic, antenatal and postnatal checks, and as part of annual health assessment	IB
	All smokers	Promote smoking cessation and the need to avoid children being exposed to cigarette smoke, as passive exposure increases the risk of acute, recurrent and chronic otitis media. (See Chapter 1: Lifestyle, section on smoking cessation)	Opportunistic and as part of an annual health assessment	IA
	All people	Swimming (sea, clean fresh water) should be permitted including in children with a prior history of otitis media (all forms)	Opportunistic	IA
	All people	A video otoscope may assist in helping patients and families to understand ear disease. This may lead to greater engagement in its prevention and management	Opportunistic	GPP
Chemo-prophylaxis	Children aged <15 years	The use of prophylactic antibiotics in order to prevent the onset of acute otitis media is not recommended, except in children with recurrent otitis media§	Opportunistic	IA
		The use of prophylactic antiviral drugs in those with confirmed influenza for the purpose of preventing the onset of acute otitis media is not recommended	Opportunistic	IA
Environmental	Children aged <15 years	Assess children at high risk of hearing impairment† with regard to their housing situation (ie. if overcrowding is likely, functional condition of housing) and refer to social support services for housing assistance if indicated (see Table 7.3)[61]	Annually	IIIC
		Encourage nose-blowing, facial cleanliness and handwashing of children, in order to prevent the transmission of infectious disease. Frequent hand washing in child care centres can prevent the occurrence of childhood infections and episodes of acute otitis media	Opportunistic	IIC
	All people	Inform families of the danger of loud noise (and for prolonged periods), especially for children with a history of ear disease (see Resources)	Opportunistic	GPP

* Aboriginal and Torres Strait Islander children in high risk areas are recommended to also receive 23-valent polysaccharide vaccine (PSV) as a booster dose between 18 and 24 months of age as indicated for the prevention of invasive pneumococcal disease. High risk areas include the Northern Territory, Queensland, South Australia and Western Australia. This vaccine is not recommended for children in New South Wales, the Australian Capital Territory, Victoria or Tasmania[18]

† High risk of hearing impairment: those from socioeconomically deprived communities and from regions with a high prevalence of otitis media

‡ Australian Government Hearing Services Program eligibility (Voucher system) includes all Australian pensioner/sickness allowance recipients 21 years and older including a dependent of a person in that category.[58] For those under 21 years, certain remote area patients, adults with complex hearing needs, Aboriginal and Torres Strait Islander persons >50 years of age or Aboriginal participants in CDEP programs of any age, the Community Services Obligation component also provides free hearing services[59] and can be accessed by the federally funded and sole provider of these services: 'Australian Hearing'.[57] The CSO can also be accessed by those aged 21–26 years.[60] Private hearing clinics (eg. Hearing Life) provide free hearing assessments to anyone 21 years and over

§ Recurrent otitis media: the occurrence of three or more episodes of acute otitis media in a 6 month period, or occurrence of four or more episodes in the past 12 months[2]

Table 7.1. Hearing related growth milestones in children

Simplified parental questionnaires can elicit a child's progress through the following hearing related growth milestones:

- 3–6 months: not communicating by vocalising or eye gaze
- 9 months: poor feeding or oral coordination
- 12 months: not babbling
- 20 months: only pointing or using gestures (ie. not speaking)
- 24 months: using <20 words, not following simple requests
- 30 months: no two-word combinations

Source: Darwin Otitis Guideline Group 2010[2]

Table 7. 2. Criteria for referral of children with suspected hearing loss, hearing related problems elicited through simplified parental questionnaires (Table 7. 1), and/or caregiver concerns

Age of child	Refer to
<3 years	Major regional hearing centre to determine the level of loss
<5 years and older children at high risk of hearing impairment*	Paediatrician and audiologist for appropriate developmental assessment and hearing tests
<15 years	Audiologist or ENT specialist for full hearing assessment

* High risk of hearing impairment refers to people from socioeconomically deprived communities and from regions with a high prevalence of otitis media

Source: Darwin Otitis Guideline Group 2010[2]

Table 7.3. Definition of overcrowded housing circumstances

Households that do not meet the following requirements are deemed to be overcrowded:

- There should be no more than two persons per bedroom
- Children younger than 5 years of age of different sexes may reasonably share a bedroom
- Children 5 years of age or older of opposite sex should have separate bedrooms
- Children younger than 18 years of age and the same sex may reasonably share a bedroom
- Single household members 18 years or over should have a separate bedroom, as should parents or couples

Source: Biddle N 2008[51]

Chapter 8: Sexual health and bloodborne viruses

Recommendations: General preventive advice				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Screening	All people with risk factors for STIs or BBVs (see Table 8.1)	Screen for STIs according to local prevalence guidelines and screen for BBVs if risk factors are present (see specific recommendations below)	Annually and re-screen 3 months after positive test	GPP
	People diagnosed with an STI	Review STI risk factors and screen for other STIs according to local prevalence guidelines Consider also screening for BBVs if risk factors are present (see Table 8.1)	On diagnosis and re-screen in 3 months	GPP
	Sexual partners of a person with an STI	Ensure contact tracing is undertaken at time of diagnosis and appropriate testing and treatment is offered to contacts, as per Australasian Contact Tracing Manual (see Resources[54])	Every positive screen	IB
Behavioural	All sexually active people	Provide sexual health counselling including proactive discussion of issues of sexuality	Opportunistic	IIB
		Recommend condom use with all sexual activity	Opportunistic	IIIB
	People at higher risk of HBV or HCV infection (see Table 8.1)	Provide counselling on harm minimisation and promote peer education strategies around safer sex and injecting drug use	Opportunistic and as part of an annual health assessment	GPP
	People with opioid dependence	Conduct brief motivational interviewing to reduce use of illicit drugs, harm with injecting drugs, risky alcohol use and risk of BBV infection and STIs, particularly for those unlikely to attend specialist treatment (see Resources[57,58])	Opportunistic	IIIC
Chemoprophylaxis	Exposure to HIV both occupational and non-occupational	Assess post-exposure risk using national guidelines (see Resources)[59] and provide post-exposure prophylaxis (PEP) within 72 hours of the risk exposure when indicated Refer to local jurisdictions to source PEP starter packs and recommendations regarding specialist access (see Resources)[60] Follow up PEP requires an authorised prescriber (under Section 100 Special Access Scheme)	Opportunistic	GPP
	People with opioid dependence	Opioid substitution therapy should be made accessible to all populations, including those in prison populations and other closed settings	As early as possible in dependence situation	IIIB
Environmental	Injecting drug users	Needle and syringe programs should be made available to all populations including prison populations	Opportunistic	IIIA

Recommendations: Sexually transmissible infections

Preventive intervention type	Who is at risk?	What should be done?	How often?	Level/ strength of evidence
Screening: chlamydia	All people aged 15–29 years of age if sexually active All people aged ≥30 years and at high risk (see Table 8.1) All pregnant women Pregnant women at high risk of STI (see Table 8.1) Women having a termination of pregnancy	Recommend nucleic acid amplification tests (NAAT) via: • endocervical swab if having a speculum examination, or • first void urine, or • self administered low vaginal swab	Annually First visit First visit and again in third trimester Once	IA (to age 25 years) GPP (25–29 years)
	Men who have sex with men	Recommend first void urine NAAT and anal swab NAAT	Annually	IA
Screening: gonorrhoea	Sexually active people aged 15–39 years and pregnant women where local prevalence rates are high (see reference 7)	Recommend NAAT (as above)	Annually	IIB (age <25 years) GPP (age 25–39 years and pregnant women)
	Men who have sex with men	Recommend throat swab NAAT and culture, plus anal swab NAAT and culture	Annually or 3–6 monthly if high risk (see Table 8.1)	IA
Screening: Trichomonas vaginalis	All sexually active people aged <35 years where local prevalence rates are high (see Resources)	Recommend NAAT for women (as above) and first void urine NAAT for men	Opportunistic if symptomatic	IIIB
Screening: syphilis	All pregnant women	Recommend testing with specific treponemal tests (EIA or TPPA or FTA-Abs) and non-specific treponemal tests (RPR). Liaise with local pathology providers to determine which tests are available for screening	At first visit Repeat at 28 weeks if positive, in a high prevalence area or if risk factors for STIs are present	IIID
	Men who have sex with men Others at high risk of STIs	Syphilis testing as above	Annually	IIB

Recommendations: Bloodborne viruses

Preventive intervention type	Who is at risk?	What should be done?	How often?	Levels/ strength of evidence
Immunisation: HBV	Neonates	Recommend HBV vaccination	Once at birth prior to leaving hospital	ID
	Babies born to mothers who are HBsAg positive	Recommend HBV immunoglobulin and vaccination at birth Complete primary course of vaccination, followed by testing for anti-HBs and HBsAg at 3–12 months after completing vaccination (see Australian Immunisation Handbook)	Immunoglobulin (HBIG) ideally within 12 hours and vaccination (HBV) preferably within 24 hours (definitely within 7 days) of birth	IA
	Unvaccinated people at high risk of STI/ BBV infection (see Table 8.1)	Recommend HBV vaccination	3 doses at 1 and 6 months*	ID
		Test healthcare workers, those at risk of severe or complicated disease, haemodialysis patients, sexual partners and household contacts of recently notified HBV carrier for seroconversion	4–8 weeks after the last dose	GPP
	Individuals exposed to HBsAg positive individuals or unable to be identified and tested rapidly	Offer HBV post-exposure prophylaxis (HBIG and primary course of vaccination) for non-immune people	Initiate within 72 hours (or 14 days for sexual contact)	IIC
	People with HCV infection or chronic liver disease not immune to HBV	Recommend HBV vaccination	3 doses at 0, 1 and 6 months*	IIC
Immunisation: HPV	Girls/women prior to first sexual activity Females who are sexually active	Recommend HPV vaccination (see Chapter 15, recommendations for cervical cancer prevention)	10–13 years of age: school-based 14–26 years of age at cost to the patient	IA
Immunisation: HAV	Men who have sex with men Injecting drug users People with chronic HBV and HCV infection	Recommend hepatitis A vaccination if serology is negative (see Australian Immunisation Handbook)	Once	GPP
Screening: HBV	Non-vaccinated or vaccine status unknown People at high risk for BBVs Healthcare workers	Offer individual HBV screening including: • HBsAg (a marker of acute or chronic infection) • HBsAb (a marker of immunity) • HBcAb (a marker of recent or past infection) See Resources for guidelines on interpreting HBV tests If serology is negative, offer HBV vaccination as above*	Opportunistic	GPP
	All pregnant women	Recommend HBV screening to allow timely HBV vaccination and HBIG for infant at birth (see Chapter 9: Antenatal health)	At first antenatal visit	III–3B
Screening: HCV	People at high risk of contracting HVC infection (see Table 8.1)	Offer HCV serology testing	As part of an annual health assessment	IIIA
	Infants born to HCV infected mothers	Offer HCV serology testing	18 months of age (repeated if positive)	IIA
Screening: HIV	Pregnant women	Offer HIV serology testing	At first antenatal visit	IIB
	Men who have sex with men and others at high risk of BBVs (see Table 8.1)		As part of an annual health assessment	

* Not subsidised on the National Immunisation Schedule but check relevant state/territory immunisation programs

Table 8.1. Risk factors for STIs and bloodborne viruses

Risk factors for STIs	Risk factors for BBVs
• Age <30 years • Age <35 years and sexual network relates to a remote community • Multiple current partners • Engaging in group sex • New partner • Using condoms inconsistently • Living in an area with a high incidence of STIs • Having sex while under the influence of drugs and alcohol • Having sex in exchange for money or drugs • Prison incarceration • Victim of sexual assault • Men who have sex with men where any of the above risk factors are also present	• Prison incarceration: current or past • Blood transfusion prior to 1990 • Tattoos or piercings not performed in a sterile professional setting • Cultural practices (ie. initiation ceremonies) • Current or past injecting drug use • Household member with HBV, HCV or HIV • Sexual partner with HBV, HCV or HIV • Infants of mothers infected with HCV, HBV or HIV

Source: Bradford D, Hoy J, Matthews G 2008[10]

Chapter 9: Antenatal care

Recommendations: General assessment at the first antenatal visit				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Screening	All pregnant women	Discuss and plan the schedule of antenatal visits with the pregnant woman based on her individual needs For an uncomplicated pregnancy review every 4 weeks until 28 weeks, then every 2 weeks thereafter	At first antenatal visit	IB
		Offer an ultrasound to determine gestational age and detect multiple pregnancies (best performed between 8 and 13 weeks + 6 days gestation)	At first antenatal visit	IIIB
		Measure blood pressure, height and weight and calculate BMI	At first antenatal visit	IIIB
		Repeated weighing during pregnancy should be confined to circumstances where clinical management is likely to be influenced	Opportunistic	GPP
		Auscultate for heart murmurs, in areas with a high prevalence of rheumatic heart disease	At first antenatal visit	GPP
		Advise women to have oral health checks and treatment if required (see Chapter 4: Dental health)	At first antenatal visit	IIB
		Offer Pap test if due	During first trimester	GPP
		Offer testing for rubella immunity	At first antenatal visit	IIB
		Check blood group and antibodies	At first antenatal visit and 28 week visit	IB
		Discuss the purpose and implications of testing for chromosomal abnormalities to promote an informed decision In those wishing to proceed offer women first trimester combined screening[β] for chromosomal abnormalities between 11 and 13 weeks + 6 days gestation Provide support to women in regional and remote areas to access this screening. If nuchal thickness ultrasound is unavailable, offer maternal serum screening[†] between 15 and 17 weeks gestation	At first antenatal visit	IB
		Offer ultrasound to assess for fetal morphology abnormalities	At 18–20 weeks	GPP
	Pregnant women at risk of pre-eclampsia[‡]	Offer proteinuria testing	At first antenatal visit and each subsequent visit	IIB
Immunisation	All pregnant women	Review influenza immunisation status and offer where appropriate (see Chapter 11: Respiratory health)	Opportunistic	GPP

β First trimester combined screening includes nuchal thickness ultrasound and plasma beta human chorionic gonadotropin (beta-HCG) and pregnancy associated plasma protein A (PAPP-A)

† Maternal serum screening includes plasma maternal serum alpha fetoprotein (AFP), unconjugated oestriol and total human chorionic gonadotropin (HCG)

‡ Risk factors for pre-eclampsia include age >40 years, first or multiple pregnancy, BMI >30, diabetes, vascular or kidney disease, personal or family history of pre-eclampsia, raised blood pressure at first visit, pregnancy interval >10 years

Recommendations: Smoking cessation

Preventive intervention type	Who is at risk?	What should be done?	How often?	Level/ strength of evidence
Screening	All pregnant women	Regularly assess smoking status and remind patients to limit/avoid exposure to cigarette smoke	At first and subsequent antenatal visits	IB
		Record in the handheld pregnancy record (if available) or otherwise use local protocols to record this information		GPP
Behavioural	Pregnant women who smoke	Offer interventions to assist smoking cessation ranging from brief advice to more intensive, multicomponent interventions (see Chapter 1: Lifestyle)	At first and subsequent antenatal visits	IB
Chemo-prophylaxis	Pregnant women who smoke at least 10–15 cigarettes/day requesting additional assistance with smoking cessation	Consider nicotine replacement therapy (NRT) with discretion, noting that the safety of NRT in terms of effect on fetal development and birth outcomes remains unclear Discuss the risks and benefits taking into account overall clinical circumstances If deemed necessary, intermittent forms of NRT are recommended rather than continuous use formulations to reduce the total dose of nicotine	At each antenatal visit	IB

Recommendations: Genitourinary and bloodborne virus infections

Preventive intervention type	Who is at risk?	What should be done?	How often?	Level/ strength of evidence
Screening	Pregnant women aged <25 years	Offer chlamydia testing with a nucleic acid amplification test (NAAT), most commonly by PCR, using either a first void urine, self obtained low vaginal swab or endocervical swab	At first antenatal visit	IIC
	Pregnant women from communities with a high prevalence of STIs	Offer testing for chlamydia as above and consider testing for gonorrhoea	At first antenatal visit and consider repeat testing at 36 weeks gestation	GPP
	All pregnant women Pregnant women from communities with a high prevalence of STIs	Offer testing for syphilis, HIV and hepatitis B Hepatitis C (HCV) testing is not routinely recommended. Screening may be discussed if there are identifiable risk factors for HCV infection (see Chapter 8: Sexual health, for risk factors) Offer additional tests for syphilis infection	At first antenatal visit At 28 weeks gestation and at birth	IA–IIB
	All pregnant women	Offer testing for asymptomatic bacteriuria with a midstream urine microscopy and culture In areas with limited access to pathology testing, dipstick urine tests may be used to exclude asymptomatic bacteriuria but positive results must be confirmed by midstream urine culture	At first antenatal visit	IA GPP
	Women with previous pre-term birth	Offer vaginal swab testing and treatment for asymptomatic bacterial vaginosis (eg. *Gardnerella vaginalis*, Bacteroides spp.)	Before 20 weeks pregnancy	GPP
Environmental	Women with positive results for an STI or bloodborne virus	Ensure adequate recall systems are implemented for follow up Recommend partner treatment and contact tracing (See Chapter 8: Sexual health and bloodborne viruses)	N/A	GPP

Recommendations: Alcohol consumption

Preventive intervention type	Who is at risk?	What should be done?	How often?	Level/ strength of evidence
Screening	All pregnant women	Ask about alcohol consumption	At first and subsequent antenatal visits	GPP
Behavioural	All pregnant women and women planning a pregnancy	Advise that not drinking alcohol is the safest option in pregnancy, particularly in the first 3 months	At first and subsequent antenatal visits (as appropriate)	GPP
	Pregnant women who drink alcohol	Advise women to avoid getting drunk Advise women to have no more than two standard drinks on any 1 day and fewer than seven standard drinks in 1 week	At first and subsequent antenatal visits	GPP

Recommendations: Nutritional assessment and supplementation

Preventive intervention type	Who is at risk?	What should be done?	How often?	Level/ strength of evidence
Screening	All pregnant women	Offer a full blood examination to assess for anaemia	At first antenatal visit, and at 28 and 36 weeks gestation	1A
	Women at risk of vitamin D deficiency (limited sun exposure, dark skin, BMI >30)	Consider testing for vitamin D levels, particularly in the non-summer months	At first antenatal visit	GPP
Behavioural	All pregnant women	Provide information on the benefits of a healthy diet in pregnancy and give practical, tailored advice on healthy eating	Early in pregnancy	GPP
Chemo-prophylaxis	All pregnant women and those considering pregnancy	Recommend 500 mcg of folic acid daily to reduce the risk of newborn neural tube defects	At least 1 month prior to pregnancy and for the first 12 weeks of pregnancy	IA
	Women with diabetes	Recommend a higher dose of 5 mg of folic acid daily to reduce the risk of newborn neural tube defects	At least 1 month prior to pregnancy and for the first 12 weeks of pregnancy	IC
	Pregnant women with proven vitamin D deficiency	Advise vitamin D supplementation – dose titrated according to clinical situation* (see Resources)	At diagnosis	IIB
	Pregnant women who are not iron deficient	Routine iron supplementation is not recommended	N/A	IB
	Pregnant women with proven iron deficiency	Offer iron supplementation – oral or intramuscular – dose titrated according to clinical situation	At diagnosis	IB
	All pregnant women	Offer iodine supplementation with 150 mcg/day (see Resources)	At first antenatal visit	IIA

* Vitamin D supplementation is not subsidised under the Pharmaceutical Benefits Scheme

Recommendations: Diabetes				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Screening	Pregnant women at risk of undiagnosed diabetes mellitus (BMI >30 kg/m^2, family history of diabetes, previous gestational diabetes)	Measure fasting blood glucose If not feasible, alternatives include random blood glucose or HbA1c (see Chapter 14: Type 2 diabetes prevention and early detection)	At first antenatal visit	IA
	Pregnant women who do not have pre-existing diabetes	Perform a 75 g 2 hour oral glucose tolerance test (OGTT) for diagnosis of gestational diabetes (see Table 9.1 and Table 9.2) If a 2 hour OGTT is consistently difficult to achieve, consider alternative tests such as a random blood glucose or a 50 g, 1 hour glucose challenge. If either are abnormal then recommend a 75 g, 2 hour oral OGTT	Between 24 and 28 weeks gestation	IA GPP
	Women postpartum diagnosed with gestational diabetes	Perform a 75 g fasting OGTT	At 6 weeks postpartum	GPP
Behavioural	Pregnant women with diabetes	Offer advice and resources to promote good glycaemic control throughout pregnancy – encourage a healthy diet and exercise Consider referral to specialist services, where available, and consult specific management guidelines for ongoing care (see Resources)	At diagnosis	IA
	Non-pregnant women who have had gestational diabetes in the past	Advise women of the future risk of developing diabetes and give advice about healthy diet, exercise and weight (see Chapter 1: Lifestyle) Screen for diabetes with a fasting blood glucose (see Chapter 14: Type 2 diabetes prevention and early detection)	At postpartum checks and as part of an annual health assessment	IIB

Table 9.1. The International Association of Diabetes and Pregnancy Guidelines for diagnosing pre-existing diabetes and gestational diabetes in pregnancy*

Diagnostic criteria for pre-existing diabetes	
One of the following measures of glycaemia is recommended for diagnosing pre-existing diabetes. If random plasma glucose is used, the diagnosis should be confirmed with either a fasting plasma glucose or HbA1c	
Measure of glycaemia	**Consensus threshold**
FPG (fasting plasma glucose)	≥7.0 mmo/L
Hb1c	≥6.5%
RPG (random plasma glucose)	≥11.1 mmol/L (confirmation with FPG/ HbA1c recommended)
Diagnostic criteria for gestational diabetes	
Using a 75 g 2 hour oral glucose tolerance test, one or more of these values is diagnostic of gestational diabetes	
Glucose measure	**Glucose concentration**
FPG	≥5.1 mmol/L*
1 hour plasma glucose	≥10 mmol/L
2 hour plasma glucose	≥8.5 mmol/L*

* At the time of writing these criteria had not been published by the Australian Diabetes in Pregnancy Society. Current criteria for gestational diabetes are FPG ≥5.4 mmol/L and 2 hour plasma glucose ≥7.9 mmol/L

Source: Metzger BE, Gabbe SG, Persson B, et al 2010[92]

Table 9.2. Current interpretive criteria for 75 g OGTT in pregnancy in Australia

Glucose measure	**Glucose concentration**
Fasting	Above 5.4
2 hour	Above 7.9

Chapter 10: Mental health

Prevention of depression

Recommendations: Depression prevention				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Screening	All people aged 15+ years	Screening for depression is not routinely recommended unless comprehensive support services are available (see Table 10.3)	N/A	IB
		In the absence of services outlined in Table 10.3, useful support services include those provided by social and emotional wellbeing workers and Aboriginal mental health workers and psychologists with an understanding of the local context (see Resources)		GPP
		If comprehensive support services are not available then assess for the presence of risk factors for depression (see Table 10.4)		GPP
	People in whom depression risk is greater (see Table 10.4)	Take a patient history to assess mood and consider asking: • 'Over the past 2 weeks, have you felt down, depressed or hopeless?' • 'Over the past 2 weeks, have you felt little interest or pleasure in doing things?' (See Table 10.1 for diagnostic criteria)	Opportunistic	1B
Behavioural	All people aged 15+ years	Behavioural interventions are not recommended for prevention of depression	N/A	ID
Chemoprophylaxis	All people aged 15+ years	Medications are not recommended for primary prevention of depression	N/A	GPP
Environmental	All people aged 15+ years	Community based psychosocial programs are not recommended for prevention of depression	N/A	IC

Table 10.1. DSM-IV criteria for a depressive episode

- Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning; at least one of the symptoms is either depressed mood or loss of interest or pleasure
- Depressed mood most of the day, nearly every day
- Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day
- Significant weight loss when not dieting or weight gain
- Insomnia or hypersomnia nearly every day
- Psychomotor agitation or retardation nearly every day
- Fatigue or loss of energy nearly every day
- Feelings of worthlessness or excessive or inappropriate guilt nearly every day
- Diminished ability to think or concentrate, or indecisiveness, nearly every day
- Recurrent thoughts of death, recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide
- In addition the episode must interfere with the person's daily routine or relationships, and not have a cause such as alcohol or other drugs, a physical illness or the death of a loved one

Source: American Psychiatric Association 2000[13]

Table 10.2. Proportions of stresses reported in the previous 12 months, by Indigenous status, year and stressor type, Australia, 2004–05 and 2006

	Indigenous status/year	
	Indigenous	Total population
Type of stressor	**2004–06**	**2006**
Death of a family member or friend	42	23
Serious illness or disability	28	30
Not able to get a job	17	13
Alcohol or drug related problem	25	8.6
Overcrowding at home	17	–
Members of a family sent to jail/in jail	19	–
Witness to violence	14	3.9
Trouble with police	16	3.9
Discrimination/racism	12	–
Any stressor	77	59

Source: ABS, 2006[40] ABS, 2007[31]

Notes: 1. Proportions are expressed as percentages
2. The total population for 'serous illness or disability' data has been estimated by adding proportions for the two sub-components, so may slightly overstate the true proportion

Table 10.3. Features of comprehensive support services associated with improved outcomes from depression screening

- An initial visit with a nurse specialist for assessment, education and discussion of patient preferences and goals
- A follow up visit with a trained nurse specialist and ongoing support for adherence to medication for those prescribed antidepressant medications
- A visit with a trained therapist for cognitive behavioural therapy
- A reduced copayment for patients referred for psychotherapy
- Professional support including the following:
  - staff and clinician training (1 or 2 day workshops)
  - availability of clinician manuals
  - monthly training lectures
  - academic detailing
  - resource materials for clinicians, staff, and patients
- Institutional financial commitment

Source: O'Connor EA, Whitlock EP, Beil TL, Gaynes BN 2009[5]

Table 10.4. People at greater risk for depression

- Exposure to adverse psychosocial events, such as unemployment, divorce or poverty
- A previous history of depression or suicide attempts
- A history of physical or sexual abuse
- A history of substance abuse
- Presence of other chronic diseases, including chronic pain
- Multiple presentations to health services may also be an indicator of depression. Factors that make it more likely that depression will be missed include:
  - limited consultation time
  - presentations of mostly physical or atypical symptoms
  - health professional attitudes – eg. the belief that nothing can be done, or that depression is a normal response to stress
  - communication difficulties

Source: National Collaborating Centre for Mental Health and the Royal College of Psychiatrists 2010[6]

Prevention of suicide

Recommendations: Suicide prevention				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Screening	All people	Screening for suicide risk is not routinely recommended	N/A	IC
	People with any one of the following: • past history of intentional self harm • a history of mood disorders • hazardous alcohol consumption or use of other recreational drugs	Consider asking about past and current suicidal ideation and intent as part of a comprehensive medical history	Opportunistic	GPP
Behavioural	All people	No specific behavioural interventions are recommended for prevention of suicide	N/A	IC
	People at increased risk of suicide from history or clinical judgement	Consider local methods of enhancing effective contact with volunteer or professional agencies, particularly access to Aboriginal mental health workers	Ongoing	IIIC
Chemoprophylaxis	All people	Medication is not recommended for the prevention of suicide beyond a clinically indicated use for diagnosed conditions (eg. major mental illness)	N/A	IB
Environmental	Communities	Remove access to lethal methods of suicide both in the community and the household	Ongoing	IC
	Communities	Advocate for community based health promotion programs that holistically address the multifactorial nature of social and emotional wellbeing (eg. sports events, caring for country programs, healthy lifestyle festivals)	Ongoing	GPP
	N/A	Provide education for primary care health professionals to recognise and respond to psychosocial distress and depression	Ongoing	IC
	N/A	Integrating mental health services with alcohol and other drug services can improve service access to youth who are at risk of suicide	Ongoing	GPP

Chapter 11: Respiratory health

Pneumococcal disease prevention

Recommendations: Pneumococcal disease prevention				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Immunisation	Healthy adults aged ≥50 years See also Chapter 2: Child health, for childhood vaccination recommendations	Pneumococcal vaccine (23vPPV) is recommended for the prevention of invasive pneumococcal disease	Opportunistic A second vaccination is recommended 5 years later	GPP
	People aged 15–49 years who are smokers or have an underlying high risk conditions (eg. chronic cardiac, renal or lung disease, diabetes, alcohol related problems, immunosuppression)	Pneumococcal vaccine (23vPPV) is recommended for the prevention of invasive pneumococcal disease	Opportunistic A second vaccination is required 5 years later A third vaccination is recommended 5 years later or at 50 years of age (whichever is later)	IIC
Environmental	N/A	Promote primary care, community based strategies to improve pneumococcal vaccination uptake and timeliness, particularly the implementation of reminder/recall systems	N/A	IA
	Communities	Promote community awareness of benefits and timeliness of vaccines and enhancing access to vaccination services		

Influenza prevention

Recommendations: Influenza prevention				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Immunisation	All people aged ≥15 years	Offer influenza vaccine in the pre-flu season months for the prevention of influenza (March to April)	Annually	GPP
	Children with chronic illness aged 6 months to 14 years		Annually	IIC
	Women who are pregnant or planning a pregnancy		Part of routine antenatal care (see Chapter 9: Antenatal care)	IIB
	Healthcare providers		Annually	GPP
	Children under 6 months of age	Influenza vaccination is not recommended	N/A	GPP
Behavioural	Household contacts of a person with influenza	Good hygiene practice, such as frequent handwashing and covering the mouth on coughing or sneezing, is recommended to decrease the spread of influenza, particularly to reduce transmission from children to other household members	Opportunistic	IIIC
	Healthcare workers	Minimise exposure risk to patients with influenza-like illness by adhering to current infection control guidelines In addition to standard infection control procedures, personal protective equipment is recommended during influenza pandemics	N/A	
Chemoprophylaxis	Healthy adults	Neuraminidase inhibitors (NIs) are generally not indicated for the prevention of influenza	N/A	IIB
	People at high risk of influenza complications, where there are high levels of circulating virus	Consider NIs for high risk individuals in close contact with someone with a proven case of influenza (ideally initiated within 48 hours), particularly in a pandemic situation or where there is high levels of circulating virus	Opportunistic	GPP
Environmental	N/A	Primary care, community based strategies to improve vaccination levels, particularly using reminder/recall systems, should be implemented	N/A	IB
	Communities	Activities should also focus on increasing community awareness of benefits and timeliness of vaccines for vaccinations and enhancing access to vaccination services		

Asthma

Recommendations: Asthma				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Screening	All people	Routine screening for asthma is not recommended Early detection strategies should be considered (eg. clinical vigilance, detailed history considering mimics of asthma, and spirometry when symptoms are suggestive)	N/A	GPP
Behavioural	Children	Maternal dietary restrictions during breastfeeding or pregnancy are not recommended for the prevention of asthma	Opportunistic	IIIB
	All people	A high intake of fruit and vegetables should be recommended to those with or at risk of asthma*	Opportunistic	IIIB
Chemo-prophylaxis	Children with seasonal rhino-conjunctivitis	Advise that immunotherapy is not currently recommended as a preventive strategy of asthma	N/A	IIB
Environmental	Children	Strategies to provide a smokefree environment are recommended Smoking cessation advice should be given to pregnant and breastfeeding women (see Chapter 9: Antenatal care)	Opportunistic	IIIA
		Advise families that avoidance of exposure to airborne allergens such as house dustmite or pets is not shown to be effective in preventing asthma		IIIB
	Workers in high risk workplaces, where exposure to occupational dusts and chemicals are likely	Recommend use of respiratory protective equipment	N/A	IIIB

* Risk factors include a family history (particularly maternal) of asthma and allergies, a past history of atopy and food allergies in early life, obesity, low birthweight, in utero tobacco exposure, tobacco smoking, environmental tobacco smoke, environmental pollution and work related exposures[55,57,63,64,81]

Chronic obstructive pulmonary disease

Recommendations: Chronic obstructive pulmonary disease				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Immunisation	People with an established diagnosis of COPD	Offer influenza vaccine in the pre-flu season months for the prevention of influenza (March to April)	Annually	IIB
		Pneumococcal vaccine (23vPPV) is recommended for the prevention of invasive pneumococcal disease	See section on pneumococcal vaccination for recommendations on frequency	IIC
Screening	Current smokers Ex-smokers over 35 years of age	Screen for symptoms of COPD (persistent cough/sputum production, wheezing, dyspnoea)	Opportunistic	IIB
		If symptoms are present spirometry is indicated to assess for COPD	Opportunistic	IA
		Spirometry is not recommended to screen healthy adults who do not report respiratory symptoms		
		Chest X-ray is not recommended for the diagnosis or screening of COPD	Opportunistic	GPP
		Chest X-ray may be of value to rule out other diagnoses and for later use as a baseline		
Behavioural	All people	Advise of the importance of not smoking as the most effective strategy to prevent COPD (see Chapter 1: Lifestyle, smoking)	Opportunistic	1A
	People with an established diagnosis of COPD	Smoking cessation reduces the rate of decline of lung function. Counselling and treatment of nicotine dependence should be offered to all smokers regardless of the presence or absence of airflow obstruction (see Chapter 1: Lifestyle, smoking)	Opportunistic	IA
Chemoprophylaxis	People with an established diagnosis of COPD	Pharmacotherapy (bronchodilator treatment, inhaled corticosteroids, long term antibiotic treatment) does not modify decline in lung function	Opportunistic	IA
		Pharmacotherapy is useful in decreasing symptoms and/or complications and improving quality of life		
Environmental	All people	Advise that risk factors for COPD should be minimised (eg. occupational exposure, ETS and indoor/outdoor air pollution and irritants). This may include strategies such as adequate ventilation when cooking with solid fuels and avoidance of irritants and reduction of emissions in the workplace	N/A	IIIC

Bronchiectasis and chronic suppurative lung disease

Recommendations: Bronchiectasis and chronic suppurative lung disease

Preventive intervention type	Who is at risk?	What should be done?	How often?	Level/strength of evidence
Immunisation	All children and adults	Ensure timely immunisation is provided	As per National Immunisation Program Schedule (NIPS) and state/ territory schedules	IA
Screening	People with pneumonia and lower acute respiratory infections (ARIs), particularly hospitalised episodes	Ensure primary care provider review after the ARI episode If wet or productive cough* is present, consider the diagnosis of CSLD.† Recommence antibiotics and undertake investigations as per management guidelines[94]	3–4 weeks post episode then 2 weekly till symptoms resolve or referred	IA (antibiotics efficacy in treatment of wet cough in children) IIIB (screening for CSLD post lower ARI episode)
	People with recurrent lower ARIs (particularly if hospitalised)	Consider a diagnosis of CSLD. Repeat a chest X-ray. Refer to specialist if: • >2 episodes of chest X-ray proven pneumonia and/or • Chest X-ray persistently abnormal for >6 weeks	Opportunistic	III (screening for CSLD post lower ARI episode)
	People with persistent chronic (>2 months) wet cough	Consider a diagnosis of CSLD. Assess with a chest X-ray and see above If wet or productive cough* is present, consider the diagnosis of chronic suppurative lung disease.† Recommence antibiotics and undertake investigations as per management guidelines[94]	Annually	IA (antibiotics efficacy in treatment of wet cough in children) GPP B (for effectiveness of screening and antibiotics in adults)
Behavioural	All infants	Promote and encourage breastfeeding	At postnatal checks	IIIB (breastfeeding protective)
	All children	Promote good hygiene practices to reduce burden of infections (see Chapter 7: Hearing loss)	Opportunistic	GPP B
	People with CSLD or known bronchiectasis	Assess cough severity, quality of life, and exacerbating factors. Undertake regular review to prevent and manage complications and comorbidities (see Table 11.1)	3 monthly clinic review 6 monthly specialist review	GPP B
	Infants at risk of exposure to environmental tobacco smoke both in-utero and in the postnatal period	Advise and assist pregnant women to avoid smoking (See Chapter 9: Antenatal care) Advise parents/carers who smoke about the harms of environmental tobacco smoke and the need to limit childhood exposure, particularly in confined spaces (eg. homes and motor vehicles) (see Chapter 1: Lifestyle, smoking)	Opportunistic	IIIC
	Mothers with or at risk of having babies with low birthweights and/ or premature infants	Promote increased access to comprehensive antenatal care (see Chapter 9: Antenatal care)	Opportunistic	GPP IIIC (premature and low birthweight infants developing CSLD)
Chemoprophylaxis	People with CSLD or known bronchiectasis	Consider maintenance antibiotics on discussion with the person's specialist	As per management guidelines[94]	GPP C

* Cough is usually underreported;[40] children do not usually produce sputum and hence the term wet cough (rather than productive cough) is used[94]

† Bronchiectasis refers to chronic suppurative lung disease (CSLD) with the presence of high resolution chest CT (HRCT) radiological features.[95] CSLD is diagnosed when symptoms and/or signs of bronchiectasis are present with or without HRCT features.[95] These symptoms and/or signs are: continuous, wet or productive cough for >8 weeks, ± other features such as exertional dyspnoea, reactive airway disease, recurrent chest infections, growth failure, clubbing, hyperinflation or chest wall deformity[95]

Table 11.1. Regular review of bronchiectasis

Regular review consists of:

- assessment of severity, which includes oximetry and spirometry
- sputum culture
- management of possible complications and comorbidities, particularly for gastro-oesophageal reflux disease, reactive airway disease/asthma, COPD, otorhinolaryngeal disorders and dental disease. Less commonly patients require assessments for sleep disordered breathing, cardiac complications and referral for lung transplantation

Source: Chang AB, Bell SC, Byrnes CA, Grimwood K, Holmes PW, King PT, et al 2010[95]

Chapter 12: Cardiovascular disease prevention

Recommendations: For people without an established diagnosis of CVD				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Screening	Age 12–17 years	Assess smoking status, physical activity, nutrition, BMI and waist circumference (see Chapter 1: Lifestyle) Advise lifestyle risk reduction accordingly (see Chapter 1: Lifestyle)	Opportunistic and as part of an annual health assessment	GPP
	Age 18–34 years without any vascular risk factors	Assess smoking status, physical activity, nutrition, BMI and waist circumference Also assess BP, family history of premature CVD, diabetes risk (see Chapter 14: Diabetes prevention), psychosocial risk factors (see Chapter 10: Mental health) and socioeconomic risk factors Advise lifestyle risk reduction accordingly (see Chapter 1: Lifestyle)	Opportunistic and as part of an annual health assessment	GPP
	Age 18–34 years and one or more of the following is present: family history of premature CVD or chronic kidney disease (CKD), overweight/obesity, smoking, diabetes, elevated BP	Assess risk factors as above* Also assess serum lipids and screen for CKD (see Chapter 13: Chronic kidney disease prevention and management) Advise lifestyle risk reduction accordingly (see Chapter 1: Lifestyle)	Opportunistic and as part of an annual health assessment	GPP
	Age 35–74 years	Assess for the presence of any Framingham, non-Framingham risk factors and clinically high risk conditions (see Table 12.1) If no clinically high risk conditions are present then calculate absolute 5 year CVD risk using the Australian cardiovascular risk charts (Appendix 1) or the Framingham risk equation (FRE) calculator (see Resources)	As part of an annual health assessment and review according to level of risk (see below)	IIB
	Age over 74 years	Assess for presence of any Framingham, non-Framingham risk factors and clinically high risk conditions (see Table 12.1) but assume CVD risk is high	Review according to clinical context	GPP
Behavioural	People with low absolute 5 year CVD risk (<10%)	Advise lifestyle risk reduction as needed for the following (see Chapter 1: Lifestyle): • physical activity • weight loss • smoking cessation • salt reduction to less than 4 g salt/day (1600 mg sodium/day) • diet rich in fruit and vegetables, wholegrain cereals, nuts and seeds, legumes, fish, lean meat, poultry, low fat dairy products and limiting saturated and trans fat intake • limit alcohol intake to ≤2 standard drinks/day	Review risk every 2 years	IA

	People with the following: • absolute 5 year CVD risk moderate or high (≥10%) • presence of any clinically high risk conditions (see Table 12.1)	Advise lifestyle risk reduction as above Provide intensive intervention support (see Chapter 1: Lifestyle)	Review according to clinical context	IB
Chemoprophylaxis	People at low absolute risk: • <10% 5 year CVD risk and with BP persistently ≥160/100 mmHg	Consider commencing a BP lowering medication unless contraindicated	Review according to clinical context	GPP
	People at moderate absolute risk: • 10–15% 5 year CVD risk	Review individual risk factor profile and recommend commencing a BP lowering medication and/or lipid lowering medication unless contraindicated**	Review according to clinical context	IB
	People at high absolute risk: • >15% 5 year CVD risk or presence of any clinically high risk conditions (see Table 12.1)	Recommend commencing both a BP lowering medication and lipid lowering medication regardless of risk factor levels unless contraindicated**	Review according to clinical context	IB
		Aspirin is not routinely recommended		IC
	People with atrial fibrillation (AF) without prior CVD	Determine the cause of AF and manage rate and rhythm control. Assess and manage CVD risk as above. Consider oral anticoagulant treatment if valvular heart disease is present or two or more of the following risk factors are present (based on the $CHADS_2$ score[23]): • **C**ongestive heart failure • **H**ypertension • **A**ge >75 years • **D**iabetes • prior **S**troke or TIA	Review according to clinical context	IA

* Although absolute CVD risk assessment is currently not recommended in Aboriginal and Torres Strait Islander people aged less than 35 years, a multifactorial assessment of CVD risk factors is still recommended to guide management decisions. Treatment on the basis of elevated single risk factors may still be appropriate depending on the clinical context

** Specific choice of BP and lipid lowering agents and guidelines on treatment targets is beyond the scope of this guideline. See Resources for links to specific management guidelines. If BP or lipid levels are extreme or non-responsive to treatment then further investigation for underlying causes is recommended

Recommendations: For people with an established diagnosis of CVD				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Screening	People with CVD	Calculation of the absolute CVD risk using the FRE calculator is not recommended. Five year risk of a subsequent CVD event is assumed to be high	N/A	
Behavioural	People with CVD	Intensive lifestyle risk factor management as for patients without an established diagnosis of CVD (see Table 12.1)	Review at every visit	1A
		A tailored cardiac rehabilitation program should be offered to all people post myocardial infarction (MI) and other acute coronary syndromes, and to those who have undergone revascularisation procedures	Post CVD event	1A
Chemoprophylaxis	People with CVD	Commence BP lowering treatment at any BP level unless there is symptomatic hypotension*	Lifelong	IA
		Commence lipid lowering treatment with a statin at any cholesterol level unless contraindicated*	Lifelong	IA
		Commence low dose aspirin treatment (75–150 mg) unless contraindicated Consider alternative antiplatelet agents such as clopidogrel (75 mg) if aspirin hypersensitivity is present For people with ischaemic stroke combination aspirin/dipyridamole may also be considered	Lifelong	IA
	People with CHD with stent insertion or recent acute coronary heart disease	Consider clopidogrel (75 mg) in combination with aspirin	For 12 months post stent insertion depending on stent type and circumstances of implantation	IIB
	People with stroke/TIA	Oral anticoagulant treatment is recommended if AF or cardio-embolic stroke is present unless contraindicated. Consultation of specific management guidelines is recommended (see Resources)	Lifelong	IA

* Specific choice of BP and lipid lowering agents and guidelines on treatment targets is beyond the scope of this guideline. See Resources for links to specific management guidelines. If BP or lipid levels are extreme or non-responsive to treatment then further investigation for underlying causes is recommended

Table 12.1. Framingham and non-Framingham CVD risk factors

Framingham risk equation factors*†	Non-Framingham risk equation factors‡	Clinically high risk conditions
• Age • Gender • Smoking status • Systolic blood pressure • Total cholesterol§ • HDL cholesterol§ • Diabetes status • Left ventricular hypertrophy (LVH)†	• Obesity (BMI >30 kg/m^2 and/or waist circumference >102 cm in men, >88 cm in women) • Family history of CVD before age 55 years in a mother, father or sibling • Presence of albuminuria# • Atrial fibrillation • Impaired fasting glucose ≥6.1 mmol and <7.0 mmol or glucose intolerance (2 hour glucose ≥7.8 mmol and ≤11.0 mmol) • Socioeconomic hardship • Depression or other psychosocial stress • Excessive alcohol intake	• Extreme risk factor elevations (SBP ≥180 or DBP ≥110, total cholesterol >7.5 mmol/L) • Type 2 diabetes and age >60 years • Type 2 diabetes and albuminuria# • Moderate to severe chronic kidney disease (eGFR <45 mL/min/1.73 m^2 or persistent proteinuria) • Familial hypercholesterolaemia

* The 1991 Framingham risk equation is intended for people without CVD. The most recently recorded pre-treatment measures for blood pressure or lipids should be used to estimate CVD risk in people already receiving treatment. Where this is not possible, clinicians should make decisions on use of pharmacotherapy based on discussions with the patient and consideration of the individual context

† It is preferable to assess for LVH on the basis of echocardiography criteria rather than via an electrocardiogram

‡ There are many additional risk factors that are independently associated with increased CVD risk such as C-reactive protein, coronary calcium scores, and plasma homocysteine levels. Measurement of such factors can be costly and invasive and there is limited evidence to suggest that assessment of these risk factors substantially improves risk prediction over those listed in Table 12.1

§ Fasting lipid specimens are recommended, but a reasonable estimation of risk will be obtained from a non-fasting sample in most circumstances

Albuminuria is defined as an albumin excretion rate >20 mcg/min or urinary albumin to creatinine Ratio >2.5 mg/mmol in males and >3.5 mg/mmol in females

Sources: Framingham risk equation factors from Anderson K, Odell P, Wilson P, Kannel W 1991[6]; non-Framingham risk equation factors from National Vascular Disease Prevention Alliance 2009 and Colagiuri S, Davies D, Girgis S, Colagiuri R 2009[7,31] and clinically high risk conditions from National Vascular Disease Prevention Alliance 2009[7]

Chapter 13: Chronic kidney disease prevention and management

Recommendations: Chronic kidney disease detection and management				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Screening	All adults aged 18–29 years without any CKD risk factors	Screen for CKD risk factors (overweight or obesity, diabetes, elevated BP and smoking, family history of kidney disease)	As part of an annual health assessment	IIIB
	People aged 18–29 years with one of the following CKD risk factors: • family history of CKD or premature CVD • overweight/ obesity • smoking • diabetes • elevated BP All people ≥30 years	Screen for CKD with eGFR and urinary albumin-creatinine ratio (ACR) A first void specimen is preferred If urine ACR is raised then repeat once or twice over 3 months. For further quantification consider collecting a timed specimen	Every 2 years (or more frequently if CVD risk is elevated – see Chapter 12: Cardiovascular disease prevention)	IIIC
Behavioural	Adults with any risk factors for CKD (see above)	Offer individualised, structured education about risk factor avoidance and management	Annually	IIIB
		Offer smoking cessation support (see Chapter 1: Lifestyle, section on smoking) Advise avoidance of exposure to environmental tobacco smoke	Opportunistic	IIIB
		Encourage regular physical exercise appropriate to their physical ability and medical history (see Chapter 1: Lifestyle, section on physical activity)	Opportunistic	IIB
		If overweight or obese encourage weight loss Offer group diet and exercise sessions if available, especially for patients with type 2 diabetes (see Chapter 1: Lifestyle, section on overweight/ obesity)	Opportunistic	IB
		Advise to limit dietary sodium intake to 100 mmol/ day (6 g salt per day) or less	Opportunistic	IIIB
	Adults with CKD stages 1–3 (see Table 13.1)	Lifestyle risk factor management as above Patients with CKD should be advised not to use salt substitutes that contain high amounts of potassium salts	Opportunistic	As above for each risk factor
		Advise consuming the recommended daily intake of protein for adults (0.75 g/kg/day)	Opportunistic	IIC
		A daily fluid intake of 2–2.5 L (including the fluid content of foods) is generally sufficient, although this might need to be varied according to individual circumstances	Opportunistic	IIIC

Chemoprophylaxis	All people with CKD	Regularly review medications to identify and avoid those with potential nephrotoxicity Advise patients taking an angiotensin converting enzyme (ACE) inhibitor or angiotensin II receptor blocker (ARB) plus diuretic to avoid non-steroidal anti-inflammatory drugs (other than low dose aspirin if indicated)	Opportunistic at every medication change	GPP
	Adults with CKD and albuminuria (see Table 13.2)	Commence treatment with an ACE inhibitor or ARB, regardless of BP level. The goal is >50% reduction in albumin excretion without symptomatic hypotension Alternative agents include calcium channel blockers	At diagnosis	IA
		An ACE inhibitor and an ARB should not normally be prescribed together		IIB
	Adults with CKD and diabetes	Commence treatment with an ACE inhibitor or ARB regardless of BP level	At diagnosis	IA
		Blood glucose control in patients with CKD and diabetes should be optimised, generally aiming for an HbA1c target of 7%	Opportunistic	IA
	Adults with CKD and elevated BP	Consider use of more than one drug to achieve adequate BP control. (The number of drugs required tends to increase with declining GFR)	Opportunistic BP check at every visit	IIIB
		If prescribed a BP lowering medication aim for a target of <140/90 mmHg, or <130/80 mmHg in the presence of micro- or macro-albuminuria (with or without diabetes)		IB
	Adults with CKD	Statins should be prescribed according to level of overall cardiovascular risk (see Chapter 12: Cardiovascular disease prevention)	At diagnosis	IB
Environmental	Communities with high prevalence of scabies and pyoderma	Support the implementation of population based strategies for reduction of scabies and pyoderma among children (see Chapter 2: Child health and Chapter 5: Rheumatic heart disease)	N/A	IIIB

Table 13.1. Stages of chronic kidney disease

Stage	Description	GFR (mL/min/1.73 m²)
1	Kidney damage* with normal or increased GFR	>89
2	Kidney damage* with mild reduced GFR	60–89
3A	Moderately reduced GFR	45–59
3B	Moderately reduced GFR	30–44
4	Severely reduced GFR	15–29
5	Kidney failure	<15 or dialysis

* Kidney damage includes pathological abnormality or a marker of damage such as abnormalities in blood tests, urine tests or imaging studies[1]

Table 13.2. Definitions of normal albumin excretion, microalbuminuria and macroalbuminuria

	Gender	Normal albumin excretion	Microalbuminuria	Macroalbuminuria
Urinary ACR	Male	<2.5 mg/mmol	2.5–25 mg/mmol	>25 mg/mmol
	Female	<3.5 mg/mmol	3.5–35 mg/mmol	>35 mg/mmol
Urinary albumin excretion per 24 hours	Either	<30 mg/24 hr	30–300 mg/24 hr	> 300 mg/24 hr

Chapter 14: Type 2 diabetes prevention and early detection

Recommendations: Diabetes prevention and early detection				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Screening	Adults ≥18 years from regions with a high prevalence of diabetes (≥5%) AND/OR Adults with any of the following high risk conditions: • previous IGT or IFG • history of gestational diabetes mellitus • history of polycystic ovary syndrome • history of cardiovascular disease • current antipsychotic medication use	Measure fasting plasma glucose or random venous blood glucose A laboratory test is preferable, but finger prick testing is an alternative. HbA1c may also be used as a screening test for the diagnosis of diabetes* Perform oral glucose tolerance test in those with equivocal results as above The 2006 WHO/International Diabetes Federation criteria should be used to diagnose type 2 diabetes, IGT and IFG (see Table 14.1)	Annually as part of an adult health assessment	IIB
	All adults ≥18 years from regions with a low population prevalence for diabetes (<5%)	Consider screening using AUSDRISK tool to determine if blood testing is required (see Resource) If AUSDRISK score is ≥12 then proceed as above for high risk populations	Annually as part of an adult health assessment	IIIB
	People <18 years with overweight/obesity	Consider the potential for early onset type 2 diabetes and consider testing according to clinical context (see Chapter 1: Lifestyle, section on overweight/obesity)	Opportunistic	GPP
Behavioural	All people	Measure BMI and waist circumference Advise minimum of 30 minutes moderate activity on most days Encourage diet rich in vegetables, fruits, legumes, high fibre cereals, fish, and lean meats. Limit fats, salt, sugar, alcohol For people overweight or obese (see recommendations in Chapter 1: Lifestyle, section on overweight/obesity)	Opportunistic and as part of an annual health assessment	IA
	Mothers of young babies	Encourage infant breastfeeding (see Chapter 2: Child health)		
	People with BMI ≥35 kg/m^2	Advise intensive lifestyle modification as above Discuss risks and benefits of bariatric surgery and consider referral if services are available (see Chapter 1: Lifestyle, section on overweight/obesity)	Opportunistic	IIIC

Recommendations: Diabetes prevention and early detection (continued)				
Chemoprophylaxis	People with a high risk condition (see above) or at high risk of diabetes based on an AUSDRISK score ≥15	Advise intensive lifestyle modification as above If lifestyle modification is unable to be achieved, the use of metformin, acarbose, rosiglitazone or orlistat has been shown to delay or prevent the onset of diabetes These medications all have potential risks (in particular rosiglitazone). None is PBS funded for people without diagnosed diabetes, so their use is not recommended at present	Opportunistic	1B
Environmental	Communities	Advocate for multifactorial and coordinated community based interventions to increase access to healthy and nutritious food and promotion of increased physical activity (see Chapter 1: Lifestyle, section on physical activity)	N/A	GPP
* HbA1c testing for the purpose of diagnosing diabetes cannot currently be claimed from Medicare				

Table 14.1. Diagnostic criteria for type 2 diabetes and intermediate hyperglycaemia

Type 2 diabetes	
Fasting plasma glucose*	≥7.0 mmol/L or
Random venous glucose (point of care)*	≥11.1 mmol/L or
2-hr plasma glucose†	≥11.1 mmol/L or
Glycated haemoglobin (HbA1c)‡	≥6.5%
Impaired glucose tolerance (IGT)	
Fasting plasma glucose	<7.0 mmol/L and
2-hr plasma glucose†	≥7.8 and <11.1 mmol/L
Impaired fasting glucose (IFG)	
Fasting plasma glucose	6.1–6.9 mmol/L and if measured
2-hr plasma glucose†	<7.8 mmol/L
Non-diabetes	
Fasting plasma glucose	≤6.0 mmol/L or
Random venous glucose (point-of-care)	≤6.0 mmol/L

* The diagnosis of type 2 diabetes requires two positive blood tests on separate days unless the plasma glucose is unequivocally elevated in the presence of acute metabolic decompensation or obvious symptoms such as excessive thirst and polyuria

† Venous plasma glucose 2-hr after ingestion of 75 g oral glucose load. If 2-hr plasma glucose is not measured, status is uncertain as type 2 diabetes or IGT cannot be excluded

‡ Currently recommended in some, but not all guidelines. HbA1c is not funded by Medicare for the initial diagnosis of diabetes

Source: Colagiuri S, Davies D, Girgis S, Colagiuri R 2009[1]

Chapter 15: Prevention and early detection of cancer

Prevention of cervical cancer

Recommendations: Cervical cancer prevention and detection				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Immunisation	Girls aged 10–13 years	Promote human papilloma virus (HPV) vaccination for the prevention of cervical cancer ideally prior to the onset of sexual activity Recommend HPV vaccination as part of school based vaccination programs. If not accessed in a school program then offer through clinic/ community services	As per National Immunisation Program Schedule (NIPS) (varies between states and territories)	IIB
	Girls aged 14–18 years	Promote HPV vaccination for the prevention of cervical cancer ideally prior to the onset of sexual activity*	As per Australian Immunisation Handbook	IIB
	Women aged 19–26 years	Promote HPV vaccination for the prevention of cervical cancer for health benefit, but likely to be less effective*		
	Women aged 27–45 years	HPV vaccination may be of some benefit depending on sexual history†		
Screening	Women aged 18–69 years who have ever been sexually active	Offer Pap test screening from 18–20 years or 1–2 years after first sexual intercourse (whichever is later) regardless of whether HPV vaccination has been given	Every 2 years	IIA
	Women aged 70+ years who have ever been sexually active	Offer Pap test screening to women who have never had a Pap test or who request a Pap test	Pap test screening may cease for women aged 70 years who have had two normal Pap smears within the past 5 years	IIA
	Women at higher risk (eg. previous cervical abnormalities, immune suppression, in utero exposure to diethylstilboestrol)	Offer Pap test screening	Management regimen is complex: see NHMRC guidelines	GPP
	Women who have been previously treated for high grade squamous intraepithelial lesion	Offer annual Pap test screening combined with cervical HPV testing for 2 or more consecutive years, if not already done following specialist treatment	If both tests are negative in 2 consecutive years, screening for average risk population can recommence	IIIC
Behavioural	All women	Assess smoking status and advise on increased risks of cervical dysplasia and cervical cancer (see Chapter 1: Lifestyle, section on smoking)	As part of an annual health assessment	IIIB
		Offer a sexual health review (see Chapter 8: Sexual health and bloodborne viruses)	As part of an annual health assessment	

* Currently not subsidised through the NIPS

† 4-valent HPV vaccine (Gardasil®) is not registered by the Therapeutic Goods Administration for use in this age group due to lack of safety and efficacy data at the time of writing this guideline

Prevention and early detection of liver (hepatocellular) cancer

Recommendations: Liver cancer prevention and detection				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Immunisation	All people	Review if hepatitis B vaccination is indicated (see recommendations in Chapter 8: Sexual health and bloodborne viruses and Chapter 2: Child health)	See Chapter 8	See Chapter 8
Screening	All people	Review if hepatitis B and C screening is indicated (see recommendations in Chapter 8: Sexual health and bloodborne viruses)	See Chapter 8	See Chapter 8
	People with chronic liver disease or chronic hepatitis infection	Recommend specialist review to consider if screening for hepatocellular carcinoma using alpha fetoprotein (AFP) and ultrasound is warranted	6–12 monthly as part of specialist management plan	IIIC
Behavioural	Adolescents and adults	Assess levels of alcohol consumption and advise about safer levels of alcohol consumption to reduce long terms risk of alcohol related harm (see Chapter 1: Lifestyle, section on alcohol and Chapter 3: The health of young people)	As part of an annual health assessment	IIIB
	People with overweight/ obesity	Advise of the risks of liver disease and promote weight reduction strategies (see Chapter 1: Lifestyle, section on overweight/ obesity)	Opportunistic	GPP
	People at higher risk of hepatitis B or C infection (see Table 15.1)	Provide counselling on harm minimisation and promote peer education strategies around safer sex and injecting drug use where relevant (see Chapter 8: Sexual health and bloodborne viruses)	Opportunistic and as part of an annual health assessment	GPP
	People with chronic liver disease or chronic hepatitis infection	Provide counselling regarding risks of alcohol consumption	6–12 monthly as required	GPP
Chemoprophylaxis	People with chronic hepatitis B† or hepatitis C infection	Assess disease severity and suitability for antiviral treatment Regular monitoring for disease progression is recommended Refer to national or local guidelines for management recommendations (see Resources)	See management guidelines and/ or contact local services for advice	IIIC

* The World Health Organization recommends screening and hepatitis B vaccination for all people from geographic areas with a prevalence of hepatitis B of >2%.[30,31] The prevalence of hepatitis B infection in the Aboriginal population has been estimated to be 2% in the urban areas and 8% in rural areas[2]

† Hepatitis B surface antigen positive >6 months

Table 15.1. Risk factors for hepatitis B and C infection

Those at higher risk of hepatitis B infection include non-immune household or sexual contacts of people with acute or chronic hepatitis B; people aged 15–30 years; babies born to mothers with hepatitis B infection; people with multiple sexual partners; men who have sex with men; people who inject drugs; people at occupational risk or in prison/detention; and people with chronic liver disease, hepatitis C infection, HIV or impaired immunity
Those at higher risk of hepatitis C infection include people who have ever injected drugs for recreational purposes; people who have ever been incarcerated; those with tattoos and body piercings; recipients of blood products, tissues or organs prior to February 1990 in Australia or anytime overseas; and sexual partners of those with hepatitis C infection if blood has been associated with sexual activity

See also Chapter 8: Table 8.1: Risk factors for sexually transmissible infections and bloodborne viruses

Sources: National Health and Medical Research Council 2008 and Department of Health and Ageing 2010[10,29]

Prevention and early detection of breast cancer

Recommendations: Breast cancer prevention and detection				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/strength of evidence**
Screening	All women	Ask about family history of breast cancer to ascertain the individual risk of developing breast cancer (see Table 15.2)	As part of an annual health assessment	GPP
		Discuss 'breast awareness' rather than promoting regular breast self examination (ie. 'get to know what your breasts normally look and feel like') and ask women to promptly report persistent or unusual changes		IIC
	Women aged 40–49 years at or slightly above average risk (see Table 15.2)	Routine mammographic screening is not recommended If requested, provide information about mammographic screening to allow an informed decision based on individual risk and preferences	N/A	IB
	Women aged 40–49 years at moderately increased risk (see Table 15.2)	Consider annual mammography starting at age 40 years Consider referral to family cancer clinic or specialist cancer clinic where available for initial assessment of risk of developing cancer. This includes advice on the role of genetic testing, strategies to reduce risk of cancer, and information about early detection (see Resources)	Annually	GPP
	Women aged 50–69 years at or slightly above average risk (see Table 15.2)	Recommend mammography screening and provide information to allow an informed decision based on individual risk and preferences	Every 2 years	IB
	Women aged 50–69 years at moderately increased risk (see Table 15.2)	Recommend routine mammography screening Consider referral to family cancer clinic* or specialist cancer clinic for initial assessment	Every 2 years	GPP
	Women at potentially high risk of breast cancer (see Table 15.2)	Recommend mammographic screening regardless of age	Consider annually	GPP
		Offer referral to a family cancer clinic* for risk assessment, possible genetic testing and development of a management plan	When calculated to be at potentially high risk, and as needed	GPP
		Consider MRI breast screening in addition to mammography if aged <50 years. (Specialist referral is required to claim a Medicare rebate)	Consider annual screening depending on specialist advice	IIIB
		Consider clinical breast examination	As part of a well women's check	GPP

Behavioural	All women	Promote physical activity as physical inactivity increases the risk of breast cancer (see Chapter 1: Lifestyle, section on physical activity)	As part of an annual health assessment (see Chapter 1: Lifestyle)	IIIB
		Advise that alcohol consumption increases the risk of breast cancer, and that if alcohol is consumed it should be done at safe levels (see Chapter 1: Lifestyle, section on alcohol)		IIIB
		Advise that cigarette smoking increases the risk of breast cancer, and support people who smoke to quit (see Chapter 1: Lifestyle, section on smoking)		IIIC
		Advise that maintaining a healthy weight lowers the risk of breast cancer (see Chapter 1: Lifestyle, section on overweight/obesity)		IIIB
	Pregnant and breastfeeding women	Advise that breastfeeding has been shown to reduce the risk of breast cancer, and support women to breastfeed their infants (see Chapter 2: Child health, section on anaemia)	During and following pregnancy	IIIB
	Women on combined hormone replacement therapy (HRT)	Advise about risks and benefits of combined HRT; in particular advise about increased risk of breast cancer with continuous use for more than 5 years	When considering commencing HRT and every 6 months for women on combined HRT	I-IIIA
Chemoprophylaxis	Women at potentially high risk, and women aged >35 years at moderate risk	Consider specialist referral to discuss preventive treatment with tamoxifen or raloxifene Use is not currently approved for subsidy under the Pharmaceutical Benefits Scheme for the primary prevention of breast cancer (see Resources)		IIID

* Family cancer clinics provide counselling and information for families with a history of cancer on inheriting cancer, individual risk, screening, cancer risk reduction strategies, and genetic testing where appropriate. Clinics are conducted through the public hospital system and there is no direct cost to the patient for consultation or genetic testing. Location of family cancer clinics in Australia can be found at www.cancer.org.au/File/Aboutcancer/Family_Cancer_Clinics_31OCT06.pdf

Table 15.2. Risk categories for breast cancer based on family history

Category 1 At or slightly above average risk (no more than 1.5 times the population average risk)	Category 2 Moderately increased risk (1.5–3 times the population average risk)	Category 3 Potentially high risk (may be more than 3 times the population average risk)
No confirmed family history of breast cancer One first degree relative diagnosed with breast cancer at age 50 years or older One second degree relative diagnosed with breast cancer at any age Two second degree relatives on the same side of the family diagnosed with breast cancer at age 50 years or older Two first degree or second degree relatives diagnosed with breast cancer, at age 50 years or older, but on different sides of the family (ie. one on each side of the family)	One first degree relative diagnosed with breast cancer before the age of 50 years (without the additional features of the potentially high risk group – see category 3) Two first degree relatives, on the same side of the family, diagnosed with breast cancer (without the additional features of the potentially high risk group – see category 3) Two second degree relatives, on the same side of the family, diagnosed with breast cancer, at least one before the age of 50 years, (without the additional features of the potentially high risk group – see category 3)	Two first degree or second degree relatives on one side of the family diagnosed with breast or ovarian cancer plus one or more of the following on the same side of the family: • additional relative(s) with breast or ovarian cancer • breast cancer diagnosed before the age of 40 years • bilateral breast cancer • breast and ovarian cancer in the same woman • Jewish ancestry • breast cancer in a male relative One first degree or second degree relative diagnosed with breast cancer at age 45 years or younger plus another first degree or second degree relative on the same side of the family with sarcoma (bone/soft tissue) at age 45 years or younger Member of a family in which the presence of a high risk breast cancer or ovarian cancer gene mutation has been established

Source: National Breast and Ovarian Cancer Centre 2010[43]

Prevention and early detection of colorectal (bowel) cancer

Recommendations: Colorectal cancer prevention and detection				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/strength of evidence**
Screening	All people	Ask about family history of colorectal cancer (see Table 15.3) in order to estimate the individual risk of developing colorectal cancer	As part of an annual health assessment	GPP
	People at or slightly above average risk age 50+ years (category 1: Table 15.3)	Consider faecal occult blood test (FOBT)* and refer all abnormal results for appropriate diagnostic evaluation	Every 2 years from age 50–75 years, and could be continued beyond 75 years depending on individual circumstances*	IA
	People at moderate risk (category 2: Table 15.3)	Consider referral for colonoscopy (Flexible sigmoidoscopy and double contrast barium enema or CT colonography may be offered if colonoscopy is contraindicated)	Every 5 years starting at age 50 years, or at an age 10 years younger than the age of first diagnosis of bowel cancer in the family, whichever comes first	IIIC
	Those at potentially high risk (category 3: Table 15.3)	Consider referral to a specialist service for further risk assessment and possible genetic testing, and to a bowel cancer specialist to plan appropriate surveillance (See Resources for specific recommendations for screening for those with FAP or HNPCC)**	At the time of determining the individual is at high risk Offer referral later if not done at initial assessment	IIIC
	Past history of adenoma	Undertake surveillance colonoscopy	Timeframe for surveillance colonoscopy varies (see Resources)	IA
Behavioural	All people	Provide lifestyle risk factor counselling on the benefits of regular physical activity, maintaining healthy weight, alcohol intake in the low risk range, avoidance of tobacco smoking, restricting energy intake and dietary fat (see Chapter 1: Lifestyle) Also recommend consuming only moderate amounts of red meat, minimising consumption of charred and processed meats, and consuming vegetables and dietary fibre as these foods may be protective	As part of an annual health assessment	IIIC
Chemoprophylaxis	Following complete removal of adenoma at colonoscopy	Consider prophylactic aspirin use (in consultation with a specialist)	At time of diagnosis with colorectal adenoma	IIC

* Free, one-off FOBTs are offered to people turning 50, 55 or 65 years between January 2011 and December 2014. GPs can also refer patients for examination of faecal specimens for occult blood under Medicare Benefits Schedule (Items 66764, 66767 and 66770)

** Familial adenomatous polyosis (FAP); hereditary non-polyosis colorectal cancer (HNPCC)

Table 15.3. Risk categories for colorectal cancer based on family history

Category 1 Those at or slightly above average risk based on family history	Category 2 Those at moderately increased risk based on family history	Category 3 Those at potentially high risk based on family history
No personal history of colorectal cancer, colorectal adenomas or chronic inflammatory bowel disease and no confirmed close family history of colorectal cancer OR One first degree (parent, sibling, child) or second degree (aunt, uncle, niece, nephew, grandparent, grandchild) relative with colorectal cancer diagnosed at age 55 years or older OR Two relatives diagnosed with colorectal cancer at age 55 or older but on different sides of the family	One first degree relative with colorectal cancer diagnosed before the age of 55 years (without potentially high risk features as in category 3) OR Two first or one first and one second degree relative/s on the same side of the family with colorectal cancer diagnosed at any age (without potentially high risk features as in category 3)	Three or more first degree relatives or a combination of first and second degree relatives on the same side of the family diagnosed with colorectal cancer OR Two or more first or second degree relatives on the same side of the family diagnosed with colorectal cancer plus any of the following high risk features: • multiple colorectal cancers in a family member • colorectal cancer before the age of 50 years • a hereditary non-polyposis colorectal cancer (HNPCC) related cancer (endometrial, ovarian, stomach, small bowel, renal pelvis or ureter, biliary tract, brain cancer) OR • at least one first degree or second degree relative with a large number of adenomas throughout the large bowel (suspected familial adenomatous polyposis (FAP) OR • member of a family in which a gene mutation that confers a high risk of colorectal cancer has been identified

Early detection of prostate cancer

Recommendations: Prostate cancer prevention and detection				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Screening	Men at average risk	The decision to conduct prostate specific antigen (PSA) testing and digital rectal examination (DRE) should be individualised as population based screening is not recommended	Opportunistic	IIID
	Men at potentially higher risk due to family history		Opportunistic	IID

Chapter 16: Preventive health for the elderly

Osteoporosis

Recommendations: Osteoporosis				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Screening	All postmenopausal women and men over 50 years of age	Assess risk factors for osteoporosis (see Table 16.1)	As part of an annual health assessment	IIB
	People at moderate and high risk (see Table 16.1)	Recommend dual energy X-ray absorptiometry (DXA) to determine bone mineral density (BMD) If DXA confirms osteoporosis then manage as high risk	At baseline, then 2 yearly if needed	IA
Behavioural	All postmenopausal women and men over 50 at all levels of risk	Advise adequate dietary calcium intake: 1300 mg/day for women over 50 and men over 70; 1000 mg/day for men 50–70 years	Opportunistic and as part of an annual health assessment	IA
		Recommend smoking cessation (see Chapter 1: Lifestyle, section on smoking) Recommend maintenance of a healthy weight and body mass index (see Chapter 1: Lifestyle, section on overweight/obesity)		IA
		Advise adequate but safe sunlight exposure as a source of vitamin D*		GPP
	People at average and moderate risk (see Table 16.1)	Advise regular high intensity weightbearing exercise for postmenopausal women and older men aiming to achieve a target of 30 minutes/day on most days of the week (see Chapter 1: Lifestyle, section on physical activity)	Opportunistic and as part of an annual health assessment	1A
	People at high risk (see Table 16.1)	Advise regular low impact weightbearing exercise as part of a tailored program emphasising improved balance and flexibility	Opportunistic and as part of an annual health assessment	GPP

Chemoprophylaxis	All postmenopausal women and men over 50 at all levels of risk	Consider calcium supplementation for those with inadequate dietary intake Also consider vitamin D supplementation for those with inadequate sunlight exposure, particularly those in residential care	Opportunistic and as part of an annual health assessment	ID
	People at moderate and high risk (see Table 16.1)	Consider bisphosphonates† in conjunction with calcium and vitamin D supplementation	At diagnosis	IA
		Consider hormone replacement therapy to increase BMD and reduce fracture risk. Long term use is not recommended due to increased potential for harm, particularly increased breast cancer and cardiovascular disease risk		IA
		Consider strontium ranelate‡ See management guidelines for further information§		IIC
	People at high risk (see Table 16.1)	If the above medications are ineffective or contraindicated consider selective oestrogen receptor modulators (raloxifene) or parathyroid hormone (teriparatide)⊠ See management guidelines for further information§	At diagnosis	IIC
Environmental	People at moderate and high risk	Consider a multifactorial falls reduction program (see Falls recommendations below)	At diagnosis	ID

* Fair-skinned people in Australia can produce adequate vitamin D with sun exposure to their face, arms and hands for a few minutes either before 10 am or after 3 pm on most days of the week. In winter in southern parts of Australia this exposure may need to be longer. People with darker skin generally require more sun exposure[16]

† Bisphosphonates are subsidised under the PBS for the following conditions: concurrent use of oral corticosteroids (>7.5 mg/day) for 3 months or more and a BMD T-score of –1.5 or less, women aged ≥70 years with a BMD T-score of –2.5 or less, any person with a radiologically confirmed fracture due to minimal trauma

‡ Strontium is subsidised under the PBS for the following conditions: women aged >70 years with a BMD T-score of –3.0 or less, all people with a radiologically confirmed fracture due to minimal trauma

§ Refer to clinical practice guidelines for specific treatment recommendations[19]

⊠ Selective oestrogen receptor modulators and teriparatide are not subsidised under the PBS in the absence of a fracture due to minimal trauma. Recommend review the PBS for specific criteria

Table 16.1. Risk levels for osteoporosis

Average risk	Moderate risk	High risk
All postmenopausal women and men over 50 years of age	Age 60–70 years and any of the following: • family history of osteoporotic fractures • hypogonadism • prolonged glucocorticoid use (>3 months) • inflammatory conditions • malabsorption, eg. coeliac disease • hyperparathyroidism • hyperthyroidism • smoking • history of a fall • age over 70 years	• Previous fracture due to minimal trauma • Vertebral fractures

Falls

Recommendations: Falls prevention				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Screening	All people aged ≥50 years at all risk levels	Assess for risk factors for falls (see Table 16.2)	Annually	IA
	Residents of aged care facilities (RACFs)	RACF staff should screen for risk factors for falls to allow for an individualised fall prevention plan	6 monthly	IIB
	People with a past history of falls	Recommend a detailed assessment including the following: • cardiac and neurological disease assessment • medication review • assessment of vision, gait and balance • home environment assessment	Opportunistic	IA
	Those with falls due to carotid sinus hypersensitivity	Consider referral for pacemaker insertion	As needed	IIC
	Those with vision threatening cataract disease	Referral for cataract surgery	As needed	IIC
Behavioural	All people aged ≥50 years	Recommend exercise which may include the following modalities: • multicomponent group exercise (defined as targeting at least two of the following: strength, balance, endurance and flexibility) • tai chi as a group exercise • individually prescribed exercise to be carried out at home as per Australian physical activity guidelines (see Chapter 1: Lifestyle, section on physical activity)	As part of an annual health assessment	IA
	People at high risk	Recommend gait, balance and functional coordination exercises as part of a multifactorial intervention	As part of an annual health assessment	IIC
Chemoprophylaxis	People aged ≥50 years with known vitamin D deficiency or inadequate exposure to sunlight	Consider vitamin D supplementation (see also osteoporosis section)	As part of an annual health assessment	IC
	People at high risk taking medications	Review medications	At least annually and recommend 6 monthly for people taking four or more medications	IIB
		If taking psychotropic medications review the indications and consider gradual withdrawal if clinically appropriate	Opportunistic and as part of an annual health assessment	IIC
		Consider home medication review by a pharmacist	Annually or when there is a clinical need	IIB
	People in RACFs	Arrange medication review by a pharmacist	Annually	IIA
		Consider vitamin D supplementation	Ongoing	IA
Environmental	All people aged >50 years not at high risk	Home assessment and intervention is not recommended	N/A	IA
	People at high risk	Arrange for home assessment and intervention involving a multidisciplinary team	One-off for those with poor vision; opportunistic for all others	IIC
	People in RACFs who are at high risk of falls	Consider use of hip protectors	Opportunistic	IIB

Table 16.2. Risk factors for falls

- Increasing age
- Past history of falls
- Neurological conditions: stroke, Parkinson disease, peripheral neuropathy
- Multiple medications
- Psychotropic medications
- Impaired balance, gait and mobility
- Reduced muscle mass
- Visual impairment
- Cognitive impairment
- Depression
- Fear of falling
- Low levels of physical activity

Source: The RACGP 2009[24]

Dementia

Recommendations: Dementia				
Preventive intervention type	**Who is at risk?**	**What should be done?**	**How often?**	**Level/ strength of evidence**
Screening	Asymptomatic people	Dementia screening is not routinely recommended	N/A	IIIC
	People with symptoms such as memory loss or behaviour change, or if there are concerned family members	Consider administration of one of the following cognitive screening tests: • Mini Mental State Examination • General Practitioner Assessment of Cognition • Kimberley Indigenous Cognitive Assessment (See Resources)	Opportunistic	GPP
Behavioural	People with risk factors for dementia including excessive alcohol intake, tobacco smoking hypertension, diabetes, depression	Management of dementia risk factors is recommended for multiple health benefits, however, there is limited evidence that this leads to a reduction in dementia incidence	Opportunistic	GPP
Chemoprophylaxis	People without a confirmed diagnosis of dementia	Anti-dementia drugs are not recommended	N/A	1B

Resources

Chapter 1: Lifestyle

Smoking

Educational and quitting resources (Centre for Excellence in Indigenous Tobacco Control)
www.ceitc.org.au

Tobacco in Australia: a comprehensive review of the major issues in smoking and health in Australia (Cancer Council Victoria)
www.tobaccoinaustralia.org.au

Fagerström nicotine dependency test
www.health.wa.gov.au/smokefree/docs/Fagerstrom_Test.pdf

Detailed information on tobacco resources, publications, programs and projects (Australian Indigenous HealthInfoNet)
www.healthinfonet.ecu.edu.au/health-risks/tobacco

Brief intervention and self help resources to promote smoking cessation for Aboriginal people (SmokeCheck)
www.smokecheck.com.au/about/resources/index.php

Medicines to help Aboriginal and Torres Strait Islander people stop smoking: a guide for health workers
Email IndigenousTobacco@health.gov.au

Medicines to help you stop smoking: a guide for smokers
Email IndigenousTobacco@health.gov.au

Supporting smoking cessation: a guide for health professionals (RACGP)
www.racgp.org.au/guidelines/smokingcessation

National Tobacco Campaign including 'Break the Chain' campaign for Aboriginal and Torres Strait Islander people and Quitline (proactive telephone support) information and referral forms (Australian Government)
www.quitnow.gov.au/internet/quitnow/publishing.nsf/Content/home

Closing the Gap clearinghouse (AIHW)
www.aihw.gov.au/closingthegap/documents/resource_sheets/ctgc-rs04.pdf

Quitting resources (NSW Health)
www.health.nsw.gov.au/PublicHealth/healthpromotion/tobacco/cessation.asp

National youth smoking website
www.OxyGen.org.au

Quitcoach
www.quitcoach.org.au

Overweight/obesity

Growth charts (Centers for Disease Control and Prevention)
www.cdc.gov/growthcharts/cdc_charts.htm

BMI charts (WHO)
children 5–19 years
www.who.int/growthref/who2007_bmi_for_age/en/index.html
children under 5 years
www.who.int/childgrowth/standards/bmi_for_age/en/index.html

Helpful tips for measuring waist circumference (Australian Government)
www.health.gov.au/internet/abhi/publishing.nsf/Content/How+do+I+measure+myself-lp

Alcohol

Quick reference guide to the treatment of alcohol problems: companion document to the guidelines for the treatment of alcohol problems (Australian Government)
www.alcohol.gov.au/internet/alcohol/publishing.nsf/Content/treat-quick

Guidelines for safer alcohol use (NHMRC)
www.health.gov.au/internet/alcohol/publishing.nsf/Content/standard

AUDIT tool (Northern Territory Government)
www.health.nt.gov.au/library/scripts/objectifyMedia.aspx?file=pdf/63/68.pdf&siteID=1&str_title=Alcohol%20Screen%20(AUDIT)%20Tool.pdf

AUDIT-C tool
www.cqaimh.org/pdf/tool_auditc.pdf

IRIS tool (Queensland Government)
www.health.qld.gov.au/atod/prevention/iris.asp

Talking about alcohol with Aboriginal and Torres Strait Islander patients flipchart (the flipchart includes tear off prescription pads)
www.alcohol.gov.au

Standard drink definition and calculator
www.health.gov.au/internet/alcohol/publishing.nsf/Content/standard

Gambling

'Let's talk about gambling' (Aboriginal Health and Medical Research Council)
www.aboriginalgamblinghelp.org.au

Gambling Help Online
Counselling, information and support service for problem gambling issues, includes contact details for local face-to-face counselling and support
www.gamblinghelponline.org.au

National problem gambling telephone counselling services
National Problem Gambling Hotline: 1800 858 858
Gamblers Anonymous: 1800 002 210

Problem Gambling Research and Treatment Centre
Guidelines for screening, assessment and treatment in problem gambling
www.med.monash.edu.au/sphc/pgrtc/guideline/index.html

Chapter 2: Child health

Immunisation

Catch-up immunisation calculator
www.health.sa.gov.au/immunisationcalculator

Australian Immunisation Handbook
www.health.gov.au/internet/immunise/publishing.nsf/content/handbook-home

Anaemia

Iron deficiency anaemia assessment, prevention and control: a guide for programme managers (WHO)
www.who.int/nutrition/publications/en/ida_assessment_prevention_control.pdf

Childhood kidney disease

Guidelines for community control of scabies, skin sores and crusted scabies in the Northern Territory (Northern Territory Department of Health and Families)
www.health.nt.gov.au/library/scripts/objectifyMedia.aspx?file=pdf/10/83.pdf&siteID=1&str_title=Healthy+Skin+Program.pdf

Chapter 3: The health of young people

Illicit drug use

CRAFFT tool for clinicians
www.ceasar-boston.org/CRAFFT/pdf/CRAFFT_English.pdf

CRAFFT tool for self administration
www.ceasar-boston.org/CRAFFT/pdf/CRAFFT_SA_English.pdf

Substances and choices scale manual
www.sacsinfo.com/docs/SACSUserManualNoPrint.pdf

Substances and choices scale questionnaires
www.sacsinfo.com/Questionnaires.html

IRIS (Indigenous risk impact screen) tool and brief intervention. The screening tool
is made available only after participation in a training workshop
www.health.qld.gov.au/atod/prevention/iris.asp

Chapter 4: Dental health

Lift the lip and see my smile brochures (NSW Government)
www.health.nsw.gov.au/resources/pubs/orderform_pdf.asp

Information pamphlets for oral health and smoking, erosion, diabetes, pregnancy (Dental Practice Education Research Unit)
www.arcpoh.adelaide.edu.au/dperu/special

General oral health promotion information (various sources)
www.healthinfonet.ecu.edu.au/health-resources/promotion-resources
www.adaq.com.au
www.dhsv.org.au/oral-health-resources/guides-and-resources/
www.adelaide.edu.au/oral-health-promotion

Learning modules on oral health for health professionals (Smiles for Life)
www.smilesforlifeoralhealth.com

Chapter 5: Rheumatic heart disease

Updated Australian guidelines for diagnosis and management of ARF and RHD

(Rheumatic Heart Disease Australia)
www.rhdaustralia.org.au

Rheumatic heart disease: all but forgotten. A 60 minute program outlining strategies for the treatment, control and eradication of ARF and RHD (Rural Health Education Foundation)
www.rhef.com.au/programs/program-1/?program_id=37

Chapter 6: Eye health

Trachoma and trichiasis

Full report on National Indigenous Eye Health Survey
www.eyefoundation.org.au/projects/research-projects/89-minum-barreng-project

Australian guidelines for the management of diabetic retinopathy (NHMRC)
www.nhmrc.gov.au/_files_nhmrc/file/publications/synopses/di15.pdf

Patient factsheets on diabetic retinopathy (CERA)
www.cera.org.au/uploads/CERA_factsheet_DiabeticRetinopathy.pdf

Guidelines for the public health management of trachoma in Australia (Australian Government)
www.health.gov.au/internet/main/publishing.nsf/Content/1EBA6A6D1AEB9569CA2571570008FB93/$File/Trachoma2.pdf

At cost vision screening kits including E-test charts, which are suitable for primary care including remote use (CERA)
www.cera.org.au/our-work/resources/vision-screening-tools

Grading card showing the simplified trachoma grading system, which includes high quality clinical pictures of trachoma and trichiasis (2-sided), available free (WHO)
www.who.int/blindness/publications/trachoma_english.jpg

Comprehensive practical documents including control program, surgery and community support guides (WHO)
www.who.int/blindness/causes/trachoma_documents/en

Chapter 7: Hearing loss

Recommendations for clinical care guidelines on the management of otitis media in Aboriginal and Torres Strait Islander populations (Darwin Otitis Guideline Group in collaboration with the Office for Aboriginal and Torres Strait Islander Health Otitis Media Technical Advisory Group)
www.health.gov.au/internet/main/publishing.nsf/Content/64B3D2636590623FCA25722B0083428D/$File/om_pdf_version.pdf

Therapeutic Guidelines: Antibiotics
www.tg.org.au/?sectionid=41

Noise destroys your hearing (Australian Hearing)
www.hearing.com.au/upload/media-room/Noise-destroys-your-hearing.pdf

Chapter 8: Sexual health and bloodborne viruses

Bloodborne viral and sexually transmissible infections in Aboriginal and Torres Strait Islander people: surveillance and evaluation report 2011 (The Kirby Institute)
www.med.unsw.edu.au/NCHECRweb.nsf/resources/2011/$file/KIRBY_ATSIP2011.pdf

Sexual health clinical management guidelines (Queensland Government)

www.health.qld.gov.au/sexhealth/documents/cm_guidelines.pdf

Clinical guidelines for the management of sexually transmissible infections among priority populations (RACGP)
www.stipu.nsw.gov.au/pdf/STI_Rx_Priority_Populations.pdf

Guidelines for managing sexually transmissible infections
http://silverbook.health.wa.gov.au/Default.asp?PublicationID=1&SectionID=74

Management of genital Chlamydia trachomatis infection: a national clinical guideline (Scottish Intercollegiate Guidelines Network)
www.sign.ac.uk/pdf/sign109.pdf

Sexually transmissible infections: UK national screening and testing guidelines
www.bashh.org/documents/59/59.pdf

Drug misuse: psychosocial interventions, national clinical practice guideline number 51 (National Collaborating Centre for Mental Health)
www.nice.org.uk/nicemedia/pdf/CG51FullGuideline.pdf

Australasian contact tracing manual (ASHM)
http://ctm.ashm.org.au/Default.asp?PublicationID=6&ParentSectionID=P6&SectionID=733

HIV, viral hepatitis and STIs: a guide for primary care (ASHM)
www.ashm.org.au/images/publications/monographs/HIV_viral_hepatitis_and_STIs_a_guide_for_primary_care/hiv_viral_hepatitis_and_stis_whole.pdf

Hepatitis B virus testing and interpreting results (ASHM)
www.ashm.org.au/images/publications/monographs/b%20positive/b_positive-chapter_3.pdf

Counsellor's guide to working with alcohol and drug users
www.dao.health.wa.gov.au/InformationandResources/Publicationsandresources/Healthprofessionals.aspx

Drug and alcohol psychosocial interventions professional practice guidelines (New South Wales Department of Health)
www.health.nsw.gov.au/policies/gl/2008/GL2008_009.html

Drug misuse: psychosocial interventions, national clinical practice guideline number 51 (National Collaborating Centre for Mental Health)
www.nice.org.uk/guidance/CG51/NICEGuidance

Guidelines for the psychosocially assisted pharmacological treatment of opioid dependence (World Health Organization)
http://whqlibdoc.who.int/publications/2009/9789241547543_eng.pdf

Chapter 9: Antenatal care

Guidelines for management of diabetes in pregnancy (Australasian Diabetes in Pregnancy Society)
www.ranzcog.edu.au/publications/statements/coll-end-statements/ADIPS-gdm-management-guidelines

Screening guideline for gestational diabetes (Kimberley Aboriginal Medical Services Council)
http://resources.kamsc.org.au/downloads/cd_dip.pdf

Guidelines for treatment of vitamin D deficiency (King Edward Memorial Hospital)
www.kemh.health.wa.gov.au/development/manuals/O&G_guidelines/sectionb/1/b1.1.9.pdf

Dietary guidelines for Australian adults (NHMRC)
www.gofor2and5.com.au/DataStore/files/pdf/n33.pdf

Iodine, public statement: iodine supplementation for pregnant and breastfeeding women (NHMRC)
www.nhmrc.gov.au/_files_nhmrc/publications/attachments/new45_statement.pdf

Clinical practice guidelines on depression and related disorders in the perinatal period (*beyond blue*)
www.beyondblue.org.au/index.aspx?link_id=6.1246

Australian guidelines to reduce health risks from drinking alcohol (NHMRC)
www.nhmrc.gov.au/_files_nhmrc/publications/attachments/ds10-alcohol.pdf

Chapter 10: Mental health

Prevention of suicide

Australian Indigenous Mental Health (Royal Australian and New Zealand College of Psychiatrists)
http://indigenous.ranzcp.org

Working together: Aboriginal and Torres Strait Islander mental health and wellbeing principles and practice
www.ichr.uwa.edu.au/files/user5/Working_Together_book_web.pdf

Chapter 11: Respiratory health

Asthma

British Guideline on the Management of Asthma (British Thoracic Society, Scottish Intercollegiate Guidelines Network)
www.sign.ac.uk/pdf/sign101.pdf

Multiple resources including guides to asthma management and spirometry (National Asthma Council Australia)
www.nationalasthma.org.au

International evidence based guidelines and clinical resources (Global Initiative for Asthma)
www.ginasthma.org

Chronic obstructive pulmonary disease

Screening for chronic obstructive pulmonary disease using spirometry
www.uspreventiveservicestaskforce.org/uspstf/uspscopd.htm

The COPD-X Plan. Australian and New Zealand guidelines for the management of chronic obstructive pulmonary disease
www.copdx.org.au

Inhaler technique in adults with asthma or COPD
www.clinicalguidelines.gov.au/search.php?pageType=2&fldglrID=1564&

Chronic obstructive pulmonary disease: diagnosis and management of acute exacerbations
www.guideline.gov/syntheses/synthesis.aspx?id=16404

Diagnosis and management of stable chronic obstructive pulmonary disease

www.guideline.gov/syntheses/synthesis.aspx?id=16403

Chronic obstructive pulmonary disease: pulmonary rehabilitation
www.guideline.gov/syntheses/synthesis.aspx?id=16423

Management of chronic obstructive pulmonary disease in adults in primary and secondary care (partial update)
www.guideline.gov/content.aspx?id=23860&search=asthma+and+prevention

Chronic obstructive pulmonary disease
http://guidance.nice.org.uk/CG101

Bronchiectasis and chronic suppurative lung disease

Resources for health professionals (Lung Foundation)
www.lungfoundation.com.au

Lung InfoNet
www.lunginfonet.org.au

Chapter 12: Cardiovascular disease prevention

For absolute risk calculation consult:

The Australian cardiovascular risk charts (see *Appendix 1*) and
www.heartfoundation.org.au/SiteCollectionDocuments/aust-cardiovascular-risk-charts.pdf

Calculators embedded in clinical software programs

Framingham Risk Equation calculator
www.cvdcheck.org.au

For blood pressure and lipid management guidelines consult:

Guidelines for the management of absolute cardiovascular disease risk:
www.heartfoundation.org.au/SiteCollectionDocuments/Guidelines-management-absolute-cardiovascular-disease-risk.pdf

For oral anticoagulant management recommendations consult:

Therapeutic Guidelines: Cardiovascular.

Chapter 13: Chronic kidney disease prevention and management

Chronic kidney disease management in general practice, 2nd edn (Kidney Health Australia)

Caring for Australians with Renal Impairment guidelines
www.cari.org.au

Chapter 14: Type 2 diabetes prevention and early detection

AUSDRISK tool:
www.ausdrisk.com.au

www.ausdrisk.org.au/Portals/O/Risk-test.pdf

Chapter 15: Prevention and early detection of cancer

Prevention of cervical cancer

Screening to prevent cervical cancer: guidelines for the management of asymptomatic women with screen detected abnormalities (NHMRC)
www.nhmrc.gov.au/publications/synopses/wh39syn.htm

The Australian Immunisation Handbook (NHMRC): HPV chapter
www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/Handbook-hpv

Prevention and early detection of liver (hepatocellular) cancer

The Australian immunisation handbook (NHMRC): hepatitis B chapter
www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/Handbook-hepatitisb

Australia and New Zealand chronic hepatitis B recommendations (Gastroenterological Society of Australia and Digestive Health Foundation)
www.gesa.org.au/files/editor_upload/File/Professional/CHB.pdf

HIV, viral hepatitis and STIs: a guide for primary care (Australasian Society for HIV Medicine: further resources will be available through ASHM in 2012, including information on access to new treatment options for some people with chronic hepatitis C infection)
www.ashm.org.au/default2.asp?active_page_id=133

Prevention and early detection of breast cancer

Family cancer clinics (Cancer Australia)
http://canceraustralia.nbocc.org.au/fraboc/clinic.html

Online calculator, familial risk assessment – breast and ovarian cancer (National Breast and Ovarian Cancer Centre)
www.nbocc.org.au/fraboc/ or **http://canceraustralia.nbocc.org.au/fraboc**

Advice about familial aspects of breast cancer and epithelial ovarian cancer (National Breast and Ovarian Cancer Centre
www.nbocc.org.au/view-document-details/bog-advice-about-familial-aspects-of-breast-cancer-and-epithelial-ovarian-cancer

Advice for women seeking advice about risk reducing medication (Cancer Australia)
http://canceraustralia.nbocc.org.au/view-document-details/rrm-risk-reducing-medication-for-women-at-increased-risk-of-breast-cancer-due-to-family-history

Prevention and early detection of colorectal (bowel) cancer

Guidelines for the prevention, early detection and management of colorectal cancer used to determine a person's risk of colorectal cancer based on family history
www.nhmrc.gov.au/publications/synopses/cp106/cp106syn.htm or summary at www.cancer.org.au/file/HealthProfessionals/ClinicalpracticeguidelinesJuly2008.pdf

Familial aspects of bowel cancer: a guide for health professionals
www.health.gov.au/internet/screening/publishing.nsf/Content/1F35A75DC194E59CCA2574EB007F7532/$File/familial-guide.pdf

Early detection of prostate cancer

The early detection of prostate cancer in general practice: GP/patient show card
www.cancerqld.org.au/content/Document/The%20Early%20Detection%20of%20Prostate%20Cancer.pdf

Let sleeping dogs lie? What men should know before getting tested for prostate cancer
http://ses.library.usyd.edu.au/bitstream/2123/6835/3/Let-sleeping-dogs-lie.pdf

Chapter 16: Preventive health for the elderly

Osteoporosis

Fracture risk calculator
www.fracturerisk calculator.com

RACGP guidelines
www.racgp.org.au/Content/NavigationMenu/ClinicalResources/RACGPGuidelines/osteoporosis1/RACGP_Osteo_guideline.pdf

RACGP algorithm for the detection, prevention and treatment of osteoporosis
www.racgp.org.au/Content/NavigationMenu/ClinicalResources/RACGPGuidelines/osteoporosis1/OP_Algorithm.pdf

Guidelines for exercise in preventing and treating osteoporosis
www.osteoporosis.org.au/health-professionals/research-position-papers/#makebreak

Risks and benefits of sun exposure
www.osteoporosis.org.au/images/stories/documents/research/Sunexposure_OA_2007.pdf

Dementia

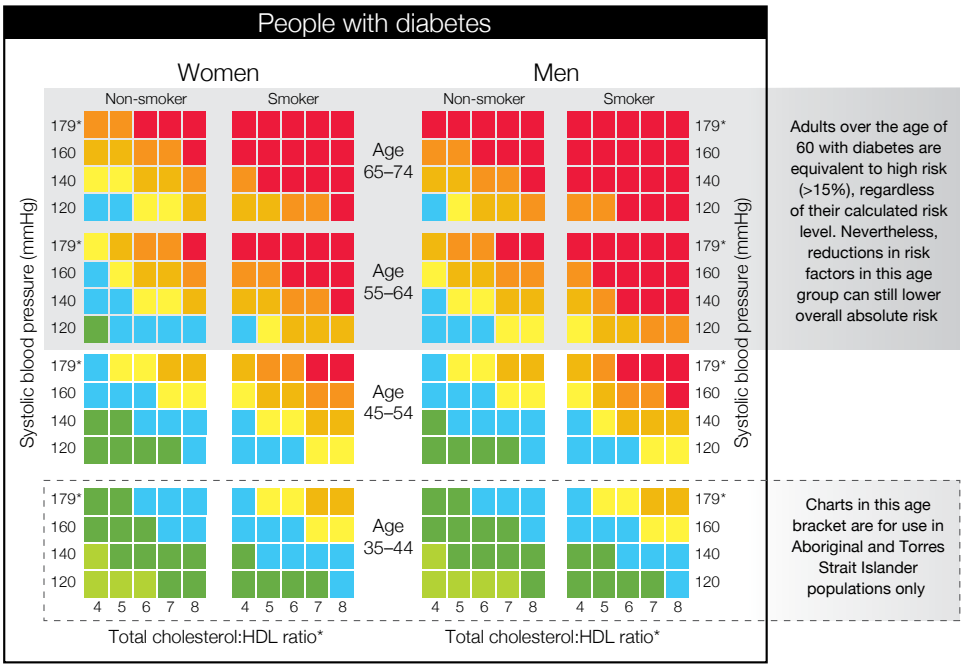
Care of patients with dementia in general practice (The Royal Australian College of General Practioners and NSW Health)
www.racgp.org.au/Content/NavigationMenu/RemovedArchived/CareofPatientswithDementia/20060413dementiaguidelines.pdf

Kimberley Indigenous Cognitive Assessment
www.wacha.org.au/kica.html

General Practice Assessment of Cognition
www.gpcog.com.au

Appendix 1

Australian cardiovascular risk charts



*In accordance with Australian guidelines, patients with systolic blood pressure ≥180 mmHg, or a total cholesterol of >7.5 mmol/L, should be considered at increased absolute risk of CVD.

Risk level for 5 year cardiovascular (CVD) risk

High risk	Moderate risk	Low risk
≥30%	10–15 %	5–9%
25–29%		<5%
20–24%		
16–19%		

Notes: The risk charts include values for SBP alone, as this is the most informative of conventionally measured blood pressure parameters for cardiovascular risk.

CVD refers collectively to coronary heart disease (CHD), stroke and other vascular disease including peripheral arterial disease and renovascular disease.

Charts are based on the NVDPA's *Guidelines for the assessment of absolute cardiovascular disease risk* and adapted with permission from New Zealand Guidelines Group. New Zealand Cardiovascular Guidelines Handbook: A Summary Resource for Primary Care Practitioners. Second edition. Wellington, NZ: 2009. www.nzgg.org.nz.

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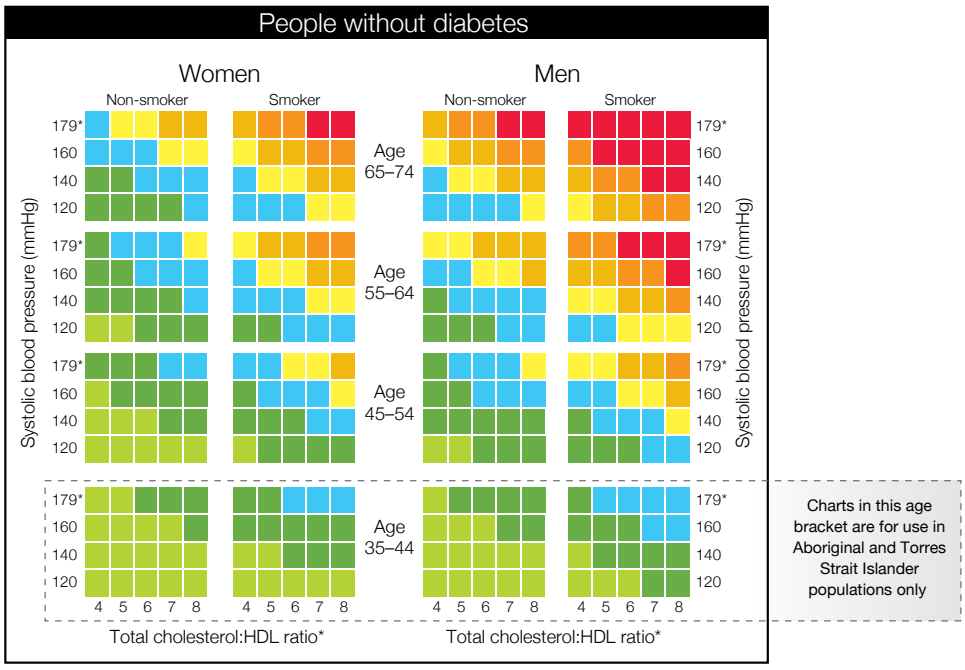

* In accordance with Australian guidelines, patients with systolic blood pressure ≥180 mmHg, or a total cholesterol of >7.5 mmol/L, should be considered at increased absolute risk of CVD.

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25–29%		<5%
20–24%		
16–19%		

How to use the risk charts

1. Identify the table relating to the person's diabetes status, sex, smoking history and age. 'Smoker' is defined as either current daily cigarette smoker or former smoker who has quit within the previous 12 months. The charts should be used for all adults aged 45–74 years (and all Aboriginal and Torres Strait Islander adults aged 35 years and older) without known history of CVD or already known to be at high risk.

2. Within the chart, choose the cell nearest to the person's age, systolic blood pressure (SBP) and total cholesterol (TC):HDL ratio. For example, the lower left cell contains all non-smokers without diabetes who are 35–44 years and have a TC:HDL ratio of less than 4.5 and a SBP of less than 130 mm Hg.

- SBP (mean of two readings on two occasions).
- Total cholesterol/high-density lipoprotein cholesterol (HDL-C) ratio (ensure correct ratio is used).

3. The colour of the cell that the person falls into provides their 5-year absolute cardiovascular risk level (see legend above for risk category). For people who fall exactly on a threshold between cells, use the cell corresponding to higher risk. The risk calculator may underestimate cardiovascular risk in these groups:

- Aboriginal and Torres Strait Islander adults
- adults with diabetes aged 60 years or less
- adults who are overweight or obese
- socioeconomically deprived groups.

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Appendix 2

Abbreviations

ACR	albumin-creatinine ratio
AHW	Aboriginal and Torres Strait Islander health worker
APSGN	acute post-streptococcal glomerulonephritis
ARF	acute rheumatic fever
BMD	bone mineral density
BMI	body mass index
BPG	benzathine penicillin G
CHD	coronary heart disease
CKD	chronic kidney disease
COPD	chronic obstructive pulmonary disease
CSLD	chronic suppurative lung disease
CVD	cardiovascular disease
DALYS	disability adjusted life years
DXA	dual energy X-ray absorptiometry
eGFR	estimated glomerular filtration rate
ESRD	end stage renal disease
ETS	environmental tobacco smoke
FOBT	faecal occult blood test
FPG	fasting plasma glucose test
FRE	Framingham risk equation
FVU	first void urines
GAS	group A streptococcal
GFR	glomerular filtration rate
GPP	good practice points
HAV	hepatitis A virus
HBV	hepatitis B virus
HCC	hepatocellular carcinoma
HCV	hepatitis C virus
HIV	human immunodeficiency virus
HPV	human papilloma virus
HRCT	high resolution chest CT scans
ICS	inhaled corticosteroids
IDA	iron deficiency anaemia
IFG	impaired fasting glucose
IGT	impaired glucose tolerance
IPD	invasive pneumococcal disease
IUDs	intrauterine devices
LABAs	long acting beta agonists
LARC	long acting reversible contraception
MMN	multiple micronutrients
MN	micronutrients
MRI	magnetic resonance imaging
NAAT	nucleic acid amplification tests
NACCHO	National Aboriginal Community Controlled Health Organisation
NHMRC	National Health and Medical Research Council
NICE	National Institute for Health and Clinical Excellence
NRT	nicotine replacement therapy
NZGG	New Zealand Guidelines Group
OCP	oral contraceptive pill
OGTT	oral glucose tolerance test
PBS	Pharmaceutical Benefits Scheme
PCR	protein-creatinine ratio
PCV	pneumococcal conjugate vaccine
PEP	post-exposure prophylaxis
PIP	Practice Incentives Program
PSA	prostate specific antigen
PVD	peripheral vascular disease
RACGP	[The] Royal Australian College of General Practitioners
RBG	random blood glucose test
RHD	rheumatic heart disease
SIGN	Scottish Intercollegiate Guidelines Network
SOLVS	self administered low vaginal swabs
STIs	sexually transmissible infections
TIA	transient ischaemic attacks
USPTF	US Preventive Services Task Force
UTI	urinary tract infection
VUR	vesicoureteric reflux
WHO	World Health Organization