The Royal Australian College of General Practitioners

RACGP Clinical Improvement Unit
Practice, Policy and Innovation Department

RACGP clinical indicators for Australian general practice

June 2012

A proposed set of clinical indicators for stakeholder comment by 30 July 2012

We recommend you print this consultation document as a reference for completing our online survey questions

Acknowledgements

The RACGP acknowledges the expert contributions made by members of the RACGP Clinical Indicator Taskforce to the development of this provisional set of clinical indicators for Australian general practice.

RACGP Clinical Indicator Taskforce

- Dr Evan Ackermann, Chair National Standing Committee - Quality Care; Taskforce Chair
- Professor Moyez Jiwa, Member National Standing Committee – Research; Member National Standing Committee – Standards for General Practices
- Professor Paul Glasziou, Member National Standing Committee – Quality Care
- Professor Mark Harris, Member National Standing Committee – Quality Care
- Dr Lynton Hudson, Former Chair National Standing Committee – Standards for General Practices
- Dr John Bennett, Chair National Standing Committee - e-Health

RACGP Project Team

- Ms Josephine Raw, General Manager, Practice, Policy and Innovation
- Ms Sharon Benson, Project Manager, Practice, Policy and Innovation
- Mr Stephan Groombridge, Program Manager, Quality Care

Table of Contents

Executive summary

The Royal Australian College of General Practitioners (RACGP) recently endorsed a provisional set of 22 clinical indicators for Australian general practice for stakeholder comment. The proposed indicators deal exclusively with the safety and quality of clinical care provided by Australian general practices. The indicators are complemented by existing practice indicators that form the RACGP *Standards for general practices* (4th edition) and by patient experience indicators within these *Standards*.

Subject to stakeholder feedback and subsequent pilot testing in the field, it is envisaged general practices will use the clinical indicators on a voluntary basis to monitor and improve the quality of their clinical services.

No single group of indicators will encompass safety and quality in general practice. However, this provisional set of 22 clinical indicators – the 'dashboard set' - has been chosen because they cover common presentations, are supported by evidence, are important for safety and quality, and should pose minimal administrative burden on general practices.

The Australian Commission on Safety and Quality in Healthcare(ACSQHC) is also developing practice level indicators of safety and quality in primary healthcare. However, the Commission has not required general practice to be included in the scope of this project on the understanding that the RACGP is already developing clinical indicators for general practice.

Proposed RACGP dashboard set of clinical indicators

No	Description
1	Practice infrastructure to support safety and quality of patient care
2	Practice policy on prescribing addictive medication
3	Practice system for triaging patients with acute illness
4	Practice system to support palliative and end-of-life care
5	Assessment of absolute cardiovascular risk
6	Screening for smoking status
7	Screening for alcohol consumption
8	Screening for cervical cancer
9	Childhood immunisation rates
10	Screening for chlamydia
11	Improving clinical documentation of chronic kidney disease
12	Screening for retinopathy in patients with diabetes
13	Screening for nephropathy in high risk patients
14	Anti-platelet/anticoagulant therapy in patients with coronary artery disease
15	Management of left ventricular failure
16	Lipid management in coronary artery disease
17	Patient access to cognitive behaviour therapy
18	Antibiotic stewardship
19	Audit of patients newly diagnosed with malignancy
20	Use of radiology in low back pain
21	Reduction of tobacco consumption in patients with COPD
22	Intervention to reduce benzodiazepine use in patients aged 60 years or more

Background

The RACGP has a proud history of leading safety and quality initiatives in general practice. Through the National Standing Committee – Quality Care and the National Standing Committee – Standards for General Practices, the RACGP has developed a range of tools and resources to assist general practitioners in providing safe, high quality care.

The aim of this project is to deliver an initial set of clinical indicators that support the delivery of safe, high quality care for patients.

The adoption of clinical indicators will complete a comprehensive suite of safety and quality indicators for general practice comprising:

1. Practice indicators within the RACGP *Standards for general practices* (4th edition)
2. Patient experience indicators within the RACGP *Standards for general practices* (4th edition)
3. Clinical indicators comprising a dashboard set of 22 clinical indicators for Australian general practice.

RACGP clinical indicator policy

In 2009, the RACGP Council endorsed a policy on the use of clinical indicators[1] to support safe, high quality healthcare. When used appropriately, clinical indicators assist in understanding and evaluating what is being done to provide care and treatment.

An indicator is defined by the RACGP policy as 'a measure, process, or outcome used to judge a particular situation and indicate whether the care delivered was appropriate'[2]. The policy describes how indicators 'guide the assessment of healthcare processes and outcomes and act as tools to flag patient care'[3].

While clinical indicators alone do not improve healthcare, they are a key component of a broad quality improvement system.

RACGP Standards

The RACGP *Standards for general practices* (4th edition) include a criterion on clinical governance (3.1.3) which highlights the importance of general practices having 'clear lines of accountability and responsibility for encouraging improvement in safety and quality of clinical care'. The dashboard set of clinical indicators is a practical, evidence based tool designed to help general practices achieve such improvements.

Development of RACGP clinical indicators

In 2011, the RACGP established an expert Taskforce chaired by Dr Evan Ackermann Chair of the National Standing Committee – Quality Care, to develop a core set ('dashboard set') of clinical indicators for Australian general practice.

The College's objective for developing a core set of clinical indicators was to provide a practical, evidence based tool that would:

- support general practices to establish, implement and maintain reasonable processes
  - to improve the quality of their clinical services and
  - improve and monitor the health and wellbeing of their patients[4]
- support general practitioners to monitor the safety and quality of their general practices.

1. RACGP. Clinical indicators and the RACGP. South Melbourne: RACGP, 2009. Available at www.racgp.org.au/policy/Clinical_indicators_and_the_RACGP_Policy.pdf. [Accessed 24 February 2011].
2. MediLexicon Medical Dictionary: Clinical indicators. Available at www.medilexicon.com/medicaldictionary.php. [Accessed 24 February 2011].
3. Mainz J. Defining and classifying clinical indicators for quality improvement. Int J Qual Health 2003;15:523–30.

[4] Adapted from Queensland Health Quality and Complaints Act – Section 20 Duties of the provider – available at http://www.legislation.qld.gov.au/LEGISLTN/ACTS/2006/06AC025.pdf

After scanning world literature, existing indicator sets and contemporary health issues, the Taskforce has developed a dashboard set of 22 clinical indicators. The initial set of indicators has been chosen on the basis of:

- available scientific evidence (see Appendix B)
- suitability within the diverse scope of Australian general practice
- minimal administrative burden
- community expectations of safety and quality in general practice
- concordance with current priorities in Australian primary care.

The indicators were not selected for performance measurement or as accreditation requirements but to support clinical governance within the practice.

No single group of indicators will encompass safety and quality for the wide range of conditions managed in general practice. However, this provisional set of 22 clinical indicators has been chosen because the indicators cover common presentations, are supported by evidence, are important for safety and quality, and should pose a minimal administrative burden on general practices.

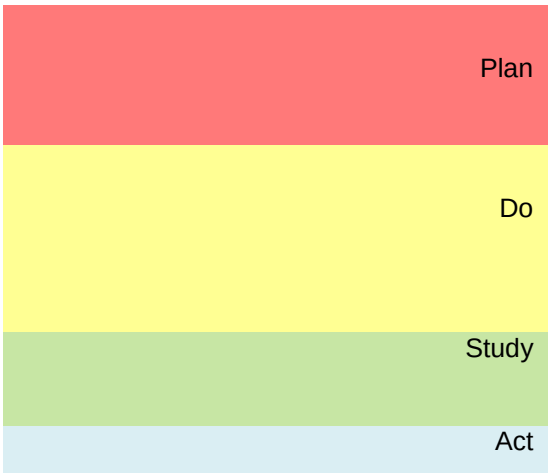
The development of additional clinical indicators is envisaged in the future, for specific subsets of general practice care (eg Aboriginal and Torres Strait Islander health; addiction medicine; diabetes care).

The Australian Commission on Safety and Quality in Healthcare(ACSQHC) is also undertaking a project to develop practice level indicators of safety and quality in primary healthcare. However, general practice is not within the scope of the Commission's project based on the development of clinical indicators for general practice by the RACGP.

Framework for RACGP clinical indicators

The RACGP Taskforce identified 10 separate and clinically relevant categories for clinical practice indicators:

1. Quality and safety infrastructure
2. Clinical policy
3. Organisation of services
4. Preventive health and screening
5. Clinical documentation
6. Clinical assessment
7. Clinical management
8. Prescribing safety*
9. Clinical practice review.
10. Populations for intervention



The structuring of clinical indicators in this manner correlates with the RACGP's plan, do, study, act (PDSA) quality improvement cycle.

*Note: there are no clinical indicators within this category in the provisional set of RACGP clinical indicators.

Voluntary implementation of RACGP clinical indicators

The implementation of the RACGP clinical indicators will be voluntary. Each practice will need to make their own decisions as to which indicators they will implement depending on (for example):

- size, locality and community served by the practice
- complexity of the services provided by the practice
- what would be considered reasonable by professional peers and patients.

Practices are encouraged to use a clinical audit tool (or similar) to assist with the implementation of particular clinical indicators. Data should be collected on a regular basis to support effective quality improvement activities.

The RACGP intends to produce a template 'quality report' which practices can utilise to record and monitor their results over time. A sample is provided in Appendix A.

Consultation process

The RACGP is issuing an open invitation to RACGP members to comment on the proposed set of 22 clinical indicators for Australian general practice.
The RACGP will also invite selected external stakeholders to comment on the clinical indicators.
Comments are due by Monday 30 July 2012 and may be submitted by completing our online survey.
We recommend you print this consultation document as a reference for completing our online survey questions on each of the proposed clinical indicators. At the end of the survey, there is an opportunity for you to provide general comments as well as / instead of comments on each separate indicator.

Pilot Test

Once the proposed clinical indicators have been refined in line with feedback from the consultation process, the RACGP will be seeking general practices willing to participate in a pilot test of the indicators later in 2012.

Expressions of interest may be emailed to clinicalindicators@racgp.org.au.

Terminology

This is a summary of the terminology used in the provisional set of 22 clinical indicators.

Active patient: a patient who has attended the practice / service three or more times in the past 2 years

Category: one of 10 clinically relevant areas of general practice being:

1. Quality and safety infrastructure
2. Clinical policy
3. Organisation of services
4. Preventive health and screening
5. Clinical documentation
6. Clinical assessment
7. Clinical management
8. Prescribing safety
9. Clinical practice review
10. Populations for intervention.

Clinical audit tool: a tool for collecting and analysing clinical data. The RACGP will explore improved functionality for a clinical audit tool to facilitate the implementation of clinical indicators.

Level of evidence: Most of the evidence supporting the clinical indicators has been sourced from NHMRC clinical guidelines where levels of evidence and grades of recommendation are defined according to the NHMRC *levels of evidence and grades for recommendations for developers of guidelines*. Some evidence has been sourced from the Scottish Intercollegiate Guidelines Network (SIGN) where the grade of recommendation relates to the strength of the evidence on which the recommendation is based not the clinical importance of the recommendation (see Appendix B).

Implementation: practical points about the implementation or interpretation of a particular clinical indicator.

Yes/no/not applicable indicator: a practice will simply need to answer yes/no/not applicable to demonstrate whether they meet the indicator.

Numerator/Denominator: a practice will need to calculate a percentage or ratio based on a defined numerator and denominator to demonstrate how they meet the indicator. The interpretation of this calculation will be dependent on individual circumstances.

Indicator 1: Practice infrastructure to support safety and quality of patient care

Category	Quality and safety infrastructure
Clinical indicator	Our practice: a) has a designated clinician who has clear lines of responsibility and accountability for encouraging improvement in the safety and quality of clinical care b) has clinical risk management systems to enhance the safety and quality of clinical care c) downloads pathology results in HL7 format d) uses a clinical audit or similar tool for evaluating clinical care.
Rationale	The Australian Safety and Quality Framework for Healthcaresays safe, high quality healthcareis always consumer centred, driven by information and organised for safety (1). Among other things this means safety and quality data are collected, analysed and fed back for improvement and safety is a central feature of how healthcarefacilities are run and how staff work. The RACGP defines clinical governance as a framework through which clinicians and health service managers are jointly accountable for patient safety and quality care (2). The intent of clinical governance is accountability to patients to prevent harm or manage harm when it occurs, including the disclosure of harm to patients by people who care for them. The second area of accountability is to the clinical team to provide a safe, supportive and just work place and culture. In a recent study, Phillips et al (3) explored the link between quality and clinical governance in primary healthcare and found seven key areas to support clinical governance: ensuring clinical competence, clinical audit, patient involvement, education and training, risk management, use of information and staff management. These areas are attainable through the RACGP *Standards for general practices* (4th edition), clinical indicators, and key infrastructure within the practices. A recent Australian systematic review (4) of clinical governance tools found supporting evidence that at an individual service level, practice-determined organisation of quality management, using targeted feedback to healthcare workers with supported reflection can improve quality of care. As part of the quality infrastructure, the RACGP *Standards* require practices to have a designated clinician who has clear lines of responsibility and accountability for encouraging improvement in safety and quality of clinical care. **Clinical systems** The RACGP *Standards* (4th edition) describe appropriate clinical risk management systems as those which can decrease medicolegal risk. They include: complaints handling process tracking tests ordered and referrals made recording of appointments, cancellation and any failure to attend infection control procedures recruitment, training and management of staff managing confidentiality and privacy.

	HL7 format is essential HL7 is a standard for exchanging information between medical applications. It defines the format and the content of the messages that applications must use when exchanging data with each another in various circumstances. Downloading pathology results in HL7 format inserts appropriate results into separate fields (eg. HbA1c goes into HbA1c field, rather than simple text report). Without HL7 format, measuring many indicators would not be possible. **Clinical audit tool** A clinical audit tool provides practices with the ability to easily extract information from the practice's medical software to assist with analysing patient population data aimed at improving the quality of patient care. These tools will assist general practices with managing voluntary clinical indicators. **References** 1. ACSQHC. Australian Safety and Quality Framework for Healthcare, December 2010. Available at www.safetyandquality.gov.au/internet/safety/publishing.nsf/Content/NSQF. [Accessed 14 November 2011]. 2. RACGP. Standards for general practices. 4th edition. South Melbourne: RACGP, 2010; p. 76. 3. Phillips C, Hall S, Pearce C, et al. Improving quality through clinical governance in primary healthcare. Canberra: Australian Primary Healthcare Research Institute, 2010. 4. Christine B Phillips, Christopher M Pearce, et al. Can clinical governance deliver quality improvement in Australian general practice and primary care? A systematic review of the evidence. Med J Aust 2010;15;193(10):602–7.
Level of evidence	Level V
Yes/No/NA indicator	✓
Numerator	Not applicable
Denominator	Not applicable
Implementation	Practices can request HL7 downloads of pathology and radiology results by contacting their pathology and radiology service providers. Practices should also contact their software manufacturer or IT administrator to confirm compatibility between HL7 downloads and their existing clinical software package

Indicator 2: Practice policy on prescribing addictive medication

Category	Clinical policy
Clinical indicator	Our practice has a policy on the safe prescription of benzodiazepines and opioids.
Rationale	Good clinical governance in prescribing drugs of addiction is supported by a comprehensive practice policy and a unified approach to drugs of addiction which support individual general practitioners to prescribe these drugs safely and appropriately. An RACGP audit of recommendations made by an Australian coroner over the past 10 years (2000–2010) highlights recurrent issues surrounding doctor shopping, prescription and supply of drugs of addiction. Commonly prescribed medications with a potential for addiction and abuse include benzodiazepines (BZDs) and opioids (1). Long term use of BZDs is common for anxiety disorders, insomnia and alcohol withdrawal, as adjuvant therapy, and as muscle relaxants. Their short term benefits are well recognised, but their long term use has risks of harm in addition to dependence (eg. daytime somnolence; blunted reflexes; memory impairment; and an increased risk of falls and hip fractures in older people) (2). There is growing apprehension about problematic and/or unsanctioned use of prescription opioids (3). Concerns are also being raised about the escalating use of opioids for chronic non malignant pain without a basis of evidence (4). Increased use of opioid prescriptions may be due to a number of factors, including increasing prevalence of chronic pain and developments in pharmaceutical opioid preparations, especially the introduction of sustained release morphine and oxycodone. These preparations have reportedly enhanced the safety and effectiveness of opioids in treating chronic pain, and consequently there has been, a greater willingness by the medical profession to prescribe opioids, in part reversing a trend of 'under-treatment' of chronic pain over many decades (1). Unfortunately, a great deal of unskilled and inappropriate prescribing of opioid and psychotropic medications occurs in public and private hospitals. Patients are often discharged on BZDs initiated for sleep problems in hospital and on opioid regimens commenced quite appropriately to treat acute injuries or postoperative pain. Problems arise where these medicines are not ceased on discharge and where an exit plan to taper and cease the opioid prescription is not communicated clearly in a timely manner to the patient and general practitioner (3). **Content of practice policy** To be effective a practice policy should cover the following key areas: **1. Quality improvement goals** (a) Improving prescription and dispensing of opioids for people with chronic non-malignant pain (CNMP) (b) Improving management of pain in people with pre-existing drug and alcohol problems (c) Reducing unsanctioned use of BZDs and pharmaceutical opioids (d) Improving the safety of staff and patients

	2. Continuing education for all staff (a) Evidence based continuing education for all staff on the appropriate use of drugs of addiction, (b) Evidence based continuing education for clinical staff addressing the dangers of addiction to prescribed medications and the dangers of misuse or abuse of prescription medication where particular attention needs to be given to the dangers of poly drug use and the possible harmful interaction of drug combinations (c) Specific evidence based continuing education for registrars in the practice **3. Clinical protocols** (a) Appropriate prescribing standards and training in appropriate prescribing and recognition of dependence in patients (b) Universal precautions as standard good clinical practice in managing CNMP, which includes attention to assessing the clinical response to opioid treatment in terms of a specific clinical evaluative framework (c) Adoption of 'ceiling doses' which may trigger review by a pain medicine specialist if the dose reached or exceeds (d) Prescribing of all opioids should be understood by patient and doctor alike as a trial **4. Systems of care** (a) In contemporary general practice, treatment of persistent pain is based on: i. A biopsychosocial approach ii. Multidisciplinary team iii. Delivering multimodal treatment (b) Referring patients to counselling, addiction agencies, mental health agencies and methadone programs in a timely fashion (c) Formal share-care arrangements with chronic pain patients (d) Consultant liaison services to GPs and teaching hospitals (e) Ongoing prescription services in the absence of the primary care provider **5. Patient selection** (a) Appropriate evaluation of chronic non-malignant pain (b) Determining if a particular patient is obtaining medication beyond therapeutic need: i. Refusing or reducing the prescribing of drugs to such patients ii. Refusing or reducing the prescribing of BZDs as well as opiates to poly drug users **6. Patient safety** (a) Harm minimisation **7. Evaluation** (a) review compliance with practice policies and risk management systems (b) undertake a clinical audit of prescribing patterns (eg. audit of alprazolam prescribing) (c) review incidents where staff or patient safety was compromised

	References 1. White J, Taverner D. Drug seeking behaviour. Australian Prescriber 1997;20:68–70. 2. Mugunthan K, McGuire T, Glasziou P. Minimal interventions to decrease long-term use of benzodiazepines in primary care: a systematic review and meta-analysis. Br J Gen Pract 2011;61(590):e573-e578. Available at www.nelm.nhs.uk/en/NeLM-Area/Evidence/Medicines-Management/References/2011---September/09/Minimal-interventions-to-decrease-long-term-use-of-benzodiazepines. [Accessed 11 October 2011]. 3. Nicholas, R., Lee, N., & Roche, A. (2011). Pharmaceutical Drug Misuse in Australia: Complex Problems, Balanced Responses. National Centre for Education and Training on Addiction (NCETA), Flinders University, Adelaide. 4. Ref: Ballantyne Jc. Is Lack of Evidence the Problem? The Journal of Pain. 2010;11(9):830-2.
Level of evidence	Level V
Yes/No/NA indicator	✓
Numerator	Not applicable
Denominator	Not applicable
Implementation	It is envisaged the RACGP will produce template policies for general practices to customise to suit their particular needs eg: • policy on benzodiazepine reduction • policy on opioid reduction • policy on opioid dosing thresholds • policy on continuation of opioid management plans for patients with chronic non malignant pain • policy on alprazolam prescribing. The RACGP envisages that practices will select and customise such template policies as they see fit or select comparable polices from an alternative source.

Indicator 3: Practice system for triaging patients with acute illness

Category	Organisation of services
Clinical indicator	Our practice has a system to identify, prioritise and respond to (triage) life threatening and urgent medical matters for: a) sick/febrile children <5 years b) patients with chest pain c) patients with mental health disorders.
Rationale	This indicator is consistent with the RACGP *Standards for general practices* (4th edition) Criterion 1.1.1: Scheduling care in opening hours; Indicator B: Our practice can demonstrate how we identify, prioritise and respond to life threatening and urgent medical matters (triage) (1). An RACGP audit of recommendations made by an Australian coroner over the past 10 years (2000–2010) highlights recurrent issues regarding patients presenting to primary care clinics with chest pain and mental health disorders. Further, despite advances in healthcare, infections remain the leading cause of death in children under the age of 5 years. Fever in young children can be a diagnostic challenge for healthcare professionals because it is often difficult to identify the cause (2). Patient safety is also a critical factor for patients presenting with chest pain or mental health disorders. To manage the risks associated with life threatening and urgent medical matters, the practice needs an effective triage system for managing these specific patient groups. **References** 1. RACGP. Standards for general practices. 4th edition. South Melbourne: RACGP, 2010; p. 8. 2. National Health Service. NICE Guideline. Feverish illness in children. Assessment and initial management in children younger than 5 years Issue date. National Institute for Health and Clinical Excellence, 2007. Available at www.nice.org.uk/CG47. [Accessed 3 October 2011].
Level of evidence	Level V
Yes/No/NA indicator	✓
Numerator	Not applicable
Denominator	Not applicable
Implementation	It is envisaged general practices will refer to Criterion 1.1.1 in the RACGP *Standards for general practices* (4th edition) to design and implement effective triage systems.

Indicator 4: Practice system to support palliative and end-of-life care

Category	Organisation of services
Clinical indicator	Our practice has a system to support palliative and end-of-life care.
Rationale	*'Caring for people nearing the end of their lives is part of the core business of general practice… The GP and the primary care team occupy a central role in the delivery of end of life care in the community. This role is greatly valued by patients and remains pivotal to the effective provision of all other care. This strategy affirms the College's commitment to promote excellence in end of life care.'* (1). This indicator is focussed on optimising palliative care in general practice and ensuring practice processes assist seriously ill patients and their families with setting priorities for care. The care of patients with advanced illness can be hindered by under treatment of physical and emotional symptoms, psychological and physical debilitation of caregivers, conflicts over decision making, and diminution of family financial resources (2). Patients often receive care that lacks continuity, with multiple care settings, multiple providers, and confusing payments. Patients, their carers and the people close to them need special care and support through the natural process of dying. GPs and the primary healthcare team have a special relationship with their patients, the patient's carers and the people close to them. The GP and the primary healthcare team have the ability to coordinate good care and to reduce the worry and stress when a patient is at the end of their life – the key is having a guide to best practice (1). Palliative Care Australia promotes a needs based approach to palliative care and recognises that many people who die an expected death in Australia do not need to be cared for by a specialist palliative care service. They advocate that all health professionals be engaged in end of life care (3). Palliative medicine is medical care focused on the relief of physical, emotional, and existential suffering, and support for best possible quality of life for patients and their family / caregivers. Palliative care is delivered at the same time as all other appropriate medical care and should be offered simultaneously with curative, life-prolonging, or disease-modifying treatments. A recent study on the key components of cancer care coordination identified seven components: • organisation of patient care • access to and navigation through the healthcare system • the allocation of a key contact person • effective communication and cooperation among the multidisciplinary team and other health service providers • delivery of services in a complementary and timely manner • sufficient and timely information to the patient • needs assessment (4). **References** 1. Royal College of General Practitioners. End of Life Care Strategy. London: RCGP, June 2009. Available at www.rcgp.org.uk/endoflifecare. [Accessed 11 October 2011]. 2. Brunnhuber, K; Nash SA, Meier DE, et al. Putting evidence into practice: Palliative care. BMJ Publishing Group Ltd, 2008. Available at www.unitedhealthfoundation.org/uhfassets/docs/2008/ebm-brunnhuber-nash-meier-weissman-woodcock-palliative.pdf. [Accessed 3 October 2011]. 3. Australian and New Zealand Society of Palliative Medicine. Clinical indicators for end of life care and palliative care. Watson, ACT: ANZSP, 2010. Available at www.anzspm.org.au/c/anzspm?a=sendfile&ft=p&fid=1288012499&sid. Accessed 11 October 2011]. 4. Walsh J, Young JM, Harrison JD, et al. What is important in cancer care coordination? A qualitative investigation. Eur J Cancer Care 2010;20:220–7.

Level of evidence	Level V
Yes/No/NA indicator	✓
Numerator	Not applicable
Denominator	Not applicable
Implementation	Practices can take advantage of local infrastructure and services to support palliative and end-of-life care which meets patients' needs. An effective practice system to support palliative and end-of-life care would generally include: • practice policy to support palliative and end-of-life care • staff with skills / training in palliative care • a key contact person • links with state funded palliative care services • home visits to support palliative and end-of-life care.

Indicator 5: Assessment of absolute cardiovascular risk

Category	Preventive health and screening
Clinical indicator	The percentage of active patient populations without known cardiovascular disease (CVD), with all required risk variables recorded to allow for an absolute cardiovascular risk assessment where patient populations are defined as: a) patients aged 45–74 years b) patients aged 35–74 years who identify as Aboriginal or Torres Strait Islander.
Rationale	Cardiovascular disease (CVD) occurs in 18% of the population, with 6.9% estimated to have an associated disability (1). The majority of deaths from CVD can be prevented by changing behavioural and physiological risk factors. Absolute CVD risk is the probability that an individual will develop a cardiovascular event (coronary infarct or stroke) within 5 years. Preventive actions based on estimated absolute risk are more effective and efficient than those based on individual risk factors as they acknowledge the synergistic effects of multiple risk factors combined. The National Vascular Disease Prevention Alliance recommends that absolute cardiovascular risk assessment using the Framingham Risk Equation to predict risk of a cardiovascular event over the next 5 years, should be performed for all adults aged 45–74 years who are not known to have CVD or to be at high risk of CVD (including people with diabetes under the age of 60 years). This should be re-assessed every 2 years or more frequently if a change in treatment is considered (2), (3). Absolute risk should be assessed from 35 years of age in Aboriginal people and Torres Strait Islanders (1). In adults without known CVD, a comprehensive assessment of cardiovascular risk includes biopsychosocial factors. However, the information required to be recorded for an FRE absolute cardiovascular risk assessment is: • age and gender • blood pressure • serum lipids (HDL and total cholesterol) • diabetes status • presence of left ventricular hypertrophy on ECG (if known) • smoking status. **References** 1. Australian Institute of Health and Welfare. Australia's health 2006. Canberra: AIHW2006 Contract No.: cat. no. AUS 73. 2. National Vascular Disease Prevention Alliance. Guidelines for the assessment of absolute cardiovascular disease risk: National Heart Foundation of Australia, 2009. 3. National Vascular Disease Prevention Alliance. Guidelines for the management of absolute cardiovascular disease risk (Draft): National Heart Foundation of Australia, 2011.
Level of evidence	Level II, B for all adults aged 45–74 years who are not known to have CVD or to be at clinically determined high risk. Level IV, C for Aboriginal and Torres Strait Islander adults aged 35–74 years. *RACGP. Guideline for preventive activities in general practice (red book). 8th edition. South Melbourne: RACGP, 2011 (In production).*

Yes/No/NA indicator	Not applicable
Numerator	a) Number of active patients aged 45–74 years who have all the following risk variables collected: i. age ii. gender iii. smoking status iv. total and HD cholesterol (within last 5 years) v. blood pressure (within last 2 years) b) Number of active patients aged 35–74 who identify as Aboriginal or Torres Strait Islander and have all the following risk variables collected: i. age ii. gender iii. smoking status iv. total and HD cholesterol (within last 5 years) v. blood pressure (within last 2 years)
Denominator	a) Number of active patients aged 45–74 years b) Number of active patients aged 35–74 years who identify as Aboriginal or Torres Strait Islander
Implementation	Data can be collected using the CAT tool. Cardiovascular risk tables define risk as: • <10% low risk • 10–15% medium risk • >15% high risk.

Indicator 6: Screening for smoking status

Category	Preventive health and screening
Clinical indicator	The percentage of active patients aged >12–80 years who have a smoking status recorded.
Rationale	Australia has made major progress in tobacco control with the population prevalence of smoking falling substantially since the 1960s. In recent years smoking rates have continued to fall with 20% people aged 18 years and over current smokers in 2007–2008, down from 23% in 2004-05 where 18% of smokers were regular daily smokers (1). However despite the decline in prevalence, smoking remains the behavioural risk factor responsible for the highest levels of preventable disease and premature death (2). The task of reducing further the number of Australians who are using tobacco requires a collaborative effort between government, health authorities, health professionals and the community. Health professionals play an important role in educating and motivating smokers as well as assessing their dependence on nicotine and providing assistance to quit. All health professionals should systematically identify smokers, assess their smoking status and offer them advice and cessation treatment at every opportunity (3). Disadvantaged groups of people in Australia have significantly higher rates of smoking, alcohol use, poorer diets and lower levels of physical activity. Most disadvantaged groups have significantly higher smoking rates (4–7). For example, in 2004–2005, 50% of Aboriginal and Torres Strait Islander adults were daily or regular smokers (8). Effective interventions for disadvantaged groups vary from those where there is little current evidence (eg. intervention programs for Aboriginal and Torres Strait Islander populations) to interventions where there is good evidence coupled with an acknowledgment that such groups present special challenges. **References** 1. Australian Bureau of Statistics. National Health Survey: summary of results Australia 2007–08 (reissue). Canberra: ABS, 2009. Report No.: 4364.0. 2. Australian Institute of Health and Welfare. Australia's health 2008. Cat. no. AUS 99. Canberra: AIHW, 2008. 3. Zwar N, Richmond R, Borland R, et al. Supporting smoking cessation: a guide for health professionals. South Melbourne: RACGP, 2011. 4. Baker A, Ivers RG, Bowman J, Butler T, Kay-Lambkin FJ, Wye P, et al. Where there's smoke, there's fire: high prevalence of smoking among some sub-populations and recommendations for intervention. Drug Alcohol Rev. 2006;25(1):85–96. 5. National Health and Medical Research Council. Dietary guidelines for children and adolescents in Australia: a guide to healthy eating. Canberra: Commonwealth of Australia, 2003. 6. Steptoe A, Perkins-Porras L, McKay C, Rink E, Hilton S, Cappuccio FB. Behavioural counselling to increase consumption of fruit and vegetables in low-income adults: randomised trial. BMJ. 2003;326:855–7. 7. Turrell G, Stanley L, de Looper M, Oldenburg B. Health inequalities in Australia: Morbidity, health behaviours, risk factors and health service use. Canberra: Australian Institute of Health and Welfare2006 Contract No.: PHE 72. 8. Australian Institute of Health and Welfare. The health and welfare of Australia's Aboriginal and Torres Strait Islander peoples. Canberra: AIHW, 2008.
Level of evidence	Instituting a system designed to identify and document tobacco use almost doubles the rate of health professional intervention and results in higher rates of smoking cessation (Level II). A system for identifying all smokers and documenting tobacco use should be used in every practice (Strength A).

	Zwar N, Richmond R, Borland R, et al. Supporting smoking cessation: a guide for health professionals. Melbourne: South Melbourne: The Royal Australian College of General Practitioners, 2011. There is a benefit in asking about smoking status in moderate and higher risk patients (predominantly Level I, A) and in Aboriginal and Torres Strait Islander patients (Level III, A). *RACGP. Guideline for preventive activities in general practice (red book). 8th edition. South Melbourne: RACGP, 2011 (In production).*
Yes/No/NA indicator	Not applicable
Numerator	Number of active patients aged >12–80 years who have had a smoking status recorded in the past 2 years where 'smoking status' is defined as current smoker, ex-smoker or never smoked.
Denominator	Number of active patients aged >12–80 years seen in the past 2 years.
Implementation	Data can be collected using the CAT tool. Practices may find it helpful to record supportive information such as the percentage of active patients aged >12–80 years who are: • smokers • ex smokers • non smokers.

Indicator 7: Screening for alcohol consumption

Category	Preventive health and screening
Clinical indicator	The percentage of active patients aged 15–80 years who have an alcohol status recorded.
Rationale	Alcohol consumption is a major cause of mortality and accounts for 3.2% of the total burden of disease and injury in Australia [1]. Alcohol related harm causes around 3000 deaths and 65,000 hospitalisations in Australia every year. Alcohol has been causally linked to more than 60 different medical conditions [13]. In Australia, alcohol was linked to 3430 deaths per year and 85,435 disability-adjusted life years per year [3]. In the 10 years between 1992 and 2001, more than 31,000 Australians died from alcohol attributable injury and disease – a greater number died from acute conditions (usually in the context of acute intoxication) rather than chronic conditions (often related to longer term dependence on alcohol). Brief interventions at the primary care setting are consistently identified as a key ingredient in a comprehensive alcohol-prevention strategy because they are regarded as relatively inexpensive, they take very little time and they can be implemented by a wide range of health and welfare professionals [7]. The benefit of brief interventions as preventative measures arises from the relative effectiveness of treating early-stage problem drinking, obviating the need for later more intense and costly treatment [43]. Brief interventions are designed to motivate high-risk drinkers to moderate their alcohol consumption [13]. In Australia, brief interventions are as yet a relatively untapped opportunity, due in part to the need for greater recognition of the role that the primary health workforce can play in moderating alcohol consumption. *Extract from: Preventative Task Force Report. Preventing alcohol-related harm in Australia: a window of opportunity. Canberra: Commonwealth of Australia, 2007. Available at www.health.gov.au/internet/preventativehealth/publishing.nsf/Content/tech-alcohol-toc~tech-alcohol-1. [Accessed 25 October 2011].* All patients should be asked about the quantity and frequency of alcohol intake from 15 years of age. Brief advice in the general practice setting has been demonstrated to have resulted in a reduction in drinking of about six standard drinks per week for men (1–5). The impact of brief advice on reduction in consumption for women is less clear (1–3,6,7). Assessment of alcohol consumption is calculated from the amount of alcoholic beverages such as beer, cider, wine, spirits and mixed drinks usually consumed in 1 day combined with the number of days per week in which alcohol is usually consumed. Alcohol consumption is usually measured in 'standard' drinks (8). Risk assessment is based on alcohol consumption on any one day (short term risk) and average weekly alcohol consumption (long term risk) (8). **References** 1. Kaner EF, Dickinson HO, Beyer FR. Effectiveness of brief alcohol interventions in primary care populations. Cochrane Database Syst Rev. 2007;CD004148(2). 2. Bertholet N, Daeppen JB, Wietlisbach V. Reduction of alcohol consumption by brief alcohol intervention in primary care: systematic review and meta-analysis. Arch Intern Med 2005;165(9):986–95. 3. Whitlock E, Polen MR, Green CA. Behavioral counseling interventions in primary care to reduce risky/harmful alcohol use by adults: a summary of the evidence for the US Preventive Services Taskforce. Ann Int Med. 2004;140(7):557–68. 4. Kaner E, Bland M, Cassidy P, et al. Screening and brief interventions for hazardous and harmful alcohol use in primary care: a cluster randomised controlled trial protocol. BMC Public Health. 2009;9:287.

	5. Kaner EFS, Dickinson HO, Beyer F, et al. The effectiveness of brief alcohol interventions in primary care settings: A systematic review. Drug Alcohol Rev 2009;28:301–23. 6. Ballesteros J, Gonzales-Pinto A, Querejeta I. Brief interventions for hazardous drinkers delivered in primary care are equally effective in men and women. Addiction 2004;99(1):103–8. 7. Ballesteros J, Duffy JC, Querejeta I. Efficacy of brief interventions for hazardous drinkers in primary care: a systematic review and meta-analysis. Alcohol Clin Exp Res. 2004;28(4):608–18. 8. RACGP. SNAP Smoking, Nutrition, Alcohol and Physical activity (SNAP): A population health guide to behavioural risk factors in general practice. South Melbourne: RACGP, 2004.
Level of evidence	Level II, B for all patients ≥ 15 years. All patients should be asked about the quantity and frequency of alcohol intake from 15 years of age (Strength A). *RACGP. Guideline for preventive activities in general practice (red book). 8th edition. South Melbourne: RACGP, 2011 (In production).*
Yes/No/NA indicator	Not applicable
Numerator	Number of active patients who have had an alcohol status recorded in the past 4 years where 'alcohol status' is defined as drinker or non drinker.
Denominator	Number of active patients aged 15–80 years seen in the past 4 years.
Implementation	Data can be collected in base form using the CAT tool: • drinker • non-drinker • binge drinker

Indicator 8: Screening for cervical cancer

Category	Preventive health and screening
Clinical indicator	The percentage of sexually-active female active patients aged 18–70 years who have been screened for cervical cancer.
Rationale	Australia has the lowest mortality rate and the second lowest incidence of cervical cancer in the world. The success of the Cervical Screening Program is dependent upon recruitment of women. Eighty-five percent of women in Australia who develop cervical cancer have either not had a Pap test or have been inadequately screened in the past 10 years. Women over the age of 50 years still represent an under-screened group. *Extract from: RACGP. Guideline for preventive activities in general practice (red book). 8th edition. South Melbourne: RACGP, 2011 (In production).*
Level of evidence	Evidence level II, A for average risk: all women who have ever been sexually active. *RACGP. Guideline for preventive activities in general practice (red book). 8th edition. South Melbourne: RACGP, 2011 (In production).*
Yes/No/NA indicator	Not applicable
Numerator	Option 1: number of sexually-active female active patients aged 18-70 years who have had a Pap test in the past 2 years where 'sexually active' means sexually active women who have an intact cervix (and excludes those who have had a hysterectomy). Option 2: Total Whole Patient Equivalent of female patients with a cervical screening pathology item.
Denominator	Option 1: number of sexually-active female active patients aged 18-70 years seen in the past 2 years where 'sexually-active' means sexually active women who have an intact cervix (and excludes those who have had a hysterectomy). Option 2: Total Whole Patient Equivalent of female patients aged 20 to 69 years inclusive.
Implementation	Option 1 allows data to be collected using the CAT tool. Option 2 allows data to be collected from PIP notifications. This is the recommended option even though it does not exclude ineligible patients (eg. women who have had a hysterectomy). Please be aware that the National Cervical Screening Programme is currently under review. It is highly likely that required screening characteristics will change including the age range for screening and the frequency of screening.

Indicator 9: Childhood immunisation rates

Category	Preventive health and screening
Clinical indicator	The percentage of active child patients fully immunised for their age group in accordance with the National Immunisation Program Schedule
Rationale	For more than 200 years, since Edward Jenner first demonstrated that vaccination offered protection against smallpox, the use of vaccines has continued to reduce the burden of many bacterial and viral diseases. As a result of successful vaccination programs, deaths from tetanus, diphtheria, *Haemophilus influenzae type b* and measles are now extremely rare in Australia. Vaccination protects individuals as well as others in the community by increasing the general level of immunity and minimising the spread of infection. It is therefore vital that healthcare professionals take every available opportunity to vaccinate children and adults. It is also important that the public be made aware of the proven effectiveness of immunisation to save lives and prevent serious illness. *Extract from: The Australian Immunisation Handbook. 9th Edition. 2008. Available at www.health.gov.au/internet/immunise/publishing.nsf/content/handbook-home. [Accessed on 19 October 2011].* General practitioners play an important role in the prevention and management of communicable diseases. This role includes advice on the prevention of infection and the provision of immunisation services. For immunisation to be effective, there needs to be high coverage in the community. General Practitioners need to be aware of groups with lower levels of age appropriate immunisation including: • families with young parents (under 25 years of age) • single parent families and families with more than one child • migrant families particularly in the first years of their arrival in Australia or if a language other than English is spoken at home • families where the parents are unemployed on low incomes or have very high or very low education levels • families who move frequently • Aboriginal children in rural and urban areas. *Extract from: RACGP. Guideline for preventive activities in general practice (red book). 8th edition. South Melbourne: RACGP, 2011 (In production).*
Level of evidence	Evidence Level II, A
Yes/No/NA indicator	Not applicable
Numerator	Number of active child patients fully immunised for their age group in accordance with the National Immunisation Program (NIP) Schedule: i. 0 to <4 months ii. 4 to <12 months iii. 12 to <18 months iv. 18 to <48 months v. 48 to <84 months vi. 84+ months

Denominator	Number of active child patients in the following age groups: i. 0 to <4 months ii. 4 to <12 months iii. 12 to <18 months iv. 18 to <48 months v. 48 to <84 months vi. 84+ months
Implementation	It is recommended practices use their overall proportion of children fully immunised (as provided by Medicare Australia) to achieve an upward trend in immunisation rates for all age groups over time.

Indicator 10: Screening for chlamydia

Category	Preventive health and screening
Clinical indicator	The percentage of female active patients aged 15–25 years who have been screened for chlamydia.
Rationale	General practitioners play an important role in the prevention and management of communicable diseases. Worldwide and in Australia, *Chlamydia trachomatis* is the most common sexually transmitted bacterial infection. In the majority of cases (80%) infection with chlamydia is asymptomatic, making detection difficult. If left undetected and untreated chlamydia infection can move into the upper genital tract, causing inflammation and scarring in the female reproductive tracts. In women the most common complications of chlamydia infection include urethritis, cervicitis, pelvic inflammatory disease (PID), tubal infertility and chronic pelvic pain. *Extract from: Adelaide Health Technology Assessment. Horizon Scanning Technology Prioritising Summary: Opportunistic screening of asymptomatic individuals for chlamydia. Canberra: Commonwealth of Australia, 2007. Available at www.health.gov.au/internet/horizon/publishing.nsf/Content/6B81AEB3E7EE0001CA2575AD0080F344/$File/May%20Vol%2016%20No%204%20-%20Chlamydia%20screening.pdf. [Accessed 25 October 2011].* As over 80% of infections in women are asymptomatic, screening is the only effective way to detect cases and reduce the duration of infection and the risk of complications. Testing is non-invasive and single-dose treatment is available (1). Men act as a reservoir of infection, but have lower infection rates (3.9% in a general practice sample but generally higher than this for men in sports clubs, outback mines and from an Aboriginal or Torres Strait Islander background). There is lack of evidence that screening and treatment of males result in reduced population prevalence. *Extract from: RACGP. Guideline for preventive activities in general practice (red book). 8th edition. South Melbourne: RACGP, 2011 (In production).*
Level of evidence	Level II, A High risk: all sexually active young people aged 15–25 years, particularly female, Aboriginal or Torres Strait Islander, and those with a pattern of inconsistent or no condom usage or with recent change in sexual partner. *RACGP. Guideline for preventive activities in general practice (red book). 8th edition. South Melbourne: RACGP, 2011 (In production).*
Yes/No/NA indicator	Not applicable
Numerator	Number of female active patients aged 15-25 years who have been screened for chlamydia in the past 12 months.
Denominator	Number of female active patients aged 15–25 years seen in the past 12 months.
Implementation	

Indicator 11: Improving clinical documentation of chronic kidney disease

Category	Clinical documentation
Clinical indicator	The percentage of active patients with an Estimated Glomerular Filtration Rate (eGFR) <30 where a diagnosis of chronic kidney disease has been documented in the patient health record.
Rationale	Poor clinical documentation is a recurrent theme in medicolegal and other review processes. It is also a critical safety component in the electronic health records if inbuilt safety prompts (eg. prescribing prompts) are to be triggered. Chronic kidney disease (CKD) constitutes a significant risk factor for cardiovascular events and death. Individuals with CKD have a 10 to 20-fold greater risk of cardiac death than individuals without CKD (1). Recent Australian studies suggesting early management of CKD would lead to large cost savings by preventing people from reaching end-stage kidney failure (2). Documentation of CKD identifies those patients: • at risk of worsening kidney disease • at higher cardiovascular risk • at risk for medication misadventure. CKD provides an environment for altered pharmacodynamics. Documentation of CKD in the record allows computerised assessment of current and prescribed medication. Estimated Glomerular Filtration Rate (eGFR) using the MDRD formula is the recommended method of measuring kidney function. An eGFR is automatically provided with every laboratory request for a serum creatinine in people aged > 18 years. The classification levels for CKD are: • Stage 1: eGFR >90 mL/min/1.73 m2 with microalbuminuria, proteinuria or haematuria • Stage 2 (mild): eGFR 60–89 mL/min/1.73 m2 with microalbuminuria, proteinuria or haematuria • Stage 3a: (moderate) eGFR 45–59 mL/min/1.73 m2 • Stage 3b: (moderate) eGFR 30–44 mL/min/1.73 m2 • Stage 4: (severe) eGFR 15–29 mL/min/1.73 m2 • Stage 5: (end stage) eGFR <15 mL/min/1.73 m2 **References** 1. Chronic kidney disease management in general practice. Kidney Health Australia, Melbourne, 2007. 2. Vos T, Carter R, Barendregt J, Mihalopoulos C, et al, ACE–Prevention Team. Assessing Cost-Effectiveness in Prevention (ACE–Prevention): Final Report. University of Queensland, Brisbane and Deakin University, Melbourne, 2010.
Level of evidence	Level V
Yes/No/NA indicator	Not applicable
Numerator	Number of active patients with a diagnosis of chronic kidney disease documented in the patient health record where the last recorded eGFR is <30.

Denominator	Number of active patients where the last recorded eGFR is <30.
Implementation	Data can be collected using the CAT tool. Diagnosis at CKD stage 4 was selected for this indicator though it is recognised that similar issues occur at CKD stage 3b.

Indicator 12: Screening for retinopathy in patients with diabetes

Category	Clinical assessment
Clinical indicator	The percentage of active patients with diabetes who have retinal screening performed.
Rationale	Diabetic retinopathy (DR) is the leading cause of preventable blindness in Australians younger than 60 years. The treatment of DR with laser photocoagulation can prevent nearly all cases of severe vision loss and blindness (1). Thus, the 2008 National Health and Medical Research Council (NHMRC) guidelines for DR management recommend regular ocular review of patients with diabetes (2). Considerable evidence now shows that diabetes is becoming a more prevalent problem in our community. This means detecting diabetic eye disease is critically important, since there are well developed and proven strategies to prevent visual loss. One of the earliest randomised controlled clinical studies to show the success of a particular treatment investigated photocoagulation therapy for diabetic retinopathy. Findings from this diabetic retinopathy study were reported in 1976, showing that appropriate laser treatment would dramatically reduce the risk of blindness. Further major prospective trials have now shown that the control of diabetes and more recently the control of hypertension and lipid management in patients with diabetes, will reduce the risk of visual loss from diabetic eye disease. **References** 1. Scottish Intercollegiate Guidelines Network (SIGN). Management of diabetes. A national clinical guide. Guideline No 116. NHS Quality Improvement Scotland (NHS QIS), 2010. Available at www.sign.ac.uk/pdf/sign116.pdf. [Accessed 3 October 2011]. 2. NHMRC. Guidelines for the management of diabetic retinopathy. Canberra: Commonwealth of Australia, 2008. Available at www.nhmrc.gov.au/_files_nhmrc/publications/attachments/di15.pdf. [Accessed 3 October 2011].
Level of evidence	Systematic screening for diabetic retinal disease should be provided for all people with diabetes (Grade B). Patients with type 1 diabetes should be screened from age 12 years (Grade C) Patients with type 2 diabetes should be screened from diagnosis (Grade A). Patients with diabetes with no diabetic retinopathy could be screened every 2 years. All others should be screened at least annually (Grade B). *Scottish Intercollegiate Guidelines Network (SIGN). Management of diabetes. A national clinical guide. Guideline No 116. NHS Quality Improvement Scotland (NHS QIS), 2010. Available at www.sign.ac.uk/pdf/sign116.pdf. [Accessed 3 October 2011].* Ensure that all people with diabetes have a dilated fundus examination and visual acuity assessment at the diagnosis of diabetes and at least every 2 years (Level I). *NHMRC: Guidelines for the Management of Diabetic Retinopathy. Canberra: Commonwealth of Australia, 2008. Available at www.nhmrc.gov.au/_files_nhmrc/publications/attachments/di15.pdf. [Accessed 24 October 2011].*
Yes/No/NA indicator	Not applicable

Numerator	Number of active patients with diabetes who have had retinal screening performed in the past 2 years.
Denominator	Number of active patients with diabetes seen in the past 2 years
Implementation	Data can be collected using the CAT tool. This indicator requires the accurate documentation of an accurate diagnosis of diabetes within patient health records. The practice should undertake data checks of patient health records to confirm accurate diagnoses by checking factors such as: • number of patients with fasting BGL > 7 and no diagnosis of diabetes (where not all fasting BGL > 7 will indicate diabetes eg patients on steroids or patients who failed to fast properly) • number of patients with HbA1c > 6.5 and no diagnosis of diabetes (where it is acknowledged HbA1c = 6.5 may become standard). • number of patients with fasting BGL < 5.5 and no antidiabetic medication and no diagnosis of diabetes The data check should also search for inappropriate diagnoses of diabetes (eg patients with diabetes who instituted lifestyle changes and are now diabetes free).

Indicator 13: Screening for nephropathy in high risk patients

Category	Clinical assessment
Clinical indicator	The percentage of high risk active patients who have been screened for nephropathy (eGFR and albuminuria) where high risk patients are defined as: a) diabetic patients b) hypertensive patients c) Aboriginal and Torres Strait Islander patients aged >35 years.
Rationale	Diabetic patients are at risk of developing nephropathy. Measurements of urinary albumin loss and serum creatinine are the best screening tests for diabetic nephropathy. Urinary microalbuminuria has been identified as an independent risk factor for cardiovascular complications. Its presence is therefore a pointer to the need for more rigorous management of all cardiovascular risk factors. All patients with diabetes should have their urinary albumin concentration and serum creatinine measured at diagnosis and at regular intervals, usually annually.(1) Other patient groups at high risk include Aboriginal and Torres Strait Islander patients and hypertensive patients. While this is not a comprehensive summary of high risk groups, this indicator recommends a particular focus be directed toward these three patient groups for quality purposes. Estimated Glomerular Filtration Rate (eGFR) using the MDRD formula is the recommended method of measuring kidney function. An eGFR is automatically provided with every laboratory request for a serum creatinine in people aged > 18 years. **Further information** SIGN clinical guideline 116 (2010). Management of diabetes. Available at www.sign.ac.uk/guidelines/fulltext/116/index.html NICE clinical guideline 87 (2010). Type 2 Diabetes: The management of Type 2 diabetes. Available at www.nice.org.uk/nicemedia/pdf/CG87NICEGuideline.pdf **Reference** 1. The NHS Confederation. Quality and Outcomes Framework Guidance for GMS contract 2011/12. April 2011; p. 68.
Level of evidence	Diabetic patients Level III, A Hypertensive patients Level III, A Aboriginal and Torres Strait Islander patients Level III, B *RACGP. Guideline for preventive activities in general practice (red book). 8th edition. South Melbourne: RACGP, 2011 (In production).*
Yes/No/NA indicator	Not applicable
Numerator	a) Number of patients with type 1 or 2 diabetes screened using both eGFR and urinary albumin in the past year b) Number of hypertensive patients screened using both eGFR and urinary albumin in the past year c) Number of Aboriginal and Torres Strait Islander patients aged >35 years screened using both eGFR and urinary albumin in the past 2 years

Denominator	a) Number of patients with type 1 or 2 diabetes seen in the past year b) Number of hypertensive patients seen in the past year c) Number of Aboriginal and Torres Strait Islander patients aged >35 years seen in the past 2 years
Implementation	Data can be collected using the CAT tool. This indicator requires the accurate documentation of accurate diagnoses / Aboriginal and Torres Strait Islander identification. Where possible, the practice should undertake data checks of patient health records to confirm accurate diagnoses by checking factors such as: • number of patients with fasting BGL > 7 and no diagnosis of diabetes (where not all fasting BGL > 7 will indicate diabetes eg patients on steroids or patients who failed to fast properly) • number of patients with HbA1c > 6.5 and no diagnosis of diabetes (where it is acknowledged HbA1c = 6.5 may become standard). • number of patients with fasting BGL < 5.5 and no antidiabetic medication and no diagnosis of diabetes Unfortunately, there are no automated data checks for hypertension or Aboriginal and Torres Strait Islander identification.

Indicator 14: Anti-platelet / anticoagulant therapy in patients with coronary artery disease

Category	Clinical management
Clinical indicator	The percentage of active patients with coronary heart disease on aspirin, an alternative antiplatelet therapy, or an anticoagulant.
Rationale	Coronary artery disease (CAD) is a common condition in general practice with a strong evidence base for appropriate management. Aspirin (75–150 mg/day) should be given routinely and continued for life in all patients with CAD unless there is a contraindication. Clopidogrel (75 mg/day) is an effective alternative in patients with contraindications to aspirin, or who are intolerant of aspirin. Aspirin should be avoided in patients who are anticoagulated (1). **Further information** SIGN clinical guideline 96 and 97. Grade A Recommendation. Available at www.sign.ac.uk/guidelines/fulltext/93-97/index.html Joint British Societies JBS (2005). Available at www.bcs.com/download/651/JBS2final.pdf NICE clinical guideline 67 (2010). Recommendation 1.4.25. Available at www.nice.org.uk/nicemedia/live/11982/40689/40689.pdf
Level of evidence	Grade A Individuals with established atherosclerotic disease should be treated with 75 mg aspirin daily (Grade A). *Scottish Intercollegiate Guidelines Network (SIGN). Risk estimation and the prevention of cardiovascular disease: A national clinical guideline. Guideline No 97. NHS Quality Improvement Scotland (NHS QIS), 2007. Available at www.sign.ac.uk/guidelines/fulltext/93-97/index.html. [Accessed 11 October 2011].*
Yes/No/NA indicator	Not applicable
Numerator	Number of active patients with coronary artery disease on aspirin, an alternative antiplatelet therapy, or an anticoagulant.
Denominator	Number of active patients with coronary artery disease.
Implementation	Data can be collected using the CAT tool. This indicator requires the accurate documentation of an accurate diagnosis of CAD within patient health records. The practice should undertake data checks of patient health records to confirm accurate diagnoses and to exclude patients who do not have CAD (eg patients who present with angina but subsequently have CAD excluded). For example, practices should check the number of patients with CAD / angina without a beta blocker, without an anti lipid and without antithrombotic medication.

Indicator 15: Management of left ventricular failure

Category	Clinical management
Clinical indicator	The percentage of active patients with left ventricular failure prescribed: a) angiotensin converting enzyme (ACE) inhibitors or A2 Inhibitors b) cardio-selective beta blockers c) angiotensin converting enzyme (ACE) inhibitors or A2 Inhibitors and cardio-selective beta blockers.
Rationale	Chronic heart failure (CHF) is a complex clinical syndrome that can result from any structural or functional cardiac or non-cardiac disorder that impairs the ability of the heart to respond to physiological demands for increased cardiac output. Chronic heart failure is characterised by symptoms such as exertional breathlessness and fatigue, and signs of fluid retention as well as signs associated with the underlying cardiac disorder. A large number of high quality trials on pharmacological therapy have been undertaken in patients with left ventricular failure with all stages of disease from asymptomatic left ventricular failure to severe heart failure. The aims of treatment are to reduce symptoms, prevent progression of the disease, hospital admissions and mortality. Many treatments have been shown to reduce either one or more (often all) of these. The SIGN CHF guideline (95) states that:(1) Angiotensin converting enzyme inhibitors should be considered in patients with all New York Heart Association (NYHA) functional classes of heart failure due to left ventricular systolic dysfunction (LVSD). Patients with LVSD alone or with chronic heart failure for other reasons who are intolerant of angiotensin converting enzyme inhibitors should be considered for an angiotensin receptor blocker. All patients with heart failure due to LVSD of all NYHA functional classes should be started on beta blocker therapy as soon as their condition is stable (unless contraindicated by a history of asthma, heart block or symptomatic hypotension). Unless contraindicated, all patients with LVSD should be started on an ACE inhibitor and a beta blocker. **Reference** 1. *Scottish Intercollegiate Guidelines Network (SIGN). Management of chronic heart failure. Guideline No 95. NHS Quality Improvement Scotland (NHS QIS), 2007. Available at www.sign.ac.uk/guidelines/fulltext/95/index.html. [Accessed 11 October 2011].*
Level of evidence	Grade A Angiotensin converting enzyme inhibitors or A2 inhibitors (Grade A). Cardio-selective beta blockers (Grade A).
Yes/No/NA indicator	Not applicable
Numerator	a) Number of active patients with left ventricular failure on ACE or A2 inhibitor b) Number of active patients with left ventricular failure on cardio-selective beta blockers c) Number of active patients with left ventricular failure on ACE or A2 inhibitor and cardio-selective beta blockers

Denominator	a) Number of active patients with left ventricular failure b) Number of active patients with left ventricular failure c) Number of active patients with left ventricular failure
Implementation	Data can be collected using the CAT tool. Practices may find it useful to collect supportive information such as the number of active patients with left ventricular failure. This indicator requires the accurate documentation of an accurate diagnosis of left ventricular failure within patient health records. The practice should undertake data checks of patient health records to confirm accurate diagnoses and to exclude patients who do not have LVF (eg patients who present with isolated peripheral oedema). For example, the practice might use audit tools to check: • number of patients on cardio-selective beta blockers and no diagnosis of LVF (to highlight patients who have not had a diagnosis of LVF recorded) • number of patients with LVF recorded but not on ACE or A2 inhibitor or cardio-selective beta blocker (to exclude patients who do not have LVF but have been incorrectly categorised as LVF) • number of patients with a diagnosis of LVF on a non cardio-selective beta blocker (to determine the number of patients with LVF who remain on this type of medication)

Indicator 16: Lipid management in coronary artery disease

Category	Clinical management
Clinical indicator	The percentage of active patients with known coronary heart disease who have been prescribed lipid lowering therapy.
Rationale	Coronary artery disease (CAD) is a common condition in general practice with strong evidence base for appropriate management. Lipid modifying therapy is recommended in patients with CAD to prevent future coronary heart disease (CHD) events. Multiple placebo-controlled studies, in which all participants had CHD at study entry, have demonstrated the effectiveness of lipid management in CAD. Meta-analyses (1) have indicated that statin therapy was associated with a statistically significantly reduced risk of: • all-cause mortality (RR 0.79, 95% CI 0.70 to0.90) • CVD mortality (RR 0.75, 95% CI 0.68 to 0.83) • CHD mortality (RR 0.72, 95% CI 0.64 to 0.80) • fatal MI (RR 0.57, 95% CI 0.45 to 0.72) • non-fatal MI (RR 0.69, 95% CI 0.59 to 0.79) • unstable angina (RR 0.82,95% CI 0.72 to 0.94) • hospitalisation for unstable angina (RR 0.90, 95% CI0.84 to 0.97) • non-fatal stroke (RR 0.75, 95% CI 0.59 to 0.95) • new or worsening intermittent claudication (RR 0.64, 95% CI 0.46 to 0.91) • coronary revascularisation (RR 0.77, 95% CI 0.69 to 0.85). **Reference** 1. NICE. Statins for the prevention of cardiovascular events. Technology Appraisal 94. Reviewed 2008. Available at www.nice.org.uk/nicemedia/pdf/TA094guidance.pdf. [Accessed 13 October 2011].
Level of evidence	Level 1, A
Yes/No/NA indicator	Not applicable
Numerator	Number of active patients with known coronary artery disease prescribed statin or lipid lowering therapy
Denominator	Number of active patients with known coronary artery disease
Implementation	Can be collected using the CAT tool. This indicator requires the accurate documentation of an accurate diagnosis of coronary artery disease within patient health records. The practice should undertake data checks of patient health records to confirm accurate diagnoses and to exclude patients who do not have CAD (eg patients who present with angina type pain but subsequently have CAD excluded). For example, practices should check the number of patients with CAD / angina without a beta blocker, without an anti lipid and without antithrombotic medication.

Indicator 17: Patient access to cognitive behaviour therapy

Category	Clinical management
Clinical indicator	Our practice provides appropriate access to cognitive behaviour therapy.
Rationale	Cognitive behaviour therapy (CBT) is a focused approach based on the premise that cognitions influence feelings and behaviours, and those subsequent behaviours and emotions can influence cognitions. CBT has two aspects: behaviour therapy and cognitive therapy: 1. Behaviour therapy is based on the theory that behaviour is learned and therefore can be changed. Examples of behavioural techniques include exposure, activity scheduling, relaxation, and behaviour modification. 2. Cognitive therapy is based on the theory that distressing emotions and maladaptive behaviours are the result of faulty patterns of thinking. Therapeutic interventions, such as cognitive restructuring and self-instructional training are aimed at replacing such dysfunctional thoughts with more helpful cognitions, which leads to an alleviation of problem thoughts, emotions and behaviour. Skills training (eg. stress management, social skills training, parent training, and anger management) is another important component of CBT. *Extract from: Evidence-based psychological interventions in the treatment of mental disorders: A literature review. Third edn. Australian Psychological Society, 2010.* Cognitive behaviour therapy has become a widely used psychotherapy for major mental disorders. CBT methods were initially developed for depression and anxiety disorders and later they were modified for many other conditions. *Extract from: Wright JH. Cognitive behavior therapy: basic principles and recent advances. Focus, Spring 2006 4:173–8. Available at http://focus.psychiatryonline.org/cgi/content/full/4/2/173* Computer and internet based treatments are a self help option that offers patients the potential benefits of psychological treatment with less therapist involvement. They permit increased treatment flexibility, especially for individuals who do not want, or are not suitable for, drug therapy or do not wish to interact with a therapist (NICE, 2008) As with face-to-face CBT, pre-therapy assessment is recommended to ensure people are suitable for therapy and ongoing monitoring and support is required (NICE, 2008). *Health Technology Analysts Pty Ltd. Literature review of anxiety disorders. Revised 2010.* *NICE 2008 Computerised cognitive behaviour therapy for depression and anxiety Review of Technology Appraisal 97*
Level of evidence	Summary of the level of evidence for the interventions reviewed for mental disorders affecting adults, adolescents and children: **For adults** Adjustment disorder — Level III-1 Anorexia nervosa — Level III-2 Attention deficit & hyperactivity — Level II Binge eating — Level I Bipolar — Level II Body dysmorphia — Level I Bulimia nervosa — Level I Chronic fatigue — Level I Depression — Level I

	Generalised anxiety — Level I Hypochondriasis — Level I Obsessive compulsive — Level I Pain — Level II Panic — Level I Post traumatic stress — Level I Psychotic disorders — Level I Sexual disorders — Level II Sleep disorders — Level I Social anxiety — Level II Somatisation — Level I Specific phobia — Level I Substance use disorders — Level I **For children and adolescents** Sleep disorders — Level II Social anxiety — Level II Specific phobia — Level II Attention deficit & hyperactivity — Level I Chronic fatigue — Level I Conduct & Oppositional defiant — Level I Depression — Level I Enuresis — Level I Generalised anxiety — Level I Obsessive compulsive — Level I Substance use disorders — Level I, A *Evidence-based psychological interventions in the treatment of mental disorders: A literature review. Third edn. Australian Psychological Society, 2010. Available at: www.psychology.org.au/Assets/Files/Evidence-Based-Psychological-Interventions.pdf. [Accessed 25 October 2011].* The MoodGYM Training Program is a popular interactive program which incorporates cognitive behaviour therapy for depression. It was first launched in 2001 and is now in its third revision. MoodGYM has been extensively researched and its effectiveness has been demonstrated in randomised controlled trials. *Extracted from: Australian National University website at www.ehub.anu.edu.au/research/moodgym.php. Also visit http://moodgym.anu.edu.au/welcome*
Yes/No/NA indicator	✓
Numerator	Not applicable
Denominator	Not applicable
Implementation	The RACGP envisages providing examples of books, online resources and factsheets in further phases of the project.

Indicator 18: Antibiotic stewardship

Category	Clinical practice review
Clinical indicator	The ratio of active patients prescribed narrow spectrum versus broad spectrum antibiotics
Rationale	In an environment of increasing antimicrobial resistance, several professional and public health organisations are implementing evaluation methods and strategies directed at the quality use of antibiotics. The Infectious Diseases Society of America and the Society for Healthcare Epidemiology of America collaboratively reviewed antimicrobial stewardship (AMS) strategies. The review showed that comprehensive AMS programs consistently demonstrated a decrease in antimicrobial use (in the order of 22–36% reduction) and significant cost savings (1). Similarly, authors systematically reviewed 66 studies on AMS interventions for the Cochrane Collaboration (2). They reported improved drug use in 81% of the studies that examined optimising antimicrobial use. Reducing unnecessary antimicrobial use and optimising treatment minimises the potential for selecting resistant organisms. There are many examples where changes in antimicrobial prescribing practices have had a significantly beneficial effect on outbreaks of resistant pathogens. While the evidence mainly refers to hospital based care, similar rationales are being used in primary care where health services are adopting local antibiotic policies. In the context of increasing antimicrobial resistance, the European Surveillance of Antimicrobial Consumption (ESAC) aimed to develop valid drug-specific clinical indicators for outpatient antibiotic use in Europe. One of these, the ratio of narrow versus broad spectrum antibiotic use; rated highly for its contribution to addressing antibiotic resistance, patient health benefit, cost effectiveness, and public health policy (1). The use of β-lactamase sensitive penicillins, first generation cephalosporins and erythromycin represent commonly used narrow spectrum antibiotics. In contrast to combinations of penicillins with β -lactamase inhibitor, second and third generation cephalosporins and newer macrolides (so-called broad spectrum antibiotics) the use of narrow spectrum antibiotics allows the treatment of infections caused by susceptible bacterial strains without excessive elimination of normal flora and thus lowers the selection pressure for resistance. Furthermore, broad spectrum antibiotics represent first line therapy in only a limited number of presentations in ambulatory care (1). **References** 1. *Extract from European Surveillance of Antimicrobial Consumption (ESAC): clinical indicators for outpatient antibiotic use in Europe. Coenen S, Ferech M, Haaijer-Ruskamp FM, et al: the ESAC Project Group. Qual Saf Healthcare2007;16:440–445. doi: 10.1136/qshc.2006.021121.* 2. *Extract from: Jamtvedt G, Young JM, Kristoffersen DT, et al. Audit and feedback: effects on professional practice and healthcareoutcomes. Cochrane Database of Systematic Reviews 2006, Issue 2. Art. No.: CD000259. DOI: 10.1002/14651858.CD000259.pub2.*
Level of evidence	Level V
Yes/No/NA indicator	Not applicable
Numerator	Number of active patients prescribed narrow spectrum antibiotics
Denominator	Number of active patients prescribed broad spectrum antibiotics

Implementation	The evidence suggests that practices should be mindful of over-prescribing antibiotics in general and that narrow spectrum antibiotics should generally be prescribed in preference to broad spectrum antibiotics. General practices should define their own range of acceptable prescribing ratios for narrow versus broad spectrum antibiotics considering the limited number of instances where combinations of penicillins with β -lactamase inhibitor, second and third generation cephalosporins and newer macrolides (so called broad spectrum antibiotics) represent the first line antibiotic. The practice should take concerted action to maintain or improve these prescribing ratios. Practices should be able to obtain PBS data to undertake this clinical practice review.

Indicator 19: Audit of patients newly diagnosed with malignancy

Category	Clinical practice review
Clinical indicator	Our practice undertakes a periodic audit of active patients diagnosed with malignancy to examine avoidable delays in diagnosis
Rationale	Cancer is a major health problem in Australia and has recently overtaken cardiovascular disease as the leading cause of the burden of disease and injury (1,2). Diagnostic delay of cancers is a recognised concern of GPs (3). Figures from medical defence organisations show a regular trend in claims against GPs for delayed diagnosis of cancer (4). A 10 year audit of GP claims undertaken by MDA Australia in 2011 revealed that 15% of all GP claims relate to failure to diagnose cancer. The past decade has seen improvements in cancer care in the developed world, and as a result there have been significant reductions in mortality rates - almost a 20% reduction since 1995. Australia has very good cancer care outcomes (as measured by high rates of five-year survival) by international standards (5) and outcomes are continuing to improve in line with advances in cancer treatment and management. However, opportunities exist for further improvements across the cancer control spectrum to help ensure Australia meets the challenges arising from the converging demands of increasing cancer incidence and treatment complexity. Making an accurate diagnosis can sometimes be difficult in primary care because of nonspecific symptoms at presentation. Many patients will have comorbidity which can make the evaluation of symptoms complex (eg. tiredness which can indicate cancer) (7). What constitutes a delayed diagnosis and the effect of that delay is a complex and much debated issue in cancer management. Cancer diagnoses are made on screening, as incidental findings and following the presentation of an individual with symptoms to a healthcare practitioner. A delay in diagnosis can occur for many reasons such as: • an individual does not attend for screening • the screening service does not diagnose the cancer or initiate a treatment pathway • an incidental finding is not appropriately acted upon • an individual does not recognise a symptom of cancer • an individual with symptoms does not seek healthcare advice • a healthcare practitioner or system fails to detect a cancer or initiate a treatment pathway (eg. delayed access to public colonoscopy services). Late diagnosis is a patient safety issue. To improve routine monitoring and evaluation of delayed diagnosis, general practices should initially review new diagnoses of the following cancers : • breast • bowel • cervix • melanoma • lung cancer • brain.

	References 1. Australia Bureau of Statistics. 1370.0 – Measures of Australia's Progress, 2010. Health: Burden of disease. Available at www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/1370.0~2010~Chapter~Burden%20of%20disease%20(4.1.6.4). [Accessed 11 October 2011]. 2. Australian Institute of Health and Welfare 2010. Australia's health 2010. Australia's health series no. 12. Cat. no. AUS 122. Canberra: AIHW, 2010; p. 57. Available at www.aihw.gov.au/publications/aus/ah10/ah10.pdf. [Accessed 11 October 2011]. 3. RCGP Quality Unit. In safer hands. Issue 6. London: Royal College of General Practitioners, 2004. 4. MDA National – 10 year audit GP Claims 2001 -2011 – personal communication 2011 5. *Review of national cancer control activity in Australia – the project. Available at www.canceraustralia.gov.au/sites/default/files/user-upload/publications/Audit_Ch_17_Conclusions.pdf. [Accessed 25 October 2011].* 6. Silk N.An Analysis of 1000 Consecutive General Practice Negligence Claims. MPS Research Document. Published as What Went Wrong in 1000 Negligence Claims and Findings from 1,000 Negligence Claims – Part Two, HealthcareRisk Report, November (2000) and February (2001). 7. National Patient Safety Agency. Delayed diagnosis of cancer: Thematic review, 2010. Available at www.nrls.npsa.nhs.uk/EasySiteWeb/getresource.axd?AssetID. [Accessed 11 October 2011].
Level of evidence	Level V
Yes/No/NA indicator	✓
Numerator	Not applicable
Denominator	Not applicable
Implementation	Depending on the size of the practice, it would be reasonable to undertake a 'periodic audit' every 1 or 2 years. In the context of general practice and qualified privilege, the audit should have generalised findings which do not include documentation on individual patients. Practices may find it helpful to utilise resources from the Royal College of General Practitioners particularly the National Cancer Diagnosis audit tool (Excel spreadsheet) at: http://www.rcgp.org.uk/clinical_and_research/circ/effectiveness__evidence/audit/cancer_audit_in_primary_care.aspx

Indicator 20: Use of radiology in low back pain

Category	Clinical practice review
Clinical indicator	The percentage of active patients in defined age groups who receive lumbar spine diagnostic imaging
Rationale	Adults with low back pain are a common general practice presentation. Acute low back pain generally has a favourable natural history of resolution and is effectively managed with conservative therapies. Most patients do not need immediate imaging (1). Concerns have been raised in the Australian context regarding possible overuse of diagnostic imaging for low back pain. Imaging is an important driver of low back pain costs. It can also lead to additional tests, follow up and referrals, and may result in an invasive procedure of limited or questionable benefit (2). Patients with suspected serious pathology should be investigated with tests relevant to the possible cause. Diagnostic imaging is indicated for patients with low back pain only if they have severe or progressive neurologic deficits or signs or symptoms that suggest a serious or specific underlying condition. In other patients, evidence indicates that routine imaging is not associated with clinically meaningful benefits but can lead to harms (3). Addressing inefficiencies in diagnostic testing could minimize potential harms to patients and have a large effect on the use of resources by reducing both direct and downstream costs. **References** 1. Chou R, Qaseem A, Owens DK, Shekelle P; Clinical Guidelines Committee of the American College of Physicians. Diagnostic imaging for low back pain: advice for high-value healthcarefrom the American College of Physicians. Ann Intern Med. 2011 Feb 1;154(3):181–9. 2. Adelaide Health Technology Assessment, University of Adelaide. Systematic review of clinical practice guidelines on the management of acute / subacute soft tissue injuries to the lower back, 2008. Available at www.workcover.com/public/download.aspx?id=2905. [Accessed 11 October 2011]. 3. Australian Acute Musculoskeletal Pain Guidelines Group. Evidence-based management of acute musculoskeletal pain. Bowen Hills: Australian Academic Press; 2003. Available at www.nhmrc.gov.au/_files_nhmrc/publications/attachments/cp94.pdf. [Accessed 11 October 2011].
Level of evidence	Routine imaging tests are not recommended in acute nonspecific low back pain (Level III-2 evidence obtained from comparative studies) *Australian Acute Musculoskeletal Pain Guidelines Group. Evidence-based management of acute musculoskeletal pain. Bowen Hills: Australian Academic Press; 2003. Available a: www.nhmrc.gov.au/_files_nhmrc/publications/attachments/cp94.pdf. [Accessed 11 October 2011].*
Yes/No/NA indicator	Not applicable
Numerator	Number of active patients in each of the following age groups who receive lumbar spine X-rays, CT scans or MRI scans: 0–18; 19-65; over 65
Denominator	Number of active patients in each of the following age groups: 0–18; 19-65; over 65
Implementation	Practices will need to make their own decisions about what constitutes a reasonable level of lumbar spine diagnostic imaging for patients within different age groups.

Indicator 21: Reduction of tobacco consumption in patients with chronic obstructive pulmonary disease (COPD)

Category	Populations for interventions
Clinical indicator	The practice has a smoking cessation program for active patients who have chronic obstructive pulmonary disease and continue to smoke
Rationale	Health authorities have been advocating that general practices actively manage their clinical populations and subpopulations to ensure safety and quality of healthcare. The RACGP *Standards for general practices* (4th edition) describe characteristics of good clinical governance including 'systems to manage patients with chronic conditions systematically and to proactively identify those at special risk or those who would benefit from special intervention' (1). Targeting smoking cessation in patients with COPD within the practice is an indication of good clinical governance. A comprehensive review of smoking cessation in patients with respiratory diseases has been published by the European Respiratory Society. This review suggests smoking cessation programs should be made readily available. Health professionals play an important role in educating and motivating smokers as well as assessing their dependence on nicotine and providing assistance to quit. All health professionals should systematically identify smokers, assess their smoking status and offer them advice and cessation treatment at every opportunity (2). Pharmacotherapies double the success of quit attempts. Behavioural techniques further increase the quit rate (3). **References** 1. RACGP. Standards for general practices. 4th edition. South Melbourne: RACGP, 2010; p. 77 2. Zwar N, Richmond R, Borland R, et al. Supporting smoking cessation: a guide for health professionals. South Melbourne: RACGP, 2011. 3. The COPDX Plan: Australian and New Zealand Guidelines for the management of Chronic Obstructive Pulmonary Disease 2010 for the management of Chronic Obstructive Pulmonary Disease.
Level of evidence	Smoking cessation reduces the rate of decline of lung function (Level I, A). Pharmacotherapy with nicotine replacement therapy or bupropion sustained release is an effective aid to assisting motivated smokers to quit (Level I). In the absence of contraindications, pharmacotherapy should be offered to all motivated smokers who have evidence of nicotine dependence. Choice of pharmacotherapy is based on clinical suitability and patient choice (Strength A)
Yes/No/NA indicator	✓
Numerator	Not applicable
Denominator	Not applicable
Implementation	Data can be collected using the CAT tool. This indicator requires the accurate documentation of an accurate diagnosis of chronic obstructive pulmonary disease and smoking status within patient health records. The practice should undertake data checks of patient health records to confirm accurate diagnoses and accurate smoking status and to exclude patients who do not have chronic obstructive pulmonary disease. RACGP. Smoking cessation guidelines for Australian general practice. South Melbourne: The RACGP, 2004. Available at http://www.racgp.org.au/guidelines/smokingcessation

Indicator 22: Intervention to reduce benzodiazepine use in patients aged 60 years or more

Category	Populations for interventions
Clinical indicator	The practice has an intervention program for minimising benzodiazepine use in active patients aged 60 years or more
Rationale	Targeting interventions to high risk populations within the practice is an indication of good clinical governance. The RACGP *Standards for general practices* (4th edition) describe characteristics of good clinical governance including 'systems to manage patients with chronic conditions systematically and to proactively identify those at special risk or those who would benefit from special intervention' (1). Long term use of benzodiazepines (BZDs) is common in Australia. With regard to BZD use in patients over 60 years, a recent review comparing sedatives with placebo demonstrated that adverse cognitive events were 4.8 times more common, adverse psychomotor events 2.6 times more common, and reports of daytime fatigue 3.8 times more common in the trial group. Improvements in sleep with sedative use were statistically significant, but the magnitude of the effect was small. In summary, the benefits of these drugs may not justify the increased risks, particularly if the patient is over 60 and has additional risk factors for cognitive or psychomotor adverse events (2). As has been demonstrated in several trials, withdrawal of BZDs should be flexible. A key element is a slow step down process of about 25% reduction each week (2). A recent systematic review of long term BZD use revealed that BZD use could be reduced by 'minimal interventions' (eg a simple tailored letter or consultation). For a tailored letter, the 'number needed to post' is about 12 for one additional person to cease BZD use (2). While only a modest percentage of patients will reduce or cease their BZD, the minimal effort required suggests it would have a high benefit-to-effort ratio. Widespread use of this strategy would be clinically and economically worthwhile. **References** 1. RACGP. Standards for general practices. 4th edition. South Melbourne: RACGP, 2010; p. 77 2. Mugunthan K, McGuire T, Glasziou P. Minimal interventions to decrease long-term use of benzodiazepines in primary care: a systematic review and meta-analysis. Br J Gen Pract 2011;61(590):e573-e578. Available at www.nelm.nhs.uk/en/NeLM-Area/Evidence/Medicines-Management/References/2011---September/09/Minimal-interventions-to-decrease-long-term-use-of-benzodiazepines. [Accessed 11 October 2011].
Level of evidence	Level 1
Yes/No/NA indicator	✓
Numerator	Not applicable
Denominator	Not applicable
Implementation	The practice will need to get total BZD prescriptions supplied for active patients aged >60 years from PBS Medicare data.

	Monitor total intake in diazepam 10mg equivalents. Key elements of an intervention program and a sample letter for designated active patients are included in the appendix. In summary a tailored letter should express: • the GP's concern over long term use of a hypnotic – ideally name the drugs and the time frame relevant to the patient • the potential side effects of long term BZD use • advice to reduce BZD use • practical steps to safely and gradually reduce or cease BZD use in a manner designed to decrease the likelihood of withdrawal symptoms • an invitation to discuss the issue further with the GP. The practice could measure the effectiveness of its intervention program by comparing the consumption rate of BZD for active patients aged >60 pre- and post-intervention.

Appendices

The following appendices will form part of the final document. Appendices C to G are under development.

A. **Template Quality Report**
B. **Levels of evidence for clinical indicators**
C. **Indicator 2 – Template practice policy on benzodiazepine reduction**
D. **Indicator 2 - Template practice policy on opioid reduction**
E. **Indicator 2 – Template practice policy on opioid dosing thresholds**
F. **Indicator 2 – Template practice policy on continuation of opioid management plans for patients with chronic non-malignant pain**
G. **Indicator 2 – Template practice policy on alprazolam prescribing**
H. **Indicator 22 – Template intervention program for benzodiazepine reduction**

Appendix A: Template Quality Report

The following is a report to demonstrate the draft RACGP clinical indicators. This exhibit is provided to enable practitioners to visualise and contemplate a completed quality report and evaluate it against its intended purpose.

The intended purpose of the report is to support:

1) general practices to establish, implement and maintain reasonable processes to

- improve the quality of their services,
- and improve and monitor the health and wellbeing of their patients,

2) GPs in monitoring the safety and quality of their general practice.

These sample items illustrate an easy mechanism for recording and monitoring results for a 'yes/no' indicator. It is envisaged that all indicators where calculations and supportive data are required will be automated via clinical auditing tools, or are available from other sources.

The notes are provided as a practice evaluation/interpretation of the indicator.

Note: all data extracted is based on active patients

Category 1: Quality and safety infrastructure

Indicator Details	Audit Period	2007 - 09	2008 - 10	2009-11
1. Practice infrastructure to support safety and quality of patient care				
Our practice:				
a) Has a designated clinician who has clear lines of responsibility and accountability for encouraging improvement in safety and quality of clinical care		No	No	No
b) Has clinical risk management systems to enhance the quality and safety of our patient care		Yes	Yes	Yes
c) Downloads pathology results in HL7 format		Yes	Yes	Yes
d) Uses a clinical audit or similar tool.		Yes	Yes	Yes

Example notes on quality and safety infrastructure:

Ongoing responsibilities for quality management has yet to be determined by the Practice

Category 2: Clinical policy

Indicator Details	Audit Period	2007 - 09	2008 - 10	2009-11
2. Practice policy on prescribing addictive medication				
Our practice has a policy on:				
Safe opioid tapering and withdrawal		No	No	Yes
Safe benzodiazepine tapering and withdrawal		No	No	Yes
Opioid prescribing thresholds for chronic non malignant pain		No	No	No
Continuation of pain management programmes		No	No	No
Alprazolam prescribing		No	No	No
Other				

Example notes on clinical policy:

Development of formal policies around drugs of dependency has been considered for some time. The provided policies will be reviewed and discussed by all staff at the next clinical meeting

Category 3: Organisation of services

Indicator Details	Audit Period	2007 - 09	2008 - 10	2009-11
3. Practice system for triaging patients with acute illness				
Our practice can demonstrate how we identify, prioritise and respond to life threatening and urgent medical matters (triage) for:				
a) sick/febrile children (<5 years)		Yes	Yes	Yes
b) patients with chest pain		Yes	Yes	Yes
c) patients with mental health disorders.		No	No	No

Indicator Details	Audit Period	2007 - 09	2008 - 10	2009-11
4. Practice system to support palliative and end of life care				
Our practice has a system to support palliative and end-of-life care				
a) Our practice has a policy to support palliative and end-of-life care		No	No	No
b) Our practice has staff with advanced skills/training in palliative care		No	Yes	Yes
c) Our practice has a key palliative care contact person(s)		No	No	No
d) Our practice has formal/informal links with state funded palliative services		Yes	Yes	Yes
e) Our practice provides home visits to support palliative and end-of-life care.		Yes	Yes	Yes

Example notes on organisation of services:

Development of a formal response for mental health patients has not been a recognised issue for the practice. However discussions with front line administration staff has highlighted difficulties in this area. Formal process change will come. The practice continues its policy of seeing all sick children on the day. Patients who complain of chest pains to reception staff either by phone, or at presentation have well-rehearsed process for management.

Palliative care services are strong with doctors who have completed further training in palliative care. The practice has good relations with public terminal care services.

There are issues about identifying non cancer palliative patients, and the formal implementation of advance care plans etc. The practice does need a designated liaison person within the practice to co-ordinate external services, as well as start to organise internal quality palliative mechanisms. Funding remains an issue.

Category 4: Preventive health and screening

Indicator Details	Audit Period	2007 - 09	2008 - 10	2009-11
5. Assessment of absolute cardiovascular risk				
The % of patients with all required information recorded to allow for an absolute cardiovascular risk assessment:				
a) General population aged 45–74 years	Patients	5873	5623	5305
	% Fully assessed	59.9%	66.2%	71.6%
b) ATSI population aged 35–74 years.	Patients	18	15	22
	% Fully assessed	77.0%	66.7%	63.0%

Indicator Details	Audit Period	2007 - 09	2008 - 10	2009-11
6. Screening for smoking status				
The % of active patients aged >12–80 years who have a smoking status recorded	Patients	13389	12755	11681
	% Screened	77.7%	81.7%	86.0%
	Non-smoker	47.50%	50.20%	52.90%
	Ex-smoker	16%	17.30%	19.40%
	Smoker	14.20%	14.10%	13.70%

Indicator Details	Audit Period	2007 - 09	2008 - 10	2009-11
7. Screening for alcohol consumption				
The % of active patients in target range 15 – 80 years who have an alcohol status recorded	Patients		12279	11298
	% Screened	7.2%	17.1%	26.7%
	Non-drinker	2.20%	4.90%	7.60%
	Drinker	5%	12.20%	19.10%

Indicator Details	Audit Period	2007 - 09	2008 - 10	2009-11
8. Screening for cervical cancer				
The % of sexually active female patients aged 18-70 years who have been screened for cervical cancer				
The number of whole patient equivalents of female patients aged 20-69 inclusive		5860	5709	5236
PIP Data		51.4%	49.4%	47.8%
CAT Data				

Note PIP data and CAT data calculate rates using different techniques and data

Indicator Details	Audit Period	2007 - 09	2008 - 10	2009-11
9. Childhood immunisation rates				
The % of fully immunised children for their age				
a) 0 to <4 months		..	.	.
b) 4 to <12 months		98.2%	96.2%	98.2%
c) 12 to <18 months		93.2%	88.6%	85.1%
d) 18 to <48 months		97.0%	97.5%	98.4%
e) 48 to <84 months		92.5%	95.5%	94.7%
f) 84 +		100.0%	100.0%	100.0%
Overall		95.2%	96.0%	95.7%

Indicator Details	Audit Period	2007 - 09	2008 - 10	2009-11
10. Screening for chlamydia				
The % of female patients aged 15-25 years screened for chlamydia		NA	NA	NA
Number of female patients 15-25		1246	1186	1010

Example notes on preventive health and screening:

Development of optimal preventive health and has been a priority for the practice over many years. This is evidenced by high vaccination rates, high CVS risk screenings, and smoking assessments. Alcohol screening became an issue 3 years ago and shows positive signs on improvement.
Chlamydia screening remains problematic due to the intermittent nature of patients presenting in this age group. A new system may be trialled in future in association with contraception.

Cervical screening is an area of concern for the practice. Nurse practitioners at the public hospital have been targeting the breast screening unit, pregnancy clinics for provision of “free pap smears”. Whilst the service is completed, the resultant Pap is not recorded on medicare databases as it is performed by the hospital. Further, these patients subsequently are removed from the practice recall system – as we use the State based recall system. The fragmentation of care results in a continually declining Pap smear rate over several years.

Category 5: Clinical documentation

Indicator Details	Audit Period	2007 - 09	2008 - 10	2009-11
11. Improving clinical documentation of chronic kidney disease				
The % of patients with an eGFR <30 with a diagnosis of chronic kidney disease documented		50.0%	50.5%	51.9%
Patients with eGFR < 30		116	111	104
The number of patients with no diagnosis of chronic kidney disease and eGFR < 30		58	55	50

Example notes on clinical documentation:

Documentation for CKD is suboptimal. Further training is required for all clinical staff to recognise the importance of documenting this condition.

Category 6: Clinical assessment

Indicator Details	Audit Period	2007 - 09	2008 - 10	2009-11
12. Screening for retinopathy in patients with diabetes				
The % of patients with diabetes who have retinal screening performed in last 2 years		63.5%	55.7%	51.3%
Number of patients with diabetes >12 yrs recorded		1065	1097	1100
Number of patients with diabetes >12 yrs who had retinal screening performed in last 2 years		676	611	564
Data check - Number of patients with fasting BGL > 7 and no diagnosis of diabetes				
Note -A tool to review possible undiagnosed or undocumented diabetes. Not all records of fasting BGL >7 are diabetics. Some patients have been on steroids, others have "fasting BGL" done - when in fact had meal within 1 hr. However missed diagnoses do occur.				
Data check - Number of patients with HbA1c > 6.5 and no diagnosis of diabetes				
Note - A tool to review possible undiagnosed or undocumented diabetes. It is acknowledged that HbA1c 6.5 may become standard. Sometimes these patients have diabetes inserted as an abbreviation or incomplete text				
Data check - Number of patients with fasting BGL < 5.5 and no antidiabetic medication and a diagnosis of diabetes				
Note - A tool to review inadvertent over diagnosis of diabetes. Advise caution, as many of these will also be patients with diabetes who have instituted lifestyle changes to the point of being diabetes free.				

Indicator Details	Audit Period	2007 - 09	2008 - 10	2009-11
13. Screening for nephropathy in high risk patients				
The % of high risk patients who have been screened for nephropathy (eGFR and albuminuria)				
a) active patients with diabetes seen in the last year	Patients	1065	1097	1100
% screened in the last year	eGFR	87.6%	83.2%	81.1%
	Microalb	67.1%	62.9%	53.8%
	M/A and eGFR			
b) active patients with hypertension seen in the last year	Patients	2843	2966	2932
% screened in last year	eGFR	88.6%	88.6%	86.6%
	Microalb	22.4%	22.7%	20.9%
	M/A and eGFR			
c) Active ATSI patients > 35 years.	Patients	17	22	33
Greater than 35 yrs & screened in last 2 years	eGFR	87.4%	95.5%	84.8%
	Microalb	52.9%	50.0%	33.3%
	M/A and eGFR			

Example notes on clinical assessment:

It is a concern that our secondary screening / evaluation in chronic diseases seem to be declining. Reasons for this will be discussed at the next clinical meeting.

Category 7: Clinical management

Indicator Details	Audit Period	2007 - 09	2008 - 10	2009-11
14. Anti-platelet/anticoagulant therapy in patients with coronary artery disease				
The % of patients with coronary artery disease on aspirin, an alternative antiplatelet therapy, or an anticoagulant is being taken		84.1%	79.6%	78.3%
Number of Patients with CAD		845	869	865
Number of patients with CAD and on NO antithrombotic / anticoagulant		134	177	188
Number of patients with CAD and on antithrombotic / anticoagulant		711	692	677

Data Check - No of Patients with CAD without a BetaBlocker, without Antilipid, and without antithrombotic medication.			46	57
Note - A tool to assist in excluding patients with "presumed angina". Some patients who present with chest pain and are documented as "angina", are subsequently found to have a normal cardiovascular state. This audit assists in identifying these patients (not a totally fool proof tool)				
Data Check - No of Patients with CAD not seen in the last year				
Note - To enable review of those patients with CAD who may have died or left the practice				

Indicator Details	Audit Period	2007 - 09	2008 - 10	2009-11
15. Management of left ventricular failure				
The % of active patients with left ventricular failure prescribed:		281	299	300
a) angiotensin converting enzyme inhibitors or A2 Inhibitors		73.3%	72.2%	70.3%
b) heart failure selective beta blockers.		27.4%	30.7%	32.3%
c) Both drug classes		24.70%	26.70%	27.30%

Data check - Number patients on cardiac failure selective bblockers and no diagnosis LVF		38	41	44
Note - A tool to review possible undiagnosed / undocumented left ventricular dysfunction; a screen to detect patients who may have CAD, but diagnosis not documented. (Not a fully accurate tool)				

Data check - Number patients with LVF and not on ACE/ A2 and not on Heart Failure specific BBlocker		66	70	74
Note - To assist in determining those patients who may have left ventricular dysfunction incorrectly diagnosed Many older patients who present with peripheral oedema are often presumed to have heart failure. This may not always be the case.				
Data Check - Number of patients with LVF on a non heart failure selective betablocker		76	79	66
Note - To assist practitioners highlighting patients who may need medication change, or review of diagnosis. It may also identify a set who had transient LVF, and may not be a chronic condition.				
Data Check - Patients with LVF not seen in the last year				
Note - To enable review of those patients with LVF who may have died or left the practice				

Indicator Details	Audit Period	2007 - 09	2008 - 10	2009-11
16. Lipid management in coronary artery disease				
The number of active patients with existing coronary artery disease		845	869	865
% of patients on Lipid lowering therapy		76.4%	75.4%	76.5%
See previous data checks with CAD				

Indicator Details	Audit Period	2007 - 09	2008 - 10	2009-11
17. Patient access to cognitive behaviour therapy				
Our practice ensures patient access to cognitive behaviour therapy				
a) Our practice has a trained professional(s) delivering CBT onsite		No	No	No
b) Our practice can refer to professionally trained CBT providers external to the practice.		Yes	Yes	Yes
c) Our practice utilises internet sources and handouts as CBT resources.		No	No	No

Example notes on clinical management :

Data check items suggest a clean of the database is required before the cardiac indicators can be interpreted. The practice plans to undertake this process in the coming year.

Development of mental health services within the practice is considered a priority.

Category 8: Prescribing safety

No indicators under this category

Category 9: Clinical practice review

Indicator Details	Audit Period	2007 - 09	2008 - 10	2009-11
18. Antibiotic stewardship				
Ratio of patients prescribed narrow spectrum versus broad spectrum antibiotics				
We are undertaking this review		No	No	No

Indicator Details	Audit Period	2007 - 09	2008 - 10	2009-11
19. Audit of patients newly diagnosed with malignancy				
Our practice undertakes an audit of patients diagnosed with malignancy to examine avoidable delays in diagnosis				
We are undertaking this review		No	No	No
New diagnoses of Breast Cancer in last 2 years				
New diagnoses of Cervical Cancer in last 2 years				
New diagnoses of Bowel Cancer in last 2 years				
New diagnoses of Lung Cancer in last 2 years				
New diagnoses of Melanoma in last 2 years				
New diagnoses of Brain Cancer in last 2 years				

Indicator Details	Audit Period	2007 - 09	2008 - 10	2009-11
20. Use of radiology in low back pain				
The % of patients who require lumbar spine diagnostic imaging				
We are undertaking this review		No	No	No
< 14 yrs				
15-65 yrs				
65+ yrs				

Category 10: Populations for intervention

Indicator Details	Audit Period	2007 - 09	2008 - 10	2009-11
21. Reduction of tobacco consumption in patients with COPD				
The % of patients who have COPD and continue to smoke		25.5%	27.1%	27.1%
We are undertaking this intervention		No	No	No
Number of active COPD patients		396	435	454
The % active COPD patients smoking not recorded		6.1%	6.0%	4.6%
The percentage of COPD patients who are ex-smokers		55.3%	53.8%	53.7%
The percentage of COPD patients who have never smoked.		13.1%	13.6%	14.5%

Data check - The Number of COPD patients not seen in the last year				
Note - To enable review of those patients with COPD who may have died or left the practice				

Indicator Details	Audit Period	2007 - 09	2008 - 10	2009-11
22. Intervention to reduce benzodiazepine use in patients aged >60 years				
Minimising the % of older patients using taking benzodiazepines				
We are undertaking this intervention		No	No	No
Number active patients > 60 years seen in the last year		4557	4557	4431
Number of patients > 60 yrs prescribed BZDs		474	433	412
Percentage of patients > 60yrs prescribed benzodiazepines		10.40%	9.50%	9.30%

Data check - The Number of patients > 60 yrs not seen in the last year				
Note - To enable review of those patients > 60yrs who may have died or left the practice				

Appendix B: Levels of evidence for clinical indicators

Level of evidence: Most of the evidence supporting the clinical indicators has been sourced from NHMRC clinical guidelines where levels of evidence and grades of recommendation are defined according to the NHMRC *levels of evidence and grades for recommendations for developers of guidelines* (see Table 1 below).

There are several indicators that have been assigned Level V evidence as no evidence could be obtained from controlled trials or studies. However the RACGP clinical indicators Taskforce agreed these indicators should be included in the core indicator set based on their collective clinical experience.

Table 1

LEVELS OF EVIDENCE	
Level	**Explanation**
I	Evidence obtained from a systematic review of all relevant randomised controlled trials
II	Evidence obtained from at least one properly designed randomised controlled trial
III	Evidence obtained from any of the following: well designed pseudo randomised controlled trials (alternate allocation or some other method) comparative studies with concurrent controls and allocation not randomised (cohort studies), case control studies, or interrupted time series with a control group comparative studies with historical control, two or more single arm studies, or interrupted time series without a parallel control group
IV	Evidence obtained from case series, either post-test or pre-test and post-test
V	Opinions of respected authorities, based on clinical experience, descriptive studies or reports of expert committees
No evidence	After thorough searching no evidence was found regarding recommendations in general practice for the target disease or condition
GRADES OF RECOMMENDATION	
Strength	**Recommendation**
A	Body of evidence can be trusted to guide practice
B	Body of evidence can be trusted to guide practice in most situations
C	Body of evidence provides some support for recommendation(s) but care should be taken in its application
D	Body of evidence is weak and recommendation must be applied with caution

The evidence for some clinical indicators has been sourced from the Scottish Intercollegiate Guidelines Network (SIGN) where the grade of recommendation relates to the strength of the evidence on which the recommendation is based not the clinical importance of the recommendation (see Table 2 below).

Table 2

LEVELS OF EVIDENCE	
Level	**Explanation**
1++	High quality meta-analyses, systematic reviews of RCTs, or RCTs with a very low risk of bias
1+	Well-conducted meta-analyses, systematic reviews, or RCTs with a low risk of bias
1-	Meta-analyses, systematic reviews, or RCTs with a high risk of bias
2++	High quality systematic reviews of case control or cohort or studies High quality case control or cohort studies with a very low risk of confounding or bias and a high probability that the relationship is causal
2+	Well-conducted case control or cohort studies with a low risk of confounding or bias and a moderate probability that the relationship is causal
2-	Case control or cohort studies with a high risk of confounding or bias and a significant risk that the relationship is not causal
3	Non-analytic studies, e.g. case reports, case series
4	Expert opinion
GRADES OF RECOMMENDATIONS	
Strength	**Recommendation**
A	At least one meta-analysis, systematic review, or RCT rated as 1++, and directly applicable to the target population; *or* A body of evidence consisting principally of studies rated as 1+, directly applicable to the target population, and demonstrating overall consistency of results
B	A body of evidence including studies rated as 2++, directly applicable to the target population, and demonstrating overall consistency of results; *or* Extrapolated evidence from studies rated as 1++ or 1+
C	A body of evidence including studies rated as 2+, directly applicable to the target population and demonstrating overall consistency of results; *or* Extrapolated evidence from studies rated as 2++
D	Evidence level 3 or 4; *or* Extrapolated evidence from studies rated as 2+
GOOD PRACTICE POINTS	
✓	Recommended best practice based on the clinical experience of the guideline development group