Australian College of Rural and Remote Medicine

PCEHR Feedback

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Introduction

The Australian College of Rural and Remote Medicine (ACRRM) thanks the Minister, the Hon Peter Dutton, for the opportunity to contribute to the review of the current status and future development of the Personally Controlled Electronic Health Record (PCEHR).

ACRRM is recognised by the Medical Board of Australia as an Australian specialist medical college, and is accredited by the Australian Medical Council (AMC) to set standards and provide education, training and continuing professional development in the specialty of general practice. The College is also accredited to undertake a range of post-graduate assessments for overseas trained doctors to practice in Australia under the various AMC pathways.

Although the primary ACRRM qualification (Fellowship) will allow general practitioners to work as specialist GPs anywhere in Australia, the College is particularly committed to training and support of doctors who live and work in rural and remote areas throughout the country and the communities that they serve.

The extended skills required by rural and remote doctors includes comprehensive community primary care, hospital and emergency care, population health and extended specialised services. This full scope of general practice, or ‘rural generalist medicine’ as it is called, is specified in the ACRRM Primary Curriculum. Of particular relevance to the PCEHR review, the curriculum includes requirement for our Fellows (GPs etc.) to use technology (IMIT Statement) to optimise provision of, and access to, care for patients in rural and remote areas. This includes the fit for purpose use of relevant Clinical Information Systems (CIS), Shared records, telehealth, Secure messaging (pathology, referral, and discharge), Clinical decision support systems and Point of Care Testing (POCT).

Because of relative isolation, rural and remote doctors have been natural innovators and leaders in use of technology to bring health care to their communities. This includes development of patient information and recall systems to organise practice population health care, consultation at a distance delivered by radio, telephone, video-conferenced and internet technologies, point of care testing, imaging and so on. By virtue of their involvement across the care continuum – from community to clinic to hospital and in the home – rural and remote doctors can offer a unique perspective on electronic records, eHealth and continuity of care.

ACRRM therefore is well positioned to contribute to the review of the PCEHR and ehealth reforms.

For this review we would seek to make a distinction between eHealth and the PCEHR. The PCEHR, as eHealth record or repository controlled by the patient, is but one element of the eHealth agenda and should not be considered in isolation. More broadly, eHealth includes a range of technologies, services and clinical processes supported by various electronic tools. ACRRM provides this submission with a view to the adoption of eHealth as a whole.
Summary of ACRRM position on eHealth

ACRRM supports the introduction of Shared Electronic Health Records as a strategy to address the current fragmentation of medical information spread across different locations and providers. This is especially important for rural and remote patients, who are often required to travel to access specialist services, and who are most likely to be transferred away from their local community in the event of a medical emergency or serious illness.

Two new health reports released this week – General practice activity in Australia 2012-13 and A decade of Australian general practice 2002-03 to 2012-13 – confirm the key role of GPs as leaders in primary care in Australia and the preferred first port of call for Australians. GPs must be engaged as a critical player in any ehealth reform. Rural and remote GPs must be specifically supported. It is this group who are faced with the most severe workforce shortages, have the highest patient to doctor ratios and are the most time poor.

The emphasis on the role of the GP in ehealth is appropriate; however more consideration of the role of consultant specialists, nurses, Aboriginal health workers and allied health professionals in their use of electronic records is needed.

General Practitioners strive to provide safe, effective and high quality care within the constraints of a patient consultation. The clinical source of ‘truth’ for patient information today is the patient’s notes, that are either on paper (rare in General Practice now, but still the norm in consultant specialist practice) or in the clinician’s own clinical information system (CIS) or a combination of both.

Currently, the PCEHR is a designed as a tool to share information among providers as determined by the patient. The patient controls what information is shared and which clinicians have access to the information.

When the patient receives care from a range of providers, having access to a tool that provides all the relevant patient information in a concise and reliable format, to all clinicians responsible for the care of that patient, ultimately benefits the patient and the healthcare providers.

This is especially important for rural GPs who provide ongoing care in the (physical) absence of specialists, but often supported with specialist advice via telephone or more recently telehealth arrangements.

EHealth needs to support the sharing of relevant clinical information to relevant healthcare providers responsible for the care of the patient. If this cannot be done in a patient controlled repository then another repository or redesign of the existing solution should be considered.

ACRRM considers that shared electronic health records and the use of secure messaging should be the cornerstone of team based care – which in regional rural and remote areas can be facilitated and optimised via telehealth arrangements. Referral, shared care and handover of patient care can be meaningfully supported by electronic clinical documents, including:

- Referrals and specialist letter (including versions for telehealth purposes),
- Hospital discharge summaries,
- Aged Care transfer documentation,
- Pathology orders and results,
- Diagnostic imaging orders, results and images and
- Prescription and supply of medications (including dispensed medicines) and home medication reviews.

ACRRM considers that there has been reasonable progress in the implementation of a number of foundations to support eHealth nationally. But in recent years there has arguably been an overemphasis on the implementation of the PCEHR at the expense of the broader roll out of the eHealth foundations.

This gap in functionality and red tape being experienced with the implementation of the eHealth foundations needs to be remedied before further investment is made in the national sharing of electronic patient medical records.

ACRRM recommends investment in national infrastructure including a simplified National Authentication system. The College recommends that success is rewarded, and that meaningful use is incentivised. Strengthen investment in clinical information systems (Specialist, GP, Diagnostic Services, Allied Health, Aged Care and Hospital). Incentivise specialist uptake of eHealth records and continued support of standardised secure messaging and clinical information exchange between care providers.

ACRRM recommends an overhaul of eHealth governance and leadership arrangements to improve transparency, accountability, consultation, strategic development, and implementation. Apply a standards based approach, involve ACRRM and industry and focus on meeting clinical needs, streamlining care and facilitating shared care and handover of care.

**Panel Review Topics**

1. Your experience on the level of consultation with key stakeholders during the development phase
2. The level of use of the PCEHR by health care professions in clinical setting
3. Barriers to increasing usage in clinical settings
4. Comments on standards for terminology, language and technology
5. Key clinician utility and usability issues
6. Key patient usability issues
7. Suggested improvements to accelerate adoption of the plan

**1. Your experience on the level of consultation with key stakeholders during the development phase**

It is with regret and disappointment that ACRRM has to report a near total failure of NEHTA to engage with the College as a key stakeholder. (Attachment 1, NEHTA Governance Arrangement). Despite numerous approaches (both formal and informal) by ACRRM to NEHTA and the Department, the College had been excluded from meaningful engagement up until October 2013.

ACRRM had been isolated from participation in the PCEHR governance arrangements. Ironically this exclusion occurred during a period when ACRRM was exercising national leadership in shaping and supporting clinical use of other
foundation elements of the ehealth reform (notably telehealth) across disciplines – GPs, specialists, hospital doctors, nurses, midwives and Aboriginal health workers. (See attachment 1 - PULSE IT article and attachment 2 ACRRM Telehealth Advisory Committee Telehealth (ATHAC) Standards Framework).

It is ACRRMs observation that there has been consultation with other clinical groups; the quality of that consultation is unknown as the College was not involved.

The other key organisations represented in the 3 levels of governance (NEHTA documentation attached) included:

A. PCEHR Peak Consultation and Communication Group - PPCCG

1. Royal Australian College of General Practitioners (RACGP)
2. Australian Medical Association (AMA)
3. Consumer Health Forum (CHF)
4. Pharmacy Guild of Australia (PGA)
5. Australian Primary Health Care Nurses Association (APNA)
6. Aged and Community Services Australia (ACSA)
7. Private Healthcare Australia (PHA)
8. Australian Medicare Local Alliance (AMLA)
9. Department of Health and Ageing (DOHA)
10. National E-Health Transition Authority (NEHTA)

B. Stakeholder Product Consultation Group - SPCG (NEHTA)

1. Royal Australian College of General Practitioners (RACGP)
2. Australian Medical Association (AMA)
3. Coalition of National Nursing Organisations (CONNO)
4. Pharmacy Guild of Australia (PGA)
5. Pharmaceutical Society of Australia (PSA)
6. Allied Health Professionals Association (AHPA)
7. Consumer Health Forum of Australia (CHF)
8. Health Informatics Society of Australia (HISA)
9. Royal Australasian College of Surgeons (RACS)
10. Royal Australasian College of Physicians (RACP)
11. Australian Association of Practice Managers (AAPM)
12. Australian Medicare Local Alliance (AMLA)
13. Australian Private Hospitals Association (APHA)
14. National Rural Health Alliance (NRHA)
15. Private Healthcare Australia (PHA)
16. National Health Chief Information Officers (via the NHCIO Forum)
17. A Medical Indemnity Organisation Rep

C. CUP Steering Group (NEHTA)

Representatives from NEHTA and the Department of Health

Representatives from the following organisations:
1. Royal Australian College of General Practitioners (RACGP)
2. Australian Medical Association (AMA)
3. Australian Medicare Local Alliance (AMLA)
4. National Aboriginal Community Controlled Health Organisation (NACCHO)
5. Rural Doctors Association of Australia (RDAA)
6. Australian Primary Health Care Nurses Association (APNA)
7. Improvement Foundation Australia (IF)

In was out of frustration with the direction of evolution of the PCEHR, and our failure (over a 3 year period) to gain a place on the any NEHTA or DoHA governance committee, or any traction whatsoever with NEHTA, that the College directly approached the Department of Health at the Executive level - Mr Paul Madden Deputy Secretary and Chief Information and Knowledge Officer (CIKO) with our offer to participate. It was only at this point that the ACRRM voice was heard.

ACRRM genuinely welcomes this clear signal of a change in policy direction and willingness to engage with the College and we are happy to contribute to the evolution of eHealth reform.

In October 2013 ACRRM was belatedly offered a place on the newly established Clinical Usability Program (CUP) and we now participate in the department’s consultation regarding Pathology and Diagnostic Imaging integration. In November the NEHTA CEO (Mr Fleming) and senior department officers (Mr Butt and Ms Granger) participated in a panel session at ACRRM/RDAA National Conference (Rural Medicine Australia 2013). They spoke frankly about the opportunities and challenges related to creating a more connected health system and the PCEHR. The session was webcast to broaden access to this discussion, which can be heard by clicking on the following links:

Part 1 David Butt and Fionna Granger
Part 2 Peter Fleming
Part 3 Discussions

The College welcomes this clear change in policy (to engage with ACRRM) and we are happy to contribute to the evolution of eHealth reform.

**Insufficient Clinical Input?**

ACRRM notes the general criticism in the medical press that there was insufficient clinical input. ACRRM agrees that there was insufficient breadth and quality of strategic clinical input (as well as industry input). However it is not true that the medical profession was not consulted nor that GPs were not involved.

There was significant engagement (and funding) provided to selected medical organisations to guide development and promote the PCEHR.

For example, the Royal Australian College of General Practitioners (RACGP) has been heavily represented at all levels of governance related to the PCEHR from the outset and has been in receipt of substantial grant funding from DoHA to provide input into and to promote the PCEHR.

It is also the case that high profile clinical leaders from both the RACGP and AMA were recruited to manage change and ensure clinical input into the PCEHR.
Past Presidents of both the RACGP (Dr Chris Mitchell) and the AMA (Dr Mukesh Haikerwal) have had high profile salaried leadership roles in NEHTA. Whilst employed as the Head of Adoption, Benefits and Change at NEHTA, Dr Mitchell also chaired the board of RACGP Oxygen Pty Ltd - a controlled entity and technology enterprise established by the RACGP in 2011. Another RACGP representative, Dr Nathan Pinskier, served on two NEHTA advisory committees, was engaged with the NEHTA Clinical Unit and is also an RACGP Oxygen Pty Ltd board member. The NEHTA Model of Ehealth Care display is located in the RACGP head office.

The NEHTA clinical leads (the GPs included members of the RACGP eHealth standing committee and board members of RACGP Oxygen) participated in the $2.5 million (DoHA funded) RACGP PCEHR Advocacy Workshop Project[1], that was funded by DoHA to conduct workshops for GPs and staff across Australia. This project was still operating in Oct 2013 (GP13 conference).

These workshops saw the RACGP and its GP representatives advocating for the uptake of the PCEHR in its current form whilst at the same time the RACGP began publically criticising NEHTA and DoHA for not consulting with the profession and for producing a critically flawed product.

It is the view of ACRRM that any blame for deficits in clinical functionality and design of the PCEHR must be shared by others, and cannot be wholly placed with NEHTA and the Department. Future development of the PCEHR and eHealth should seek to strengthen systems of probity and management of conflict of interest in dealings with peak medical bodies and their leadership in provision of strategic advice, consultancies, employment and in related -party dealings.

Despite heavy investment by the taxpayer in PCEHR technical design and in the engagement of selected medical groups, it is clear that consultation and engagement measures were not sufficient to produce a clinically useful system that would convince the GPs that participation in the current PCEHR was worthwhile.

Notwithstanding the debate about the value of the current PCEHR, it should also be noted that there has been particularly poor penetration of understanding of the PCEHR throughout rural and remote Australia. (Member feedback to ACRRM, RMA2013 consultation and feedback )

It is important to ensure that this lack of penetration is addressed with appropriate education and information strategies to support implementation of a revised product and process for eHealth reform.

ACRRM volunteered to be part of this reform in our 2011 submission, but the offer was ignored.

[1] RACGP was originally required by the Department sub- contract ACRRM to run the rural workshops however ACRRM withdrew from the project as disagreements regarding governance content, approach and funding could not be resolved. However ACRRM did complete work with RACGP in the development of ehealth educational resources which focused on a more comprehensive view of ehealth (other than the PCEHR)- examining the Clinical,, Technical and Contextual requirements for ehealth – compliant with ACRRM domains -Telehealth standards Framework.
The College has focussed its energies on the TeleHealth part of the reform with assistance from the department to contribute to the relative success of the MBS TeleHealth initiative.

Evidence of ACRRM recognition of the importance of the broader eHealth agenda to rural communities and practitioners the College has self-funded the following, independent of NEHTA or government:

- Curriculum development: defining the IMIT requirements including eHealth skill-set that is require of GPs training towards Fellowship of ACRRM, thereby shaping the scope of practice of the future workforce (see attached)
- Web-based resources for members: development of an ehealth discussion forum and information on a dedicated website that now has a user base of >35,000 to disseminate information and invite discussion and collaboration.

We hope that the government and other agencies will now work with ACRRM and industry as well as continue to work with other relevant bodies to refine the model for shared records, its utility and redirection.

ACRRM through our membership, project management experience, commitment to collaboration, and deep understanding of technology and quality of care issues, has much to offer.

ACRRM should be a key partner in the development of the future ehealth strategy.

**Recommendation in response to Topic One - Your experience on the level of consultation with key stakeholders during the development phase**

ACRRM recommends an overhaul of eHealth governance and leadership arrangements to improve transparency, accountability, consultation, strategic development, and implementation. Involve ACRRM as well as other key stakeholders (including industry) and focus on meeting clinical needs, streamlining care, facilitating shared care and handover of care.

ACRRM is well positioned to

- Assist in channelling clinical input to ensure usability and practicability. e.g. using ACRRM connectedness with membership and other health professionals using traditional and new media (including social media, ACRRM eHealth website and forums [www.ehealth.acrrm.org.au](http://www.ehealth.acrrm.org.au) (>35,000 users))
- Leverage existing relationships, such as those established by ACRRM for telehealth, (the ACRRM Telehealth Advisory Committee - see attachment 6) for engagement with specialists, nurses as well as GPs to contribute to the implementation of eHealth functionality as a component to quality shared care arrangements. ACRRM has established an eHealth community at [www.ehealth.acrm.org.au](http://www.ehealth.acrm.org.au). This community of registered Specialists, GPs, Nurses, Aboriginal Health workers, Medicare Local and Medical college staff and Practice Managers actively contribute to the sharing information and resources. To date over 35,000 individuals has access resources from the site.
- Develop education related to the use of eHealth functionality for rural GPs
2. The level of use of the PCEHR by health care professions in a clinical setting

ACRRM survey data indicates that very few members are actively participating in the PCEHR, citing reasons explored below.

3. Barriers to increasing usage (of the PCEHR) in clinical settings

ACRRM consulted with members to gain insight into a range of issues associated with the perceived poor uptake of the PCEHR in general practice.

Participants were asked whether they had encountered any difficulties or barriers to implementing eHealth functionality into their practice. The most commonly cited barriers (outside the lack of perceived clinical usefulness and value of the PCEHR) involved practitioner concerns about maintaining the accuracy, security, and confidentiality of patient data. This concern correlates with medico-legal concerns about potential penalties imposed for breaches of data security and other unforeseen consequences of making patient data available in an electronic format.

In addition to the medico-legal, data ownership, privacy and security issues highlighted in the survey, other issues were identified by members in online forums, email communication and an eHealth workshop at our National conference. They identified issues such as clinical utility, usability, impact on workflow, impact on workload, data quality control, patient safety, poor quality internet connectivity and clinical relevance issues.

In addition, electronic connectivity between GPs with Specialists, Hospitals and Allied Health is currently low due to a lack of ICT and eHealth implementations in these sectors and complexities associated with its use.

If information is not flowing electronically today between the patients’ healthcare providers then it’s a stretch to implement this for the PCEHR.

ACRRM recommends measures to increase the implementation of e-clinical systems used by other healthcare professionals (especially Specialists, Aged Care and Allied Health) to enable the management of patient care to occur electronically point to point before introducing the capability to share this information electronically with any other providers. The college recommends measures to continue to support an open national secure message delivery solution – interoperable across all vendors.

Today most ACRRM members are unable to receive electronic discharge summaries from a healthcare organisation and those that can, are faced with content that is not relevant or key information is missing, such as pathology. The value of electronic clinical documents needs to be increased for both creators and receivers.

Excerpt from rural doctors response:

“All I ever want from any e Record at this stage is a library of recent tests (+ results) and current/recent scripts. Names and contact details of doctors and their clinics doing the ordering and prescribing would also make some sense. I’d sign up for that.

In the (name deleted) EHR hospital discharge summaries are included (as a pdf I think, useless as 8 pages plus of waffle which reads like uuencoded enigma traffic - when all one needs is when and what (absolute maximum size of a hospital discharge record should never need to exceed a single page .....A4 in 12 font) and follow up instructions.”
Recommendations for Topic 3 - Barriers to increasing usage (of the PCEHR) in clinical settings

ACRRM recommends the optimisation, standardisation and enhancement of information transfer between health professionals to not only improve quality and safety of care but also to improve access to care for rural and remote patients (via enhanced data sharing accompanying telehealth consultations). There needs to be a major focus on data quality and interoperability.

ACRRM is already active in this space in exploring data sharing arrangements to support its successful telehealth services.

ACRRM recommends:

- A re-think of the model of patient control
- Redesign of the PCEHR to improve usability by clinicians - the current system is not valued or see as practical
- Incentivise Specialists to use a CIS to improve uptake of electronic patient records across the system.
- Build on shared care arrangements with specialists and develop that relationship as the basis for sharing data (as exemplified by telehealth)
- Safety - resolve legal, governance and privacy concerns (whether perceived or real)
- Focus on Clinical Benefit – currently no benefit is perceived. Quality Shared Health Summaries / Discharge Summaries will increase perceived benefit
- Focus on OPEN Secure Messaging system as a priority.
- Support implementation more appropriately - compensate clinicians

There are also a number of mandatory requirements for using the PCEHR solution. These requirements restrict the use of the solution if all cannot be achieved. Bandwidth and network speed is a problem in many rural and remote locations affecting the use of the internet and the running of medical software.

- Internet access
- Healthcare identifiers
- Patient has registered for an eHealth record
- Access has been granted by the patient

Recommendation

- Dedicated connection /Improved network speed to support the use of eHealth tools
- eHealth tools are architected to run efficiently in low bandwidth areas
- Software development to CDA level 3 to improve interoperability and architecture of the solution
Without a patient identifier communication with the PCEHR cannot occur. Accessing the Medicare Identifier service is not always possible at that point in time – the service could be down or the response time slow.

Consideration should be given to other methods of accessing identifier information.

Patient registration has been an impost on practice staff time with many practices unable to introduce this additional service. Consideration should be given to improving the method of patient registration especially for rural and remote areas where workforce issues.

4. Comments on standards for terminology, language and technology

The electronic distribution (point to point) of clinical documents between healthcare providers is not the norm. Specialist uptake of electronic CIS is low.

The Department of Health, Wave One and Wave Two projects completed trials in 2011 that shared these clinical documents using national standards point to point. However, the roll-out across all organisations did not occur and instead the focus was switched to the PCEHR and the point-to-share model.

Recommendation

ACRRM recommends an increased emphasis on information flow electronically between (to and from) the patient’s GP and other healthcare providers and their organisations point to point using national standards for clinical documents such as a referral, prescription, pathology and diagnostic imaging order and result and a discharge summary.

Cut red tape and reduce the number of authentication certificates required by clinicians and healthcare organisations to perform clinical and government transactions. Work with clinicians and industry to create specifications for critical clinical communications and embed terminology into clinical documents as required to support smarter working.

ACRRM has concerns with the recent PCEHR design being considered for pathology and diagnostic imaging clinical documents. The PCEHR is a national solution and can provide clinicians with access to clinical documents from providers they are unfamiliar with. There is an increased clinical risk should the PCEHR accept different formats for the same document type, as is currently suggested for pathology and diagnostic imaging. The reading of the document would be left to the clinicians’ interpretation based on their experience. ACRRM recommends all clinical documents should be standardised (layout and terminology) to support consistent interpretation of information received especially when dealing with reports from unfamiliar service providers (such as pathology reports).
**Recommendation**

ACRRM recommends that vendors are encouraged to further enhance their software to a level 3 CDA to improve the richness of the data for improved interoperability and architecture.

In addition the quality of data in many CIS will need to be improved in order to ensure that information shared is fit for use. This will require considerable effort by health care organisations and clinicians.

**Recommendation**

Education, and quality improvement activity and incentives will need to be introduced to ensure health records are valid, current and reliable (properly structured, utilising standard terminology).

5. Key clinician utility and usability issues

There is a common complaint amongst ACRRM members that the Shared Health Summary (SHS) cannot be edited over time. The scenario that supports this requirement is that a SHS is created in consultation with the patient, where there is an agreement on what information the SHS will contain. When an appropriate stage has been reached in the patient’s treatment to provide an updated version of the SHS the information that was originally agreed to needs to be recreated (including the necessary updates). It is at this stage that there is a risk that information the patient requested not be included in their SHS (as per the original) is included in error due to the process of having to create the updated version of SHS from scratch. Providing an edit function would remove this possibility of error and make the process of maintaining a current SHS more efficient.

The patient control functionality has not met the requirement by clinicians to have a tool that supports the sharing of critical relevant information amongst the patient’s healthcare providers. Functionality that allows a patient to hide or remove clinical documents without involvement of the patient’s primary healthcare provider is not supported by ACRRM members.

ACRRM recommends a review of the method for controlling the content in a patient’s eHealth record. It should be a patient and healthcare provider decision made together, not a decision the patient can take on their own. Consideration should be given on how functionality can be built to support information sharing between healthcare providers for all clinical information known about a patient.

Some of the current usability concerns can be associated with the implementation of the Clinical Document Architecture standards at level 1 and 2. In that data is encapsulated in the document and cannot be made available for relevant clinical grouping and filtering within a user interface. Clinicians viewing a patient’s record will not open and close documents to find relevant information as this is time consuming and introduces risk in trying to manually created a consolidated view (of current medications for example). ACRRM recommends that vendors are encouraged to further enhance their software to a level 3 CDA to improve the richness of the data for improved interoperability and architecture.
A number of independent vendors are involved in the end to end process to use the PCEHR (sending organisation, messaging agent, receiving organisation). No one party has authority over the other to resolve a software fault and often it becomes a stale mate or many months or years for the fix to be delivered. With multiple vendors (CIS, Messaging Agents, and PCEHR) involved in the end to end solution there needs to be a centralised authority who can investigate issues noted by the user community and negotiate a resolution. ACRRM recommends a support model is defined for user issues and faults found using the system and includes the management of the issue through to resolution.

**Recommendations for Topic 5 - Key clinician utility and usability issues**

1. Review the work processes for General Practice, in particular introducing the SHS clinical document and provide tools for maintaining the accuracy of this information in an efficient manner.
2. Review patient control that allows the hiding or removal of clinical documents and investigate how the sharing of all patient information between healthcare providers can be achieved.
3. Improve access to the data provided in the clinical document to enable greater interoperability, including the ability to group, sort and filter on key data elements.

6. **Key patient usability issues**

The promotion of the PCEHR and the registration process needs to support patients and their practices in a rural location without impacting on practice staff time. Workforce deficit is more acute in rural and remote regions, so regionally responsive solutions must be developed.

Consider the role of regional organisations in further supporting assisted registration.

Create a single helpdesk and 1800 number for all consumer and provider eHealth support.

Health Consumers of Rural and Remote Australia relate the criticisms of GP disengagement with key patient usability issues. In their most recent newsletter the HCRRRA state;

“Currently there is no alignment between consumer registration and meaningful use through engagement of the clinical community… UGPA wants GPs to have a major say in the implementation and operation of the PCEHR system. Seeing as they are the ones who are going to have to use it every day and, so long as patient concerns are addressed, we can’t see anything wrong with that.”

7. **Suggested improvements to accelerate adoption of the platform**

System review - transfer the PCEHR into a clinical useful and reliable shared information system.

Consider changing the Model - clinical data should be clinician controlled; clinicians have a legal, professional and ethical responsibility to provide accurate clinical information. Currently the PCEHR is a tool to share information determined by the patient.
Make the new process opt out for patients. Consider linking MBS rebates with ehealth contributions - e.g. make it a MBS requirement for reimbursement for pathology and imaging data/reports to be delivered electronically to a shared EHR.

Consider no PBS authority drugs are available to a patient without a shared EHR.

Invest and support in clinical data quality improvement measures and incentives (in collaboration with the professional colleges and health organisations).

Incentivise meaningful use and change management to move away from a time period via extended consult criteria for GPs. Clinician uptake of new electronic clinical documents (Shared Health Summary or Event Summary) will remain low if there is no incentive to include this in a patient’s consultation. The remuneration for a General Practitioner who creates a new electronic clinical document can only be claimed if the consultation meets the criteria for an extended consult. If creation of the new clinical document occurs within the standard consultation timeframe no remuneration can be claimed.

Separate ePIP funding should be made available even when practices do not participate in a shared eHealth record, to avoid a complete stand-still of eHealth innovations. Currently all ePIP stops flowing if practices do not sign a PCEHR participation contract. Considerations for inclusion in ePIP are:

- Quality telehealth - involving secure transmission of data (existing incentives cease June 2014)
- encrypted messaging, security measures, dedicated internet connection for ehealth and telehealth (in rural areas with low bandwidth)

Infrastructure and practice support - introduce a model for implementation and ongoing support and maintenance of ICT infrastructure for eHealth functionality. A large amount of effort is required by a practice to implement all the foundations to connect to the PCEHR. The workload and complications do not stop at implementation. There is an ongoing requirement for ICT supports e.g. digital certificates going out of date on servers and workstations that need to be reinstalled and upgrading software. Finding skilled staff in rural locations where staffing is already a problem make this issue greater for rural and remote locations. Consider the role of Medicare Locals.

Education and training

Suggest establishing an eHealth Education Coalition - a collaboration of professional bodies (including ACRRM, with our long experience in web based education) as well as Industry, and Medicare Locals to scope educational needs, identify existing resources and commission new resources and systems to target key professional and organisations. Provide material to organisations to customise and deliver in their context. This model was used to great effect by ACRRM in our telehealth collaboration. See www.ehealth.acrrm.org.au

Providing a centralised training environment containing the Practice Management Systems, Clinical Information Systems used by hospitals, allied health and aged care and the PCEHR.
Consider development of videos to demonstrate how to use the system. Videos may be specific to each software vendor. Improve uptake with a “how to guide” for clinicians. This could be developed for topics such as how to create a shared health summary, when to do it, lessons learnt etc. - keep it short and practical (see ACRRM Just a Minute Instant Tutorial Examples - JAMIT)

Data Quality Improvement

Work with the professional colleges and health care organisations to develop education resources, tools and professional development incentives to maintain accurate data to support improved data quality, e.g. develop a Professional Development Program (PDP) to support the implementation of a data management plan including the cleansing of patient data to improve the speed and accuracy of creating electronic clinical documents.
RURAL MEDICINE AND
TELEHEALTH: THE ACRRM
APPROACH

WRITTEN BY VICKI SHEEDY ON 23 SEPTEMBER 2013.

The Australian College of Rural and Remote Medicine (ACRRM) is responsible for setting professional medical standards for training, assessment, certification and continuing professional development relevant to rural generalist medicine. The use of telehealth in accordance with ACRRM standards is seen by the College as an essential component of effective rural and remote practice.

ACRRM is committed to supporting the delivery of sustainable, high-quality health services to rural and remote communities by providing quality education programs, and innovative support to doctors who serve those communities.

ACRRM recognises that quality rural medical practice is characterised by the provision of a broad range of services, including those facilitated by technology.

It is our commitment to quality health services for rural and underserved communities that resulted in ACRRM designating telehealth skills as requisite for doctors training towards its Fellowship in Rural Medicine.

It also drives ACRRM’s telehealth support and educational programs, which have been operational since 2004, when ACRRM’s store and forward telehealth services – Telederm, Teleradiology and Tele-toxinology – began.

In July 2011, the federal government recognised the provision of telehealth services within the MBS, providing Medicare rebates to patients and financial incentives to clinicians for online consultations across a range of medical specialties under the Modernising Medicare by Providing Rebates for Online Consultations initiative.

In addition to funding direct private consultations between patients and specialists, this initiative provided an MBS item number and incentives for GPs, nurses and Aboriginal health workers at the patient end to conduct a consultation via telehealth.

This initiative expanded the range of telehealth MBS item numbers beyond psychiatry and, for the first time, provided financial compensation for the involvement of the patient–end rural doctor who is responsible for the enduring care of rural people in their local communities.
This MBS rebate and financial incentive removed one of the major barriers enabling video telehealth consultations to become part of routine private rural medical practice. ACRRM strongly supported this initiative and its potential to improve health outcomes and improved models of care.

ACRRM president Professor Richard Murray expresses ACRRM's position: “Telehealth brings the specialist and the general practitioner together in the shared care of patients. Done well, the shared interaction between referring doctor, the ‘consultant’ specialist and the patient delivers better medical care, strengthened professional relationships and enhanced insights and knowledge for all.

“The GP, who may have been inclined to routinely refer away the patient with type 2 diabetes for initiation of insulin therapy, builds skills and confidence. The patient has the benefit of a triangulated and consistent communication for understanding and self-care. The consultant is able to apply their vertical expertise to the really challenging problems.

“This type of symbiotic interaction between GP and specialist has been more typical of how rural doctors and the specialist consultant colleagues work together. Telehealth affords an opportunity to strengthen that in the bush and to extend the collaborative model more broadly.”

FLEXIBILITY FOR CLINICIANS

The government did not establish a monolithic, closed national telehealth system for this initiative, as defined by some state government telehealth systems which have operated for over 10 years.

A reliance on existing standards and industry–enabled competition, innovation and flexibility has also put the onus on the professions and practices to work to establish telehealth relationships as part of referral arrangements for the benefit of patients. DoHA emphasised that the decision to use, or not to use, telehealth together with the choice of particular hardware or software methods for consultation should rest with the clinician. In making their choices, clinicians should consider any legal (privacy and security), safety and clinical effectiveness implications.

ACRRM, amongst other organisations, was funded to develop guidelines, education and support arrangements to assist in the uptake of this opportunity to improve access to healthcare for patients who would benefit from telehealth services.

However, for rural doctors, finding the right specialist prepared to provide video consultations, at the right time, using compatible technology was problematic. A practical response was required.
ACRRM collaborated with other national bodies including specialist medical colleges, nursing colleges and peak bodies such as the National Aboriginal Community Controlled Health Organisation (NACCHO), the Royal Flying Doctor Service, industry and standards organisations like the Australasian Telehealth Society (ATHS) to develop support arrangements for clinicians.

These resources were developed according to an endorsed Framework for Telehealth standards developed by ACRRM, which explored the clinical, contextual and technical considerations relevant to conducting telehealth consultations.

These standards, resources, directories and telehealth virtual network are publicly available on [www.ehealth.acrrm.org.au](http://www.ehealth.acrrm.org.au)

**VIRTUAL COMMUNITY**

The website is the shop front for ACRRM telehealth activity. It provides:

- Access to a Telehealth Technology Directory, with information about telehealth products and equipment mapped to existing relevant telehealth standards
- Access to a Telehealth Provider Directory, with information about clinicians providing telehealth consultations
- Access to telehealth discussion forums to connect with other clinicians experienced in the use of the technology in a variety of disciplines, to discuss telehealth solutions with other clinicians and technology providers
- Access to telehealth guidelines according to the Telehealth Standards Framework
- Access to telehealth education modules for rural doctors, GP practice staff, surgeons, physicians and ACCHS staff
- Access to telehealth resources, templates consent forms, business models, implementation guides, requirements analysis etc.

Over 25,000 clinicians access this virtual community, with the most popular resources being the Telehealth Provider Directory and the telehealth technology databases.

The ACRRM Telehealth Provider Directory is the original non-commercial national database of telehealth-enabled doctors available in Australia. The directory is endorsed by the members of the ACRRM Telehealth Advisory Committee (ATHAC), which includes specialist colleges across Australia.

The directory, which has been operational since 2012, aims to assist GPs and other patient-end clinicians to obtain relevant information regarding specialists providing telehealth services and vice versa.

Information includes how to make a telehealth booking, the interests of the clinicians and what technologies they are using.
ACRRM validates the registration status of providers against AHPRA data. GP, nursing, Aboriginal health and specialist colleagues are invited to promote their telehealth services in the directory.

Analysis of the data on the directory reveals that many clinicians use more than one technology, with Skype being the default option. Most popular technologies used in order of popularity are Skype, Vidyo, GoToMeeting, Jabber and FaceTime.

ACRRM has recommended that clinicians investing in a telehealth solution use a standards-based product, but we also recognise that issues of quality and potential security risk can be trumped by clinical need in certain circumstances. ACRRM has developed an information guide to mitigating risk when using Skype for clinical consultations.

As of July 15, 2013, a total of 997 health services have indicated that they are current providers of telehealth services. This represents almost 2000 practitioners, making the ACRRM directory the largest telehealth directory operating in Australia.

Fifty-eight per cent of entries represent patient–end practitioners and 42 per cent are specialist–end practitioners. Rural GP practices are the most represented followed by surgeons, psychiatrists, endocrinology, paediatrics and cardiology. Over 25 disciplines are represented.

**UNMET DEMAND**

However, there is still an unmet demand for additional services and information about those services.

Of the GPs contacting ACRRM for assistance to contact specialists offering a telehealth service, most requests indicated an interest in contacting a psychiatrist (31 per cent), dermatologist (17 per cent), and/or a geriatrician (14 per cent).

The directory is expected to expand, as ACRRM has been funded by DoHA to work with specialists visiting rural communities under the Rural Health Outreach Fund to augment these services by providing telehealth consultations in between visits.

Specialists and generalists who provide such services will be invited to register. ACRRM believes this will improve both access to care as well as the continuity of care for these rural patients.

ACRRM is also working with Healthdirect Australia to further improve access to information regarding telehealth services availability.

Healthdirect Australia has agreed to collaborate with the ACRRM to add telehealth information to the National Health Services Directory (NHSD).
The NHSD is an initiative of all Australian governments to provide a shared, comprehensive and consolidated national directory of health service and provider information.

The NHSD has a search widget that will also be located on ACRRM websites, enabling users of to search the entire directory for a broad range of information, as well as to filter for services that offer access via telehealth.

This approach has been undertaken by the two organisations to support the work being done on the ground by practitioners.

Healthdirect Australia will continue to work collaboratively with ACRRM to increase the accuracy of the NHSD in relation to telehealth and other rural health services.

ACRRM will continue to work with other partners, including the RDAA, medical colleges, Medicare Locals and rural workforce and health service agencies to register providers on the directory and promote telehealth services for rural, remote and underserved communities.

AUTHOR DETAILS

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Vicki Sheedy is the strategic programs manager for eHealth with ACRRM and is responsible for the establishment and management of the ACRRM telehealth program. Vicki has over 25 years’ experience initiating and managing medical education and quality improvement programs.
ACRRM TeleHealth Advisory Committee Standards Framework
ATHAC Telehealth Standards Framework

Purpose

The purpose of the ATHAC Telehealth Standards Framework is to provide health and medical colleges, clinicians and health care organisations with a common approach to the development of craft specific guidelines to assist members in the establishment of quality telehealth services.

Methodology

ACRRM undertook a scan of Australian guidelines and standards, which were also considered in the design of the Framework.

The ATHAC Telehealth Standards Framework is referenced to:

- The ISO draft technical specifications Health Informatics – Quality criteria for services and systems for telehealth (ISO DTS 13131) (2012), using the framework and systematic approach to customisation described in that document.
- The AHPRA Guidelines for Technology-based Patient Consultations (2012)
- ACRRM Core Principles for Telehealth (2011)

The Framework has been synthesised from a variety of sources including:

- ISO draft technical specifications Health Informatics – Quality criteria for services and systems for telehealth (ISO DTS 13131) (2012)
- ACRRM Core Principles for Telehealth (2011)
- CRRM International Review of Telehealth Standards (2010)
- RACGP Standards for general practices offering video consultations (2011)
- ACRRM eHealth staff and consultants
- ATHAC Chair Dr Jeff Ayton
- ATHAC Members
- ACRRM TeleHealth clinical review panel

Background

Standards for telehealth proliferate. Telehealth is a means of delivering healthcare across many different clinical settings. One set of standards or guidelines cannot cover all of these in detail, therefore ACRRM has chosen to establish a framework which relevant craft groups or clinical disciplines in Australia can use to develop profession and health– organisation specific telehealth guidelines. This approach was endorsed by the ACRRM Telehealth Advisory Committee (ATHAC) which includes representatives from medical specialist and nursing colleges and organisations, peak Aboriginal health organisations, consumer organisations, the National Rural Health Alliance, the Royal Australasian College of Surgeons and the Royal Australasian College of Physicians and the Royal Flying Doctor Service.

The ATHAC Telehealth Standards Framework provides the architecture for telehealth guideline development. ACRRM has applied this framework to develop guidelines for general practice (with an emphasis on rural and remote context), and partnered with the National Aboriginal Community Controlled Health Organisation, the Royal Australasian College of Surgeons and the Royal Australasian College of Physicians to apply this Standards Framework in the development of their specific telehealth guidelines and education.

The ATHAC Telehealth Standards Framework forms the basis for the organisation of content and resources for the online telehealth modules developed by ACRRM for telehealth clinicians including; GPs, staff working in Aboriginal community controlled health services, rural generalists, surgeons and physicians. These modules are hosted on ACRRMs online tele-education platform ‘Rural and Remote Medical Education Online’.

This work has been funded by the Australian Government Department of Health and Ageing.
Quality aspects

This framework addresses the following quality aspects as identified in the ISO draft technical specifications Health Informatics – Quality criteria for services and systems for telehealth (ISO DTS 13131) (2012).

- Freedom of choice
- Appropriate care
- Transparency
- Continuity of care
- Timeliness of care
- Accountable care
- Expertise, skills and motivation
- Effectiveness
- Usability
- Safety
- Privacy and confidentiality

ACRRM applied the systematic approach to customisation described in the ISO document to develop the ATHAC Telehealth Standards Framework and apply this framework to develop the ACRRM Telehealth Guidelines for general practice, with an emphasis on rural and remote generalist practice.

Scope Of This Document

These guidelines apply to:

- Conducting synchronous (real time) video consultations between a patient, a health care provider from the referring organisation, and a specialist medical practitioner to whom the patient has been referred.
- General practices, Aboriginal medical services, primary care providers, specialist medical practitioners.

These guidelines do not:

- Apply to direct specialist to patient video consultations, with no involvement of the referring clinician or their practice staff.
- Contain clinical advice on the effectiveness of telehealth for different medical conditions.

ACRRM TeleHealth Advisory Committee

- Australasian College of Dermatology
- Australasian Telehealth Society
- Australia and New Zealand College of Anaesthetists
- Australian Association of Practice Managers
- Australian College of Midwives
- Australian College of Nurse Practitioners
- Australian College of Rural and Remote Medicine
- Australian Medicare Local Alliance
- Australian Nursing Federation
- Australian Practice Nurses Association
- CRANA Plus
- Department of Health & Ageing
- Department of Human Services
- Health Consumers for Rural and Remote Australia
- National Aboriginal Community Controlled Health Organisation
- National Rural Health Alliance
- Royal Australasian College of Physicians
- Royal Australasian College of Surgeons
- Royal Australian and New Zealand College of Obstetricians and Gynaecologists
- Royal Australian and New Zealand College of Ophthalmologists
- Royal Australian and New Zealand College of Psychiatrists
- Royal Flying Doctor Service
- Rural Doctors Association of Australia
- Rural Health Workforce Australia
- Standards Australia
## CLINICAL ASPECTS OF TELEHEALTH

<table>
<thead>
<tr>
<th>Paragraph Number</th>
<th>AHPRA Guideline Number</th>
<th>ISO Paragraph Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.3.1</td>
<td>5</td>
<td>1.1.1</td>
<td>The patient has easy access to plain language information about telehealth, plus the other relevant options for providing care.</td>
</tr>
<tr>
<td>6.5.2</td>
<td>3</td>
<td>1.1.2</td>
<td>The patient is informed about the role of each person who is involved in delivering their care by telehealth.</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>1.1.3</td>
<td>The patient is informed that standards-based systems are used to protect their privacy and data security, but total protection cannot be guaranteed. If non standards-based systems are used, then the patient is informed about any additional risks to quality, reliability or security.</td>
</tr>
<tr>
<td>6.3.2</td>
<td>6.5.2</td>
<td>1.1.4</td>
<td>The patient is informed if there will be out-of-pocket charges for telehealth consultations, compared to other available options.</td>
</tr>
<tr>
<td>6.5.2</td>
<td></td>
<td>1.1.5</td>
<td>The patient should know how and where to make a complaint about the telehealth service.</td>
</tr>
<tr>
<td>6.4.2</td>
<td>1</td>
<td>1.2.1</td>
<td>The patient gives informed consent to the use of telehealth. This may be verbally or in writing. If the telehealth consultation is going to be recorded, or if the type of care is substantively different to usual care, then consent should be taken in writing. The consultation not be recorded, except for education/assessment purposes, and ONLY when written permission is obtained.</td>
</tr>
<tr>
<td>6.4.1</td>
<td>2</td>
<td>1.3.1</td>
<td>The health care organisation has a set of criteria about which patients are suitable for telehealth.</td>
</tr>
<tr>
<td>6.5.7</td>
<td></td>
<td>1.3.2</td>
<td>The patient and/or their informal care provider need to be able and willing to participate in care by telehealth.</td>
</tr>
<tr>
<td>6.4.1</td>
<td>2</td>
<td>1.3.3</td>
<td>The decision to use telehealth takes into account:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.3.3.1</td>
<td>Clinical factors such as continuity of care, shared care, and the best model of care for the individual patient.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.3.3.2</td>
<td>Practical factors such as the availability of specialists, local clinical staff and technology.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.3.3.3</td>
<td>Patient factors such as the ability of the patient to travel, plus their family, work and cultural situation.</td>
</tr>
<tr>
<td>6.4.1</td>
<td></td>
<td>1.4.1</td>
<td>The role of telehealth in the overall management of the patient is determined. For example, is telehealth for a one-off assessment or for regular follow up?</td>
</tr>
<tr>
<td>6.5.1</td>
<td></td>
<td>1.4.2</td>
<td>If there are any limitations from using telehealth, these are noted and reduced as far as possible.</td>
</tr>
<tr>
<td>1.4.3</td>
<td>The referring health care provider confirms the identity of the patient to the distant specialist or health service, and confirms the identity and credentials of the distant specialist to the patient.</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>1.4.4</td>
<td>The reasonable length of time needed to deliver care by telehealth is determined, and the patient informed about this.</td>
<td>6.5.3</td>
<td></td>
</tr>
<tr>
<td>1.4.5</td>
<td>A health care provider from the referring health care organisation is present with the patient for some or all of the video consultation with the specialist.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4.6</td>
<td>Telehealth should be delivered using evidence-based guidelines where possible. Where these do not apply, a framework of best fit for clinical purpose should be used.</td>
<td>6.5.5/6</td>
<td></td>
</tr>
<tr>
<td>1.4.7</td>
<td>The patient’s privacy is protected by considering what risks there are to privacy when using telehealth, and developing procedures to manage privacy.</td>
<td>6.5.8</td>
<td></td>
</tr>
<tr>
<td>1.4.8</td>
<td><strong>Relationships with Other Providers</strong>&lt;br&gt;Protocols exist about the way health care providers collaborate with each other when using telehealth. These protocols include:&lt;br&gt;&lt;br&gt;<strong>1.4.8.1</strong> A method for choosing the best referral pathway. Telehealth has greatly expanded referral options, so the referring provider needs to consider issues such as how to avoid fragmentation of care, and the availability of the specialist for an in-person consultation if required.&lt;br&gt;<strong>1.4.8.2</strong> A telehealth referral database.&lt;br&gt;<strong>1.4.8.3</strong> A description of how the care is delivered, including any changes to the usual roles of health care providers.&lt;br&gt;<strong>1.4.8.4</strong> A description of who delivers which aspect of care, including who takes responsibility for ordering tests, writing scripts, and follow up.&lt;br&gt;<strong>1.4.8.5</strong> A protocol for how the consultation should be noted. If two health care providers are consulting with the patient at the same time, they should each keep their own notes on their own record systems.</td>
<td>6.5.2 9, 10, 11</td>
<td></td>
</tr>
</tbody>
</table>

| 1.5 | **Skills of Practitioners**<br>There are criteria for the skills the health care provider should have to use telehealth. | 6.5.4 |

<p>| 1.6 | <strong>Evaluating the Use of Telehealth</strong>&lt;br&gt;After their first use of telehealth, the patient should be asked for an evaluation of the experience. If the patient is making long term use of telehealth, this evaluation should be repeated at regular intervals or if warranted by a change in the patient’s condition. | 6.5.2 |
| 1.6.2 | <strong>Organisational</strong>&lt;br&gt;At suitable intervals of time, the health care organisation evaluates the usefulness of telehealth across the organisation as a whole, and makes decisions about the continuing range and volume of telehealth used by the organisation. | |</p>
<table>
<thead>
<tr>
<th>2</th>
<th>TECHNICAL ASPECTS OF TELEHEALTH</th>
<th>ISO paragraph number</th>
<th>AHPRA guideline number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Adequate Performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1.1</td>
<td>The information and communications technology used for telehealth is fit for the clinical purpose.</td>
<td></td>
<td>6.5.6</td>
</tr>
<tr>
<td></td>
<td>Specifically:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1.1.1</td>
<td>The equipment works reliably and well over the locally available network and bandwidth.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1.1.2</td>
<td>The equipment is compatible with the equipment used at the other telehealth sites.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1.1.3</td>
<td>All the health care organisations participating in the teleconsultation, plus the network or other means of connection, meet the standards required for security of storage and transmission of health information.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1.1.4</td>
<td>Peripheral devices are used in a fit-for-purpose manner jointly determined by the patient–end clinician and the distant specialist.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td>Commissioning of Equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2.1</td>
<td>The equipment is installed according to the producer’s guidelines, where possible in collaboration with the other organisations/clinicians using the telehealth system.</td>
<td></td>
<td>7.2.1</td>
</tr>
<tr>
<td>2.2.2</td>
<td>The equipment and connectivity are tested jointly by the participating health care organisations to ensure that they do what the producer claims that they will.</td>
<td></td>
<td>7.2.3</td>
</tr>
<tr>
<td>2.3</td>
<td>Risk Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.3.1</td>
<td>A risk analysis is performed to determine the likelihood and magnitude of foreseeable problems.</td>
<td></td>
<td>7.2.1</td>
</tr>
<tr>
<td>2.3.2</td>
<td>There are procedures for detecting, diagnosing and fixing equipment problems.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.3.3</td>
<td>Technical support services are available during the times the equipment will be operating.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.3.4</td>
<td>There is a back-up plan to cope with equipment or connectivity failure, which is proportionate to the consequences of failure. For non-urgent consultations, rescheduling or completing by telephone may be sufficient. If urgent work is likely to be undertaken by telehealth, consider installing an uninterruptible power supply and a second source of connectivity.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 3 CONTEXTUAL ASPECTS OF TELEHEALTH

<table>
<thead>
<tr>
<th>ISO paragraph number</th>
<th>AHPRA guideline number</th>
</tr>
</thead>
</table>

#### 3.1 Management of Physical Environment

3.1.1 The room set-up used for telehealth has:

3.1.1.1 adequate physical space to conduct consultations (e.g. assess gait, include family or carers)

3.1.1.2 ensures privacy and comfort (physical and emotional) of the patient

3.1.1.3 allows the equipment to be used effectively (e.g. good lighting, little or no background noise, distance for best use of camera)

#### 3.2 Management of Business Environment

3.2.1 The health care organisation has implemented telehealth in a planned manner, including:

3.2.1.1 developing or utilising a business case i.e. considering the costs, benefits and sustainability of telehealth.

3.2.1.2 consulting with the staff about the workflow and other changes telehealth will introduce.

3.2.1.3 making a formal decision to implement telehealth, and then supporting the changes needed for implementation.

3.2.1.4 assessing the need for staff training or professional development in telehealth, and enabling this to occur.

3.2.1.5 including telehealth in its continuous quality improvement program.

3.2.1.6 ensuring that the telehealth service is covered by insurance and professional indemnity.

#### 3.3 Management of Logistical Environment

3.3.1 The health care organisation has a system for coordinating and booking the people, equipment and space needed for telehealth.

3.3.2 The telehealth equipment is accessible when needed, to ensure continuity of care. 6.5.6
SUBJECT – CUP GOVERNANCE

1. **Recommendation(s)**

   That the meeting note the distinct role of the CUP Steering Group in relation to other eHealth governance bodies which have already been formed or are currently in the process of being established.

2. **Background**

   The formation of the CUP Steering Group has created some confusion within the context of other eHealth consultation groups which have recently been established. If the roles of each of these groups is not clearly articulated, there is a risk of blurred accountabilities across these groups.

3. **Summary of Issues/Progress**

   There is currently some discussion regarding a potential overlap of accountabilities between the PCEHR Peak Consultation and Communication Group (PCCCG) and the Stakeholder Product Consultation Group (SPCG). Attachment 1 provides a summary of the role of each of these groups. It is noted that both of these groups have a role in the design and development of eHealth products.

   By contrast the CUP Steering Group has a governance role in relation a specific program of work, the Clinical Usability Program. Provided the scope of the program is clearly defined, the CUP Steering Group has a distinct role which does not overlap with the roles of the other two groups, regardless of whether these are ultimately combined or not. CUP is about improving eHealth products in implementation while the other two groups are consulting on future developments.

   CUP’s focus is on ensuring the implementation of eHealth functionality is clinically usable. It has oversight of specific initiatives to improve clinical usability of current capability, rather than the design of new capability. The lessons learnt should be leveraged as input to the design of new capability, and as such will be a contributor to the other consultation groups – however it is not in itself focussed on enhancements to the PCEHR itself.

   The role of the CUP Steering Group is to provide ongoing strategic and relationship oversight over the CUP and to provide an escalation point for issues impacting clinical usability objectives. It provides the opportunity for a confidential “reality check” and briefing, and ensures a practical approach to ensure solutions fit well with contemporary clinical practice.

   There is likely to be a continual stream of candidate initiatives for CUP. The Steering Group will prioritise these for attention, to ensure effort is focussed on the more urgent initiatives and specific identified clinical usability improvements are realised.

4. **Attachments**

   Attachment 1 – Consultation Groups Comparison
### Attachment 1 - Consultation Groups Comparison

<table>
<thead>
<tr>
<th>Role and function</th>
<th>PCEHR Peak Consultation and Communication Group - PPCCG (DoHA)</th>
<th>Stakeholder Product Consultation Group - SPCG (NEHTA)</th>
<th>CUP Steering Group (NEHTA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The “overarching high level group of stakeholders. Through which the future expansion of the PCEHR can be considered and discussed. .. [It is] the main forum through which consultation on the PCEHR’s ongoing development will be undertaken.”</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Core activities are:
- “First point of communication and consultation on future development of the PCEHR.
- . . . used to gain feedback on the high level plans for adding functionality . . .
- Consult[ed] on design issues and features . . .
- Assist with the development of communication, change and adoption process.” | The role of the Stakeholder Product Consultation Group is to provide:
- Advise on issues of significance referred to it by NEHTA business units and provide timely advice for consideration;
- Advise the Head CLSM on engagement;
- Determine the appropriate form of engagement to secure an effective outcome (e.g. webinar, email discussion, tele- or videoconference, face to face meeting, one off or ongoing etc.);
- Strategic links to networks. | The overall role of the Steering Group is to provide oversight of the NEHTA Clinical Usability Programme (CUP) and to foster an environment of cooperation and collaboration among key stakeholders in the achievement of CUP outcomes. This Steering Group will:
- Monitor the directions and progress of the Clinical Usability Programme (CUP) as a whole, including analysis of clinical usability issues and trends, and recommending remedial actions as needed
- Reconcile differences in opinion and approach relating to clinical usability, and resolve disputes arising from emerging issues
- Monitor Programme outcomes against the CUP Benefits Plan
- Provide recommendations and provide guidance with respect to prioritisation and shaping of nominated projects to ensure improved clinical usability is a key focus of the business.
- Address issues in relation to the Clinical Usability Programme which have been escalated to it.
- Identify Clinical Usability Programme |

The PPCCG is responsible for:
- “Ensuring their priorities and expectations are understood and considered for inclusion in the development plans being established for the PCEHR.
- Ensuring that communication, organisational change and stakeholder engagement approaches | When and if required, the Group may establish sub-committees or seek wider | | |

Key responsibilities are:
- Provide strategic advice, support and direction to NEHTA Business Units on matters related to the development and deployment of NEHTA products and services.
- Use their own networks and relationships to increase awareness of NEHTA products and services | | |
<table>
<thead>
<tr>
<th>PCEHR Peak Consultation and Communication Group - PPCCG (DoHA)</th>
<th>Stakeholder Product Consultation Group - SPCG (NEHTA)</th>
<th>CUP Steering Group (NEHTA)</th>
</tr>
</thead>
</table>
| and messages are coordinated and meet their association/groups member’s needs.  
- Providing advice, feedback and input on the design of the system to support any proposed functionality incorporates relevant feedback, noting that the PCEHR needs to continually meet the balanced needs of both providers and consumers.” | consultation and input from others with specialist knowledge to assist in carrying out its functions. Two types of sub-committees are available:  
*(SPCG Terms of Reference)* | Risks for management and escalation by the Programme.  
- Make recommendations with respect to clinical usability improvements and proposed approaches and funding implication  
- Receive regular reports on CUP projects and act as a key conduit to informing the health sector of key CUP activities.  
*(CUP SC Terms of Reference)* |
| **Participating Organisations** | **1. Australian Medical Association (AMA)**  
2. Royal Australian College of General Practitioners (RACGP)  
3. Australian Medicare Local Alliance (AMLA)  
4. Australian Pharmacy Guild (PGA)  
5. Australian Primary Health Care Nurses Association (APNA)  
6. Aged and Community Services Australia (ACSA)  
7. Consumer Health Forum (CHF)  
8. Royal Australian College of Surgeons (RACS)  
9. Royal Australasian College of Physicians (RACP)  
10. National E-Health Transition Authority (NEHTA) | **1. Australian Medical Association (AMA)**  
2. Royal Australian College of General Practitioners (RACGP)  
3. Coalition of National Nursing Organisations (CONNO)  
4. Australian Medical Association (AMA)  
5. Australian Medicare Local Alliance (AMLA)  
6. Australian Pharmacy Guild (PGA)  
7. Australian Primary Health Care Nurses Association (APNA)  
8. National Aboriginal Community Controlled Health Organisation (NACCHO)  
9. Rural Doctors Association of Australia (RDAA)  
10. Royal Australian College of Surgeons (RACS)  
11. Royal Australasian College of Physicians (RACP) | Representatives from NEHTA and DoHA  
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1. Royal Australian College of General Practitioners (RACGP)  
2. Australian Medical Association (AMA)  
3. Australian Primary Health Care Nurses Association (APNA)  
4. Australian Medicare Local Alliance (AMLA)  
5. National Aboriginal Community Controlled Health Organisation (NACCHO)  
6. Rural Doctors Association of Australia (RDAA)  
7. Health Informatics Society of Australia (HISA)  
8. Royal Australasian College of Surgeons (RACS)  
9. Royal Australasian College of Physicians (RACP)  
10. Australian Primary Health Care Nurses Association (APNA)  
11. Australian Pharmacy Guild (PGA)  
12. Coalition of National Nursing Organisations (CONNO)  
13. Aged and Community Services Australia (ACSA)  
14. Consumer Health Forum (CHF)  
15. Royal Australasian College of Surgeons (RACS)  
16. Royal Australasian College of Physicians (RACP) |
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<td>• Australian Department of Human Services/Medicare (DHS)</td>
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<td>Meeting Frequency</td>
<td>4/year face to face, videoconference of teleconference</td>
<td>Every 6 weeks for 2 hours, face to face, video or teleconference</td>
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<td>Provides a summary report to the PCEHR Operations Management Committee (OMC)</td>
<td>NEHTA Head CLSM</td>
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Foreword

The practice of ‘rural generalist medicine’ - full-scope general practice - remains as important for communities as ever, as well as exciting and fulfilling as a medical career. Doctors whose work is narrow in scope or limited in context also make important contributions, but this does not appeal to all. The medical practitioner with expanded generalist capabilities can typically make the most difference, particularly in areas where community needs are greatest.

Fortunately, many graduates relish the opportunity to ‘do-it-all’ across a medical career. These are the doctors whose greatest dilemma in considering a choice of medical specialty is not what they like, but what they are prepared to give up.

Doctors like this enjoy providing comprehensive primary care in the community but also like the satisfaction and stimulation of looking after their patients in the hospital, responding to emergencies, taking a population perspective and developing extended skills in a focused area. Many such doctors enjoy diversity in daily practice and relish a challenge. Many are driven by a desire to ‘make a difference’ in medicine – to work with underserved communities, in rural and remote areas, with Aboriginal or Torres Strait Islander peoples, in aeromedical retrieval, military or humanitarian medicine. In cities, such doctors can often be found combining work in community primary care with emergency medicine or in hospitals as Career Medical Officers. This is real ‘general practice’.

If the profile above appeals to you, then this is your curriculum. Fellowship of the Australian College of Rural and Remote Medicine signifies achievement of a broad scope of clinical capabilities, medical leadership and the ability to work confidently away from ready access to specialist referral or diagnostic services. It is recognised not as an accredited Australian general practice credential for community primary care but also by hospitals and credentialing committees for employment and award of extended scope of clinical privileges. The Fellowship is formally recognised in New Zealand and in Canada and is used as evidence of extended generalist clinical competence around the world.

I commend this curriculum and those who have developed it. It was written by rural doctors for rural doctors from an authentic rural and remote perspective. It reflects, in rich detail, the full scope of rural generalist medicine and the needs and context of rural and remote communities.

Congratulations on your choice of Fellowship. May this resource guide your learning and your professional practice and help you to become and remain the best doctor that you can be for your patients, communities and colleagues.

Professor Richard Murray
President
August 2013
1.0 Introduction

1.1 Defining general practice

The Australian College of Rural and Remote Medicine (ACRRM) is a professional College accredited by the Australian Medical Council to define standards and deliver training in the medical specialty of general practice.

The ACRRM definition of general practice asserts a proud tradition of generalist medicine, particularly as it has applied in rural and remote communities. The importance of the generalist medical practitioner with extensive clinical and leadership abilities is increasingly recognised in Australia and internationally by communities and policy-makers. The generalist medical practitioner has a key place in a societal response to a wide range of health care challenges. These include the complex care needs of ageing populations, increasing levels of chronic co-morbidity, the availability of increasingly expensive technological interventions and competing demands upon limited resources. General practice as defined by ACRRM is a long established tradition with a secure future in rural and remote communities as well as in the cities.

The ACRRM definition of general practice is as follows:

The general practitioner is the doctor with core responsibility for providing comprehensive and continuing medical care to individuals, families and the broader community. Competent to provide the greater part of medical care, the general practitioner can deliver services in the ambulatory care setting, the home, hospital, long-term residential care facilities or by electronic means - wherever and however services are needed by the patient.

The general practitioner applies broad knowledge and skills in: managing undifferentiated health problems across the lifespan in an un-referred patient population; providing continuing care for individuals with chronic conditions; undertaking preventive activities such as screening, immunisation and health education; responding to emergencies; providing in-hospital care; delivering maternal and child health services; and applying a population health approach at the practice and community level. General practitioners work across a dynamic and changing primary and secondary care interface, typically developing extended competencies in one or more discrete fields of medicine, thereby ensuring community access to the range of needed services in a supportive network of colleagues and health care providers.

As the medical expert with the broadest understanding of a patient’s health in their cultural, social and family context, the general practitioner has a key role in coordinating the care pathway in partnership with the patient, including making decisions on the involvement of other health personnel. He or she practices reflectively, accessing and judiciously applying best evidence to ensure that the patient obtains benefit while minimising risk, intrusion and expense. The general practitioner contributes clinical leadership within a health care team and is skilled in providing clinical supervision, teaching and mentorship.

The clinical scope, practises and values that characterise the ACRRM vision for general practice are outlined in the curricula and professional standards that are set and maintained by ACRRM.
General practitioners who achieve these standards are recognised through the award of Fellowship of ACRRM (FACRRM). Fellows of ACRRM receive specialist registration as a general practitioner with the Medical Board of Australia and are able to practice in any location throughout Australia.

An ACRRM position paper defining the specialty within the context of international literature (plus research and resources that expand on the definition, scope and nature of general practice as defined by the College) is available at www.acrrm.org.au.

1.2 Target Group

The ACRRM Primary Curriculum sets out the outcomes expected at the Fellowship level. These outcomes mark the end of training, other than the abilities of Advanced Specialised Training.

The Curriculum is written with four main groups in mind:

- ACRRM registrars at any stage of education and training who are developing learning plans or preparing for assessment;
- Educators and clinical supervisors who are designing and delivering educational activities or supervising and guiding registrars in achieving their learning goals;
- Assessors who are forming judgements on whether the Fellowship standard has been achieved; and
- Fellows who are planning maintenance of professional standards activities.

It is also relevant to other providers of training, education and others including continuing professional development, clinical privileging and credentialing committees, employers, Medical Boards and Medical Councils in Australia and Internationally.

1.3 Background

The Australian College of Rural and Remote Medicine (ACRRM) was formed in 1997 as an acknowledgment of:

- the importance of rural and remote medicine as a broad but distinctive form of general practice;
- the need for well-designed vocational preparation and continuing medical education for rural doctors; and
- the need to address the shortage of rural and remote doctors in Australia, by providing them with a separate and distinctive professional body.

The development of a dedicated vocational curriculum was a natural extension of ACRRM’s core vocational training and preparation role. A comprehensive Prospectus¹, and a Position Paper², both published in 1997, established the need for such a curriculum and indicated the major directions for further development. The first edition of the ACRRM Primary Curriculum was published in 1998. The second edition was published in 2003, and the third edition in 2006. Minor revisions were made to the third edition in 2009.

¹ Australian College of Rural and Remote Medicine (ACRRM) (1997a) Prospectus. Australian College of Rural and Remote Medicine, Brisbane.
² Australian College of Rural and Remote Medicine (ACRRM) (1997b) Primary Curriculum Position Paper. Australian College of Rural and Remote Medicine, Brisbane.
The fourth and current edition (2013) has resulted from a major review of both content and structure involving key stakeholders conducted between October 2009 and January 2010. The curriculum is structured into an overarching model consisting of seven domains relevant to generalist medical practice. Curriculum statements, which provide more detailed outcomes in 18 major disciplines or practice areas, are also structured by the seven domains.

1.4 Rationale – why is generalist medical practice important?

Health Status

Australians living in rural and remote areas have unique health concerns that relate directly to their living conditions, social isolation, socioeconomic disadvantage and/or distance from health services. Health outcomes, as exemplified by rates of death, increase with remoteseness. Death rates in remote areas are 1.8 times as high as in major cities. The main contributors to higher death rates in regional and remote areas are coronary heart disease, other circulatory diseases, motor vehicle accidents and chronic obstructive pulmonary disease (e.g. emphysema). Yet rural people have lower access to health care compared with their metropolitan counterparts because of distance, travel factors, costs, and availability of transport. This disadvantage increases with geographical remoteness.

Aboriginal and Torres Strait Islander peoples make up approximately 13 percent of the total ‘remote’ population of Australia and 45 percent of the ‘very remote’ population. On some indicators, in particular diabetes and renal disease, Indigenous Australians have the worst health status in the world. While there is considerable congruence between Australia and other countries in patterns of health disadvantage, morbidity, and health risk behaviours in rural and remote communities and in Indigenous people, the rate of improvement in the health of Indigenous Australians still falls well behind other first world countries. Distance, isolation, lower incomes, poor educational opportunities, inadequate housing, minority status, and lack of services all exacerbate the experience of health inequality.

Services and Workforce

This situation is compounded by shortages of health facilities and health professionals and rural peoples’ perceptions of health. Rural Australians overwhelmingly prefer that medical services be provided locally, rather than travel to healthcare services in cities. Evidence suggests that many rural people will even avoid required specialist treatment rather than travel to a city for it.

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They also prefer to receive medical care from a familiar practitioner with whom they feel comfortable and who can provide continuity of care.  

Workforce shortages are a consistent feature of rural medicine all over the world. This is compounded by medical sub-specialisation, which has tripled in the past 20 years due to technological developments. In Australia, rural medical workforce shortages persist and without further intervention, are expected to worsen, despite current Government investment in recruitment and retention and workforce planning. There is ample evidence that rural and remote communities:

- have inadequate access to medical services;
- need more local doctors who are able to provide an extended range of clinical services; and
- suffer negative health consequences associated with these unmet needs

As a consequence of workforce shortages, rural and remote doctors work much longer hours and provide on-call after-hours services far more than their urban counterparts. These factors impact upon both patient and doctor safety and the potential quality of care provided.

Quality and Safety

General practitioners working in rural and remote settings require a broader and deeper range of knowledge and skills than their urban counterparts in areas such as public health, infectious disease, environmental health, procedural and emergency skills and cultural awareness. By providing a high quality vocational preparation program for rural and remote medicine, ACRRM enables doctors to develop the necessary knowledge and skills through dedicated education, training and assessment programs that reflect the realities of rural and remote practice. This fosters and consolidates education in rural and remote medicine by undergraduate and postgraduate education institutions, and advances research into safe clinical care and managing risk in the rural context. Fitting professional recognition of rural and remote general practice will also attract more doctors to this important field, and ultimately improve safety and quality by increasing the number of skilled practitioners and the range medical services provided to rural communities.

Scope of general practice as defined by ACRRM

Generalist medical practice is a broad, horizontal field of practice that intersects with many medical specialties, other health practitioners and community services. General practitioners in rural and remote communities are commonly called upon to provide a continuum of care from primary presentation to resolution, and deal with issues associated with public health in small communities. Because rural and remote practitioners are required to undertake many of the tasks that their urban counterparts would be able to refer to specialists and other health practitioner services, their practice is both more advanced and extended.

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For example, they may provide services such as obstetrics, surgery, anaesthetics, and emergency care, and may do so across primary, secondary and tertiary settings. Their office-based consultations will often require more complex decision-making and more diverse clinical and procedural skills. There is considerable evidence that general practitioners working in rural and remote areas both in Australia\textsuperscript{15,16} and overseas\textsuperscript{16,17} are providing an increased range of procedural, emergency and other advanced care services than those working in urban areas.

In Australia, the complexity and scope of the practitioner’s tasks increase as the degree of geographical remoteness increases. For instance, the more remote the location, the more likely it is that the doctor will be required to manage myocardial infarctions to a higher level, administer cytotoxic drugs, perform forensic examinations, stabilise multiple trauma patients pending retrieval, and coordinate discharge planning.\textsuperscript{14} This observation is consistent with data from Canada, which has similar demographic challenges.\textsuperscript{18,19}

This extended scope has important implications both for training and for setting and maintaining professional standards.

Distance from tertiary services and local workforce restrictions create unique challenges for general practice that are best addressed by distinctive, functional and contemporary models of interdisciplinary teamwork. Rural and remote practitioners commonly work in a range of roles and settings, including hospitals, private practice, Aboriginal Medical Services, and community health centres. Many are required to divide their time between multiple settings. Multi-disciplinary and multi-skilled teamwork is a core feature of rural practice. It involves local healthcare teams, as well as urban-based referred care providers who may provide outreach and tele-medicine support. Rural and remote practitioners may also require higher levels of local management and collaboration to ensure post-operative and other follow-up care. In remote locations, this usually also involves working as part of a cross-cultural team with Aboriginal and Torres Strait Islander health workers who also have diverse, advanced, and extended practice roles.\textsuperscript{20}

**Conclusion**

Access to advanced medical care is a basic equity issue for all Australians. Many rural people experience considerable distress when required to travel to cities for treatment. In some instances, this can lead to patients refusing city-based specialist care, regardless of need.\textsuperscript{10,20} It is widely acknowledged that appropriate vocational preparation of general practitioners is critical if they are to continue providing advanced procedural and other vital medical services in rural and remote Australia.

Rural and remote medicine is a unique mode of general practice that differs from urban practice in terms of the context, content and process of care.\textsuperscript{21} Rural and remote general practice demands extended knowledge and skills drawn from multiple medical specialties. This advanced skill set is applied in a context that requires unique modes of practice, cultural understanding and organisational skills. These differences, combined with the particular set of professional values

\textsuperscript{19} Chaytors RG, Szafra O & Crutcher RA (2001), Rural-urban and gender differences in procedures performed by family practice residency graduates. Family Medicine, vol. 33, no. 10, pp. 766-771.
required, sets rural and remote medicine apart as a unique field of practice within the broad specialty of general practice.

For all these reasons, it is vitally important that general practice registrars preparing to work in rural and remote settings have access to appropriate medical training to national and international accreditation standards to ensure competent, safe, and culturally appropriate health care services across the variety of rural and remote contexts. The Fourth Edition of the ACRRM Primary Curriculum is an important step towards achieving this goal.
2.0 The Primary Curriculum

2.1 Aim

The ACRRM Vocational Training Program aims to produce Fellows who can function as safe, confident and independent general practitioners in a full and diverse range of healthcare settings across Australia, with particular focus on rural and remote settings.

The Program has a number of goals for registrars:

1. Acquire the knowledge, skills, and behaviours to practise safe, independent and comprehensive medicine as general practitioners with a focus on practising in rural and remote communities;
2. Attain Fellowship of ACRRM by successfully completing the training and assessment pathway requirements based on the ACRRM Primary Curriculum; and
3. Commit to maintain and enhance competency after attaining Fellowship through participating in a structured continuing professional development program.

The ACRRM Primary Curriculum “The Curriculum” builds on early postgraduate experience by setting out what ACRRM expects registrars to achieve, and education providers to deliver. In turn it is intended to underpin and articulate with the set of ACRRM Advanced Specialised Training Curricula, which support advanced studies in selected subject areas relevant to rural and remote general practice in Australia.

2.2 Purpose

The Curriculum defines the scope and standards for independent general practice anywhere in Australia, with a particular focus on rural and remote settings. It sets out the outcomes expected at the ACRRM Fellowship (FACRRM) level.

The Curriculum is a fundamental resource for rural registrars, supervisors and educators, providing a clear framework from which to plan and deliver educational and assessment activities leading to the FACRRM. It has been designed to promote transparency, clarity, consistency and academic rigor in these educational processes.

2.3 Curriculum Framework

The Curriculum is structured according to the following elements:

1. Principles – 11 principles that form the conceptual and practical foundation for the Curriculum;
2. Learning abilities – 73 generic abilities which define the abilities that registrars must demonstrate, organised within the seven domains of rural and remote general practice; and
3. Curriculum statements – 18 statements that describe the relevant content in the major medical disciplines or practice areas. The curriculum statements contain abilities organised within the seven domains of rural and remote general practice and essential knowledge and skills.
2.4 Principles

The following 11 principles underpin the Curriculum:

1. *Grounding in professional standards* – The Curriculum is grounded in medical professional standards. This includes:
   - Defining the essential knowledge, skills, attitudes and professional values required of general practitioners across the range of working contexts in Australia;
   - Meeting or exceeding the relevant accreditation criteria of the Australian Medical Council.

2. *Responsiveness to community needs* – The Curriculum content responds to the diverse needs of the Australian population, including the National Health Needs and Priorities determined by the Australian Government, and also the needs expressed by rural and remote people and communities.

3. *Responsiveness to the rural and remote context* – The Curriculum focuses on the key features that define rural and remote medicine and distinguish it from urban models of general practice. This includes features such as regular after-hours care, extended clinical skills, emergency medicine, Aboriginal and Torres Strait Islander health, and independence in decision-making.

4. *Outcomes focus* – The Curriculum defines 73 abilities that registrars must achieve. These form the basis for the assessment blueprint and link with the content listed in the accompanying Curriculum statements.

5. *Focus on experiential learning* – The Curriculum supports a predominant teaching and learning approach involving experience in a variety of structured placements, with self-directed learning and supervision from experienced mentors and educators. This also promotes the recognition of prior learning and experience, and a deep rather than a surface approach to learning.

6. *Applicability to practice* – The Curriculum content is applicable to the current and projected future demands of rural and remote general practice.

7. *Validity, reliability and educational soundness* – The Curriculum and its related assessment processes are progressive, academically rigorous, educationally sound, clinically relevant, valid, reliable, and are designed to have a positive educational impact.

8. *Appropriateness and acceptability of delivery and assessment methods* – Curriculum delivery and assessment methods have been designed to be appropriate and acceptable to registrars in rural and remote contexts. This is done through distance learning, flexible delivery methods and interactive approaches.

9. *Use of information technology* – The Curriculum is designed to enable implementation on a robust and innovative online technology platform which allows registrars and their supervisors to monitor, record and review the achievement of learning outcomes.

10. *Articulation with advanced studies* – The requirements of the Curriculum have been designed to articulate with advanced and special interest vocational and tertiary studies.

11. *Contribution to improving workforce capacity* – The Curriculum will contribute to building a skilled, confident, safe and competent Australian rural and remote general practitioner workforce.
2.5 Abilities and Domains

The ability statements are high-level statements which describe the generic abilities that general practitioners require to be able to work anywhere in Australia and particularly in rural and remote settings. The ACRRM assessment blueprint is mapped to the ability statements. These overarching abilities are then applied to different age groups, disciplines or topic areas in the curriculum statements. This provides further detail in each statement of the standard that ACRRM expects registrars to attain by Fellowship.

The abilities are organised under the seven domains that describe the different contexts of practice. Building on the Third Edition of the Primary Curriculum 2009, these domains were refined through consultation with a diverse group of rural and remote general practitioners, and by referring to the Australian and international literature that describes this unique and evolving field of general practice. Like the approach taken by the Third Edition, they do not represent the traditional ‘domains of learning’ often found in medical and other health professional curricula, but are ‘domains of practice’.

The Seven Domains

1. Provide medical care in the ambulatory and community setting
2. Provide care in the hospital setting
3. Respond to medical emergencies
4. Apply a population health approach
5. Address the health care needs of culturally diverse and disadvantaged groups
6. Practise medicine within an ethical, intellectual and professional framework
7. Practise medicine in the rural and remote context
Domain 1: Provide medical care in the ambulatory and community setting

Themes: Patient-centred clinical assessment, Clinical reasoning, Clinical management

Abilities

1.1 Establish a doctor-patient relationship and use a patient-centred approach to care
1.2 Obtain a clinical history that reflects contextual issues including: presenting problems, epidemiology, culture and geographic location
1.3 Perform a problem-focussed physical examination relevant to clinical history and risks, epidemiology and cultural context
1.4 Use specialised clinical equipment as required for further assessment and interpret findings
1.5 Order and/or perform diagnostic tests where required to confirm a diagnosis, monitor medical care and/or exclude treatable or serious conditions
1.6 Apply diagnostic reasoning to arrive at one or more provisional diagnoses, considering uncommon but clinically important differential diagnoses
1.7 Communicate findings of clinical assessment effectively and sensitively to the patient and/or carer
1.8 Formulate a management plan in concert with the patient and/or carer, judiciously applying best evidence and the advice of expert colleagues
1.9 Identify and manage co-morbidities in the patient and effectively communicate these to the patient and/or carer
1.10 Ensure safe and appropriate prescribing of medications and treatment options in the clinical context
1.11 Manage uncertainty and the need to evaluate the risks versus the benefits of clinical decisions
1.12 Refer, facilitate and coordinate access to specialised medical and diagnostic and other health and social support services
1.13 Provide and/or arrange follow-up and continuing medical care
Domain 2: Provide care in the hospital setting

*Themes: Medical care of admitted patients, Medical leadership in a hospital team, Health care quality and safety*

**Abilities**

2.1 Manage admission of patients to hospital in accordance with institutional policies
2.2 Develop, implement and maintain a management plan for hospitalised patients in concert with the patient and/or carer
2.3 Apply relevant checklists and clinical management pathways
2.4 Monitor clinical progress, regularly re-evaluate the problem list and modify management accordingly
2.5 Maintain a clinically relevant plan of fluid, electrolyte and blood product use with relevant pathology testing
2.6 Order and perform a range of diagnostic and therapeutic procedures
2.7 Maintain timely and accurate patient documentation in hospital records including drug prescription and administration
2.8 Communicate effectively with the health care team, patient and/or carer including effective clinical handover
2.9 Recognise and respond early to the deteriorating patient
2.10 Anticipate and judiciously arrange safe patient transfer to other facilities, considering clinical indications, service capabilities, patient preferences, transportation and geography
2.11 Undertake early, planned and multi-disciplinary discharge planning
2.12 Contribute medical expertise and leadership in a hospital team
2.13 Provide direct and remote clinical supervision and support to nurses, junior medical staff and students
2.14 Recognise, document and manage adverse events and near misses
2.15 Participate in institutional quality and safety improvement and risk management activities
Domain 3: Respond to medical emergencies

Themes: Initial assessment and triage, Emergency medical intervention, Communication and planning

Abilities

3.1 Undertake initial assessment and triage of patients with acute or life-threatening conditions
3.2 Stabilise critically ill patients and provide primary and secondary care
3.3 Provide definitive emergency resuscitation and management across the lifespan in keeping with clinical need, own capabilities and local context and resources
3.4 Perform required emergency procedures
3.5 Arrange and/or perform emergency patient transport or evacuation when needed
3.6 Demonstrate resourcefulness in knowing how to access and use available resources
3.7 Communicate effectively at a distance with consulting or receiving clinical personnel
3.8 Participate in disaster planning and implementation of disaster plans, and post-incident analysis and debriefing
3.9 Provide inter-professional team leadership in emergency care that includes quality assurance and risk management assessment

Domain 4: Apply a population health approach

Themes: Community health assessment, Population-level health intervention, Evaluation of health care, Collaboration with agencies

Abilities

4.1 Analyse the social, environmental, economic and occupational determinants of health that affect the community burden of disease and access to health-related services
4.2 Apply a population health approach that is relevant to the clinical practice profile
4.3 Integrate evidence-based prevention, early detection and health maintenance activities into practice at a systems level
4.4 Provide continuity and coordination of care for own practice population
4.5 Evaluate quality of health care for practice populations
4.6 Fulfil reporting requirements in relation to statutory notification of health conditions
4.7 Access and collaborate with agencies responsible for key population health functions including public health services, employer groups and local government
4.8 Participate as a medical advocate in the design, implementation and evaluation of interventions that address determinants of population health
Domain 5: Address the health care needs of culturally diverse and disadvantaged groups

*Themes: Differing epidemiology, Cultural safety and respect, working with groups to improve health outcomes*

**Abilities**

5.1 Apply knowledge of the differing profile of disease and health risks among culturally diverse and disadvantaged groups
5.2 Communicate effectively and in a culturally safe manner, using interpreters, key community contacts and networks as appropriate
5.3 Reflect on own assumptions, cultural beliefs and emotional reactions in providing culturally safe care
5.4 Apply principles of partnership, community ownership, consultation, capacity building, reciprocity and respect to health care delivery, health surveillance and research
5.5 Harness the resources available in the health care team, the local community and family to improve outcomes of care
5.6 Work with culturally diverse and disadvantaged groups to address barriers in access to health services and improve the determinants of health

Domain 6: Practise medicine within an ethical, intellectual and professional framework

*Themes: Ethical practice, Professional obligations, Intellectual engagement including teaching and research*

**Abilities**

6.1 Ensure safety, privacy and confidentiality in patient care
6.2 Maintain appropriate professional boundaries
6.3 Be aware of duty of care issues arising from providing health care to self, family, colleagues, patients and the community
6.4 Recognise unprofessional behaviour and signs of the practitioner in difficulty among colleagues and respond according to ethical guidelines and statutory requirements
6.5 Keep clinical documentation in accordance with legal and professional standards
6.6 Demonstrate commitment to teamwork, collaboration, coordination and continuity of care
6.7 Contribute to the management of human and financial resources within a health service
6.8 Work within relevant national and state legislation and professional and ethical guidelines
6.9 Provide accurate and ethical certification when required for sickness, employment, social benefits and other purposes
6.10 Manage, appraise and assess own performance in the provision of medical care for patients
6.11 Develop and apply strategies for self-care, personal support and caring for family
6.12 Teach and clinically supervise health students, junior doctors and other health professionals
6.13 Engage in continuous learning and professional development
6.14 Critically appraise and apply relevant research

Domain 7: Practise medicine in the rural and remote context

Themes: Resourcefulness, Flexibility, Teamwork and Technology, Responsiveness to context

Abilities

7.1 Demonstrate resourcefulness, independence and self-reliance while working effectively in geographic, social and professional isolation
7.2 Provide effective clinical care when away from ready access to specialist medical, diagnostic and allied health services
7.3 Arrange referral to distant services in concert with the patient and/or carer considering the balance of potential benefits, harms and costs
7.4 Provide direct and distant clinical supervision and support for other rural and remote health care personnel
7.5 Use information and communication technology to provide medical care or facilitate access to specialised care for patients
7.6 Use information and communication technology to network and exchange information with distant colleagues
7.7 Respect local community norms and values in own life and work practices
7.8 Identify and acquire extended knowledge and skills as may be required to meet health care needs of the local population
2.6 Curriculum Statements

The content that must be learned and demonstrated at Fellowship level is organised into 18 curriculum statements according to major medical disciplines or practice areas. A process of extensive consultation with rural and remote doctors throughout this country was undertaken to achieve a consensus on the content of each of these curriculum statements. The content covered in each of the curriculum statements is based on clinical presentations and problem-solving where possible, and takes into account the realities of rural and remote medicine and its comprehensive nature. The full curriculum statements are presented in Section 6.

The areas covered by the curriculum statements are:

1. Aboriginal and Torres Strait Islander Health
2. Adult Internal Medicine
3. Aged Care
4. Anaesthetics
5. Business and Professional Management
6. Child and Adolescent Health
7. Dermatology
8. Information Management and Information Technology
9. Mental Health
10. Musculoskeletal Medicine
11. Obstetrics and Women’s Health
12. Ophthalmology
13. Oral Health
14. Palliative Medicine
15. Radiology
16. Rehabilitation Medicine
17. Research and Teaching
18. Surgery
2.7 How to use the Curriculum

The Curriculum is designed to be the yardstick by which progression in training can be reflected upon and strengths and areas for improvement identified by both registrars and their supervisors and educators. It serves to specify the intended learning outcomes for reference by supervisors and educators in planning learning activities and for conducting formative and summative assessments.

The full range of outcomes should be met by the stage of achieving Fellowship. It is acknowledged that registrars will take various pathways through training, have different training experiences and environments and enter with different range of abilities and interests. Therefore the Curriculum is set out as a whole entity, and not as a linear structure. As medical practice is integrated, so are the outcomes.

To make the most of the Curriculum, users should first familiarise themselves with the seven Domains and the 73 generic learning abilities that underpin them.

The Curriculum statements are intended to provide a more detailed analysis of learning outcomes in each Domain within the 18 identified areas of practice. While many learning outcomes remain the same or similar to the generic learning abilities, these learning outcomes have been deliberately contextualized to the major medical disciplines or practice areas and some learning outcomes will therefore provide variations of the generic abilities or be additional to the generic abilities.

This approach enables each of the 18 curriculum statements to stand in its own right - which may be especially helpful for registrars when reviewing progress by discipline or areas and for supervisors or educators working in defined disciplines or areas to rapidly assess the required outcomes in planning or delivering education. In this way the Curriculum can be accessed in multiple ways depending on needs. Hyperlinks enable the reader to access the required pages direct from the Table of Contents for ease of use.
3.0 Implementation

Appendix 1 provides further information on the ways in which ACRRM implements its curriculum. Please refer to this for more information on training standards and pathways, training duration, teaching and learning, educational delivery platforms and further resources.
4.0 Assessment

4.1 Programmatic Assessment Model

A programmatic assessment model is used in the ACRRM Vocational Training Program. A programmatic model treats assessment as a ‘program’ across the entire duration of training, rather than just a specific instrument. It therefore integrates assessment into all aspects of the curriculum. This approach enables multiple methods to be used to assess learning outcomes and provides registrars with progressive feedback throughout their training.

Further details of the Assessment process are in Appendix 2. These should be read in conjunction with the Assessment blueprint relevant to the curriculum abilities shown below.

4.2 Assessment Blueprint

<table>
<thead>
<tr>
<th>Domain 1 - Provide medical care in the ambulatory and community setting</th>
<th>MCQ</th>
<th>StAMPS</th>
<th>Logbook</th>
<th>MSF</th>
<th>MiniCEX</th>
<th>Other</th>
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</thead>
<tbody>
<tr>
<td>Abilities</td>
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<tr>
<td>1.1 Establish a doctor-patient relationship and use a patient-centred approach to care</td>
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<tr>
<td>1.2 Obtain a clinical history that reflects contextual issues including presenting problems, epidemiology, culture and geographic location</td>
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<tr>
<td>1.3 Perform a problem-focused physical examination relevant to clinical history and risks, epidemiology and cultural context</td>
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<tr>
<td>1.4 Use specialised clinical equipment as required for further assessment and interpret findings</td>
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<tr>
<td>1.5 Order and/or perform diagnostic tests where required to confirm a diagnosis, monitor medical care and/or exclude treatable or serious conditions</td>
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<tr>
<td>1.6 Apply diagnostic reasoning to arrive at one or more provisional diagnoses, considering uncommon but clinically important differential diagnoses</td>
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<tr>
<td>1.7 Communicate findings of clinical assessment effectively and sensitively to the patient and/or carer</td>
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<td>x</td>
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<tr>
<td>1.8 Formulate a management plan in concert with the patient and/or carer, judiciously applying best evidence and the advice of expert colleagues</td>
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<tr>
<td>1.9 Identify and manage co-morbidities in the patient and effectively communicate these to the patient and/or carer</td>
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<td>x</td>
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<tr>
<td>1.10 Ensure safe and appropriate prescribing of medications and treatment options in a clinical context</td>
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<tr>
<td>1.11 Manage uncertainty and the need to evaluate the risks versus the benefits of clinical decisions</td>
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<tr>
<td>1.12 Refer, facilitate and coordinate access to specialised medical and diagnostic and other health and social support services</td>
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<td></td>
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<tr>
<td>1.13 Provide and/or arrange follow-up and continuing medical care</td>
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</tbody>
</table>

## Domain 2 – Provide care in the hospital setting

<table>
<thead>
<tr>
<th>Abilities</th>
<th>MCQ</th>
<th>StAMPS</th>
<th>Logbook</th>
<th>MSF</th>
<th>MiniCEX</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Manage admission of patients to hospital in accordance with institutional policies</td>
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<td>x</td>
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<tr>
<td>2.2 Develop, implement and maintain a management plan for hospitalised patients in concert with the patient and/or carer</td>
<td>x</td>
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<tr>
<td>2.3 Apply relevant checklists and clinical management pathways</td>
<td>x</td>
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<td>2.4 Monitor clinical progress, regularly re-evaluate the problem list and modify management accordingly</td>
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<tr>
<td>2.5 Maintain a clinically relevant plan of fluid, electrolyte and blood product use with relevant pathology testing</td>
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<td>x</td>
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<tr>
<td>2.6 Order and perform a range of diagnostic and therapeutic procedures</td>
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<td>x</td>
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<td>2.7 Maintain timely and accurate patient documentation in hospital records including drug prescription and administration</td>
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<td>Supervisor reports</td>
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<td>2.8 Communicate effectively with the health care team, patient and/or carer including effective clinical handover</td>
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<td>x</td>
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<tr>
<td>2.9 Recognise and respond early to the deteriorating patient</td>
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<tr>
<td>2.10 Anticipate and judiciously arrange safe patient transfer to other facilities, considering clinical indications, service capabilities, patient preferences, transportation and geography</td>
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<td>2.11 Undertake early, planned and multi-disciplinary discharge planning.</td>
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<tr>
<td>2.12 Contribute medical expertise and leadership in a hospital team</td>
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<td>2.13 Provide direct and remote clinical supervision and support to nurses, junior doctors and students</td>
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<td>2.14 Recognise, document and manage adverse events and near misses</td>
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<td>2.15 Participate in institutional quality and safety improvement and risk-management activities</td>
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</table>
## Domain 3 – Respond to medical emergencies

<table>
<thead>
<tr>
<th>Abilities</th>
<th>MCQ</th>
<th>StAMPS</th>
<th>Logbook</th>
<th>MSF</th>
<th>MiniCEX</th>
<th>Other</th>
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</thead>
<tbody>
<tr>
<td>3.1 Undertake initial assessment and triage of patients with acute or</td>
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<td>EM Courses</td>
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<td>life threatening conditions</td>
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<tr>
<td>3.2 Stabilise critically ill patients and provide primary and secondary</td>
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<td>care</td>
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<tr>
<td>3.3 Provide definitive emergency resuscitation and management across the</td>
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<td>EM Courses</td>
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<td>lifespan in keeping with clinical need, own capabilities and local</td>
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<tr>
<td>context and resources</td>
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<td>3.4 Perform required emergency procedures</td>
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<tr>
<td>3.5 Arrange and/or perform emergency patient transport or evacuation</td>
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<td>when needed</td>
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<td>3.6 Demonstrate resourcefulness in knowing how to access and use</td>
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<td>available resources</td>
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<td>3.7 Communicate effectively at a distance with consulting or receiving</td>
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<td>clinical personnel</td>
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<td>3.8 Participate in disaster planning and implementation of disaster</td>
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<tr>
<td>plans, and post-incident analysis and debriefing</td>
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<tr>
<td>3.9 Provide inter-professional team leadership in emergency care that</td>
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<td>EM Courses</td>
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<td>includes quality assurance</td>
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</table>
## Domain 4 – Apply a population health approach

<table>
<thead>
<tr>
<th>Abilities</th>
<th>MCQ</th>
<th>StAMPS</th>
<th>Logbook</th>
<th>MSF</th>
<th>MiniCEX</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Analyse the social, environmental, economic and occupational determinants of health that affect the community burden of disease and access to health-related services</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
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<tr>
<td>4.2 Apply a population health approach that is relevant to the clinical practice profile</td>
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<td>x</td>
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<tr>
<td>4.3 Integrate evidence-based prevention, early detection and health maintenance activities into practice at a systems level</td>
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<td>x</td>
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<td>x</td>
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<tr>
<td>4.4 Provide continuity and coordination of care for own practice population</td>
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<tr>
<td>4.5 Evaluate quality of health care for practice populations</td>
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<tr>
<td>4.6 Fulfil reporting requirements in relation to statutory notification of health conditions</td>
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<td>x</td>
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<tr>
<td>4.7 Access and collaborate with agencies responsible for key population health functions including public health services, employer groups and local government</td>
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<tr>
<td>4.8 Participate as a medical advocate in the design, implementation and evaluation of interventions that address determinants of population health</td>
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</table>

## Domain 5 – Address the health care needs of culturally diverse and disadvantaged groups

<table>
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<tr>
<th>Abilities</th>
<th>MCQ</th>
<th>StAMPS</th>
<th>Logbook</th>
<th>MSF</th>
<th>MiniCEX</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1 Apply knowledge of the differing profile of disease and health risks among culturally diverse and disadvantaged groups</td>
<td>x</td>
<td>x</td>
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<td>x</td>
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<tr>
<td>5.2 Communicate effectively and in a culturally safe manner, using interpreters, key community contacts and networks as appropriate</td>
<td></td>
<td></td>
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<td>x</td>
<td>x</td>
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<tr>
<td>5.3 Reflect on own assumptions, cultural beliefs and emotional reactions in providing culturally safe care</td>
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<td>x</td>
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<tr>
<td>5.4 Apply principles of partnership, community ownership, consultation, capacity building, reciprocity and respect to health care delivery, health surveillance and research</td>
<td></td>
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<tr>
<td>5.5 Harness the resources available in the health care team, the local community and family to improve outcomes of care</td>
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<tr>
<td>5.6 Work with culturally diverse and disadvantaged groups to address barriers in access to health services and improve the determinants of health</td>
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</table>

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### Domain 6 – Practise medicine within an ethical, intellectual and professional framework

<table>
<thead>
<tr>
<th>Abilities</th>
<th>MCQ</th>
<th>StAMPS</th>
<th>Logbook</th>
<th>MSF</th>
<th>MiniCEX</th>
<th>Other</th>
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</thead>
<tbody>
<tr>
<td>6.1 Ensure safety, privacy and confidentiality in patient care</td>
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<td>6.2 Maintain appropriate professional boundaries</td>
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<td>6.3 Be aware of duty of care issues arising from providing health care to self, family, colleagues, patients and the community</td>
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<td>6.4 Recognise unprofessional behaviour and signs of the practitioner in difficulty among colleagues and respond according to ethical guidelines and statutory requirements</td>
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<td>6.5 Keep clinical documentation in accordance with legal and professional standards</td>
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<td>x</td>
<td>Supervisor</td>
<td>Reports</td>
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<tr>
<td>6.6 Demonstrate commitment to teamwork, collaboration, coordination and continuity of care</td>
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<td>6.7 Contribute to the management of human and financial resources within a health service</td>
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<td>6.8 Work within relevant national and state legislation and professional and ethical guidelines</td>
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<td>6.9 Provide accurate and ethical certification when required for sickness, employment, social benefits and other purposes</td>
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<tr>
<td>6.10 Manage, appraise and assess own performance in the provision of medical care for patients</td>
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<td>6.11 Develop and apply strategies for self-care, personal support and caring for family</td>
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<tr>
<td>6.12 Teach and clinically supervise health students, junior doctors and other health professionals</td>
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<tr>
<td>6.13 Engage in continuous learning and professional development</td>
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<td>Training Program</td>
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<td>6.14 Critically appraise and apply relevant research</td>
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</table>

### Domain 7 – Practise medicine in the rural and remote context

<table>
<thead>
<tr>
<th>Abilities</th>
<th>MCQ</th>
<th>StAMPS</th>
<th>Logbook</th>
<th>MSF</th>
<th>MiniCEX</th>
<th>Other</th>
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</thead>
<tbody>
<tr>
<td>7.1 Demonstrate resourcefulness, independence and self-reliance while working effectively in geographic, social and professional isolation</td>
<td>x</td>
<td>x</td>
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<tr>
<td>7.2 Provide effective clinical care when away from ready access to specialist medical, diagnostic and allied health services</td>
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<tr>
<td>7.3 Arrange referral to distant services in concert with the patient and/or carer considering the balance of potential benefits, harms and costs</td>
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<tr>
<td>7.4 Provide direct and distant clinical supervision and support for other rural and remote health care personnel</td>
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<tr>
<td>7.5 Use information and communication technology to provide medical care or facilitate access to specialised care for patients</td>
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<tr>
<td>7.6 Use information and communication technology to network and exchange information with distant colleagues</td>
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<td>7.7 Respect local community norms and values in own life and work practices</td>
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<tr>
<td>7.8 Identify and acquire extended knowledge and skills as may be required to meet health care needs of the local population</td>
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5.0 Evaluation

This ACRRM Primary Curriculum is reviewed regularly about every five years, to ensure it is up-to-date and reflects contemporary general practice particularly in rural and remote settings, and that it is suitable to prepare registrars to work anywhere in Australia. It is also evaluated on an ongoing basis through feedback received by training providers, registrars, the profession, policy makers, and other key stakeholders.
6.0 Curriculum Statements

This section consists of the curriculum statements that describe the specific abilities, knowledge and skills that registrars must learn and be able to demonstrate, organised under major medical disciplines and topic areas. These curriculum statements resulted from an extensive consultation process with rural and remote doctors throughout Australia, which was used to achieve agreement on the content of each one. Each statement therefore takes into account the realities of rural and remote general practice and its comprehensive nature.

Each curriculum statement defines the abilities, knowledge and skills that rural general practitioners require in that discipline or topic area.

The disciplines and topic areas covered by the curriculum statements are:

1. Aboriginal and Torres Strait Islander Health (ATS)
2. Adult Internal Medicine (AIM)
3. Aged Care (AGE)
4. Anaesthetics (ANA)
5. Business and Professional Management (BPM)
6. Child and Adolescent Health (CAH)
7. Dermatology (DERM)
8. Information Management and Information Technology (IMIT)
9. Mental Health (MH)
10. Musculoskeletal Medicine (MSK)
11. Obstetrics and Women’s Health (O&WH)
12. Ophthalmology (OPH)
13. Oral Health (ORAL)
14. Palliative Care (PAL)
15. Radiology (RAD)
16. Rehabilitation (REH)
17. Research and Teaching (R&T)
18. Surgery (SURG)

Each curriculum statement has been allocated an abbreviation as indicated above. The abbreviations are used prior to each ability statement to create a specific reference for each ‘ability statement’; for example ATS 2.4.

Where an area is *italicised and underlined* in the following statements further information relating to this phrase is found under Definition of terms later in the statement.
6.1 Aboriginal and Torres Strait Islander Health

Domain 1: Provide medical care in the ambulatory and community setting

Themes: Patient-centred clinical assessment, Clinical reasoning, Clinical management

Abilities

ATS 1.1 Undertake a systematic and culturally sensitive approach to health assessment for Aboriginal and Torres Strait Islander patients

ATS 1.2 Establish a doctor-patient relationship and use a patient-centred approach to care

ATS 1.3 Obtain a clinical history that reflects contextual issues including: presenting problems, epidemiology, culture and geographic location

ATS 1.4 Identify and evaluate the range of factors that has impacted on an Aboriginal or Torres Strait Islander patient’s health and recognise high-risk situations

ATS 1.5 Identify situations where one-on-one consultations may be inappropriate with some Aboriginal or Torres Strait Islander patients

ATS 1.6 Perform a problem-focused physical examination relevant to clinical history and risks, epidemiology and cultural context

ATS 1.7 Order and/or perform diagnostic tests where required to confirm a diagnosis, monitor medical care and/or exclude treatable or serious conditions

ATS 1.8 Apply diagnostic reasoning to arrive at one or more provisional diagnoses, considering common and important health problems experienced by Aboriginal and Torres Strait Islander populations

ATS 1.9 Consider spirituality problems as a potential differential diagnosis in a range of physical and psychological illnesses and seek advice from Indigenous health workers when a spirituality problem is suspected

ATS 1.10 Evaluate and present available treatment options and their physical, social and psychological implications for the patient, family, community, and health team to enable their informed participation in decision-making

ATS 1.11 Identify and consult with relevant parts of a patient’s health decision-making network with the aim of developing a management plan in concert with the patient and/or carer

ATS 1.12 Identify and manage co-morbidities in the patient and effectively communicate these to the patient and/or carer

ATS 1.13 Ensure safe and appropriate prescribing of medications and treatment options in the clinical context

ATS 1.14 Refer, facilitate and coordinate access to relevant specialised medical and diagnostic and other health and social support services, considering local and cultural issues that may impact on the decision to treat or refer
ATS 1.15 Collaborate and work effectively with other team members and other health care providers to provide optimal patient care during referrals, transfers and evacuations

ATS 1.16 Consider and be able to evaluate the challenges associated with referral of Aboriginal and Torres Strait Islander people to specialist centres

ATS 1.17 Recognise and demonstrate in referrals the additional time and other resources that may need to be expended to ensure effective referral, including optimal travel arrangements and liaison with Indigenous health workers for advice

ATS 1.18 Establish effective follow-up and review mechanisms as required including review of procedures, assessment of outcomes and reassessment of health problems

**Domain 2: Provide care in the hospital setting**

*Themes: Medical care of admitted patients, Medical leadership in a hospital team, Health care quality and safety*

**Abilities**

ATS 2.1 Manage admission of Aboriginal and Torres Strait Islander patients to hospital in accordance with institutional policies

ATS 2.2 Develop, implement and maintain a management plan for hospitalised patients in concert with the patient, carers, family and Aboriginal and Torres Strait Islander Health Workers as relevant

ATS 2.3 Enlist the support of Aboriginal or Torres Strait Islander hospital liaison officers in inpatient care and discharge planning and be able to describe their role

ATS 2.4 Monitor clinical progress, regularly re-evaluate the problem list and modify management accordingly

ATS 2.5 Communicate effectively with the health care team, patient and/or carer including effective clinical handover and liaison with hospital and community-based Aboriginal and Torres Strait Islander health staff

ATS 2.6 Anticipate and judiciously arrange safe patient transfer to other facilities, considering clinical indications, service capabilities, patient preferences, transportation, geography and challenges associated with referral of Aboriginal and Torres Strait Islander people to specialist centres

ATS 2.7 Undertake early, planned and multi-disciplinary discharge planning with involvement of relevant Aboriginal and Torres Strait Islander health personnel
Domain 3: Respond to medical emergencies

Themes: Initial assessment and triage, Emergency medical intervention, Communication and planning

Abilities

ATS 3.1 Undertake initial assessment and triage of patients with acute or life threatening conditions
ATS 3.2 Stabilise critically-ill patients and provide primary and secondary care
ATS 3.3 Provide definitive emergency resuscitation and management across the lifespan in keeping with clinical need, own capabilities and local context and resources
ATS 3.4 Recognise and evaluate variations in emergency presentations among Aboriginal and Torres Strait Islander patients that differ from the non-Indigenous population
ATS 3.5 Perform required emergency procedures
ATS 3.6 Arrange and/or perform emergency patient transport or evacuation when needed
ATS 3.7 Demonstrate resourcefulness in knowing how to access and use available resources
ATS 3.8 Communicate effectively at a distance with consulting or receiving clinical personnel
ATS 3.9 Participate in disaster planning and implementation of disaster plans, and post-incident analysis and debriefing
ATS 3.10 Provide inter-professional team leadership in emergency care that includes quality assurance and risk management assessment

Domain 4: Apply a population health approach

Themes: Community health assessment, Population-level health intervention, Evaluation of health care, Collaboration with agencies

Abilities

ATS 4.1 Analyse the social, environmental, economic and occupational determinants of health that affect the burden of disease in Aboriginal and Torres Strait Islander communities and their access to health-related services
ATS 4.2 Apply a population health approach that is relevant to the clinical practice profile
ATS 4.3 Integrate evidence-based prevention, early detection and health maintenance activities into practice at a systems level, including opportunistic comprehensive health assessment and treatment plans for Aboriginal and Torres Strait Islander patients
ATS 4.4 Provide continuity and coordination of care for own practice population
ATS 4.5 Evaluate quality of health care for Aboriginal and Torres Strait Islander practice populations
ATS 4.6 Access and collaborate with agencies responsible for key population health functions including public health services, employer groups and local government
ATS 4.7 Participate as a medical advocate in the design, implementation and evaluation of interventions that address determinants of population health
Domain 5: Address the health care needs of culturally diverse and disadvantaged groups

Themes: Differing epidemiology, Cultural safety and respect, working with groups to improve health outcomes

Abilities

ATS 5.1 Recognise and assess how the historical, cultural and epidemiological diversity among Aboriginal peoples and Torres Strait Islander communities in Australia impacts on their health care

ATS 5.2 Apply knowledge of the varying profile of disease and health risks among different Aboriginal and Torres Strait Islander communities to health care provision

ATS 5.3 Communicate effectively and in a culturally safe manner, using interpreters, key Aboriginal and Torres Strait Islander community contacts and networks as appropriate

ATS 5.4 Reflect on and discuss own assumptions, cultural beliefs and emotional reactions in providing culturally safe care to Aboriginal and Torres Strait Islander patients

ATS 5.5 Describe and apply principles of partnership, community ownership, consultation, capacity building, reciprocity and respect to health care delivery, health surveillance and research with Aboriginal and Torres Strait Islander communities

ATS 5.6 Harness the resources available in the health care team, the local community and family to improve outcomes of care for Aboriginal and Torres Strait Islander communities

ATS 5.7 Work with culturally diverse and disadvantaged groups to evaluate and address barriers in access to health services and the determinants of health

Domain 6: Practise medicine within an ethical, intellectual and professional framework

Themes: Ethical practice, Professional obligations, Intellectual engagement including teaching and research

Abilities

ATS 6.1 Ensure safety, privacy and confidentiality in patient care

ATS 6.2 Deal effectively with the particular need and difficulty in maintaining confidentiality in rural/remote and Aboriginal and Torres Strait Islander communities

ATS 6.3 Establish where necessary and adhere to protocols that outline confidentiality and integrity requirements for staff

ATS 6.4 Describe the principles and practicalities of working in a manner which is empowering to individuals and communities
ATS 6.5 Provide health care services that use a primary health care approach, contributing to the social and emotional wellbeing of the individual patient and the community as a whole

ATS 6.6 Demonstrate an ability to recognise one’s own limitations and appropriately determine when to refer

ATS 6.7 Maintain appropriate professional boundaries

ATS 6.8 Demonstrate commitment to teamwork, collaboration, coordination and continuity of care

ATS 6.9 Critically reflect on consultations and community-based activities to identify strengths and opportunities for development of own performance in the care of Aboriginal and Torres Strait Islander patients

ATS 6.10 Develop and apply strategies for self-care, personal support and caring for family while living and working in a cultural context other than one’s own

ATS 6.11 Teach and clinically supervise health students, junior doctors and other health professionals including Aboriginal and Torres Strait Islander Health Workers

ATS 6.12 Undertake self-directed learning, continuing education and conduct quality assurance activities in the provision of health services to Aboriginal and Torres Strait Islander peoples

ATS 6.13 Critically appraise and apply relevant research to inform practice taking into account the particular ethical considerations in conduct of research in the Indigenous health context

Domain 7: Practise medicine in the rural and remote context

Themes: Resourcefulness; Flexibility, teamwork and technology; Responsiveness to context

Abilities

ATS 7.1 Demonstrate resourcefulness, independence and self-reliance while working effectively in geographic, social and professional isolation

ATS 7.2 Demonstrate a commitment to ensuring that Aboriginal and Torres Strait Islander peoples in rural/remote communities receive health opportunities commensurate with health care standards and opportunities available in metropolitan areas

ATS 7.3 Provide direct and distant clinical supervision and support for other rural and remote health care personnel

ATS 7.4 Use information and communication technology to provide medical care or facilitate access to specialised care for Aboriginal and Torres Strait Islander patients

ATS 7.5 Use information and communication technology to network and exchange information with distant colleagues

ATS 7.6 Respect local Aboriginal or Torres Strait Islander community norms and values in own life and work practices

ATS 7.7 Identify and acquire extended knowledge and skills as may be required to meet health care needs of the local Aboriginal or Torres Strait Islander population
### Definition of terms

| **High risk situations include** | High adult and child prevalence of chronic disease, including type 2 diabetes mellitus, hypertension, dyslipidaemia and related end-organ complications such as cardiovascular, renal and eye disease |
| **Situations where one on one consultations may be inappropriate include** | Gynaecological and obstetric examinations; when customary lore issues are involved; intimate examination for STIs |
| **Common and important health risks and problems experienced by Aboriginal and Torres Strait Islander populations include** | Infectious and parasitic diseases that are overrepresented in many Indigenous communities, such as bacterial pneumonia, scabies, impetigo, rheumatic fever, syphilis, trachoma, tuberculosis, leprosy, gonococcal disease, hookworm and strongyloidiasis |
| **Challenges associated with referral of Aboriginal and Torres Strait Islander people to specialist centres include** | Injury and trauma related to motor-vehicle accidents, environmental hazards, family violence and other interpersonal violence, suicide and self-harm |
| **Variations in emergency presentations among Aboriginal and Torres Strait Islander patients include** | Teen pregnancy, gestational diabetes, premature labour, IUGR, faltering growth |

### Knowledge and Skills

#### Essential knowledge required

Recognises the social, cultural, historical, economic and political framework that has influenced the current health status of Aboriginal and Torres Strait Islander people, including:

- the known characteristics of the pre-colonial health status of Aboriginal and Torres Strait Islander people
- major current mortality and morbidity patterns of Aboriginal and Torres Strait Islander people compared to the Australian population as a whole, particularly in relation to: fertility rate, life expectancy, maternal mortality, infant mortality, age-specific mortality and morbidity
- major regional differences in mortality and morbidity patterns
- common age and sex specific causes of morbidity, mortality, clinic presentation and hospital admission for local Aboriginal and Torres Strait Islander people, linking them with the associated socio-economic, cultural and environmental factors

Knows an overview of colonisation in Australia including:

- the term ‘Terra Nullius’ and its significance
- cultural revitalisation
- the background underlying colonisation in Australia
- the process of colonisation
• the resistance of Aboriginal and Torres Strait Islander people to colonisation

Knows an overview of the history of Australian government regulation in relation to Aboriginal and Torres Strait Islander people including:

• segregation and protection policies, ‘smoothing the dying pillow’ to ‘training for citizenship’
• assimilation, removal of children, the ‘stolen’ generation
• contemporary policies, community empowerment, self-determination, the growth of Indigenous organisations
• land rights
• reconciliation

Recognises the contemporary socio-cultural characteristics of Indigenous communities including:

• family organisation, extended family
• patterns of reciprocity and decision making
• social distance from non-Aboriginal and Torres Strait Islander people
• folklore and identity

Defines the term ‘cultural safety’ and the application of culturally safe principles to health service delivery, including:

• the importance of, and connection between, cultural safety, recognition of cultural diversity among Aboriginal and Torres Strait Islander peoples and self determination
• racism and the impact of racism on the health and the delivery of health care to Aboriginal and Torres Strait Islander peoples
• strategies to maintain culturally safe practice
• the concept of community held by Aboriginal and Torres Strait Islander people and appropriate protocols for consultation

Identifies the issues involved in communicating cross-culturally, including:

• the different communication styles of Aboriginal and Torres Strait Islander people
• communication cues from Aboriginal and Torres Strait Islander people particularly in relation to: gender issues in the patient/doctor relationship, body space and touching, questions about initiation marks, limitations on questions about sexual organs, lore and about other people
• the barriers to effective communication between doctors, other staff and community members including: socio-economic background, cultural issues, language, health beliefs, lore, authority figures, anticipation of approval from whites, gender
• the concept of culture shock

Knows the living picture of the population and distribution characteristics of Aboriginal and Torres Strait Islander people, including:

• the population of Aboriginal and Torres Strait Islander people relative to the whole population, pre- and post-colonisation
major features of the distribution of Aboriginal and Torres Strait Islander people, nationally, in each state, rural–urban distribution, in his/her own region, town, community
demography of the Indigenous population in terms of age and gender
the broad diversity of backgrounds and lifeway's of Aboriginal and Torres Strait Islander people

Describes current social and economic inequities experienced by Aboriginal and Torres Strait Islander people and the link between socio-economic factors and health status, including:

- employment status, education status, economic status, housing status, access and standard of environmental infrastructure
- barriers to accessing primary, secondary and tertiary health services
- the social and economic determinants of health and mechanisms by which these act

Identifies the elements, concepts and activities of Primary Health Care, including:

- the shared characteristics of the primary health care model and the concept of health held by Aboriginal and Torres Strait Islander people
- the principles of primary health care to his/her clinical practice
- how preventive health care, including health promotion and environmental health issues can be an integral part of clinical practice relevant to the health of Aboriginal and Torres Strait Islander people

Knows the evolution, philosophy and characteristics of health service delivery for Aboriginal and Torres Strait Islander people, including:

- the types, quality and effectiveness of western-style health services provided prior to the Aboriginal community controlled health services movement
- social and health conditions that underpin the evolution of community controlled health services
- the philosophy of community controlled health services
- 'self-determination' as it is exercised in the context, operation and activity of community controlled health services
- community controlled organisations in their local area and the services they provide
- the relationship between government health agencies and community controlled health services, nationally, regionally and locally
- concepts of social justice, equity of health outcomes, and health rights in relation to Indigenous health care provision
- the integral role of intersectoral and interprofessional collaboration and the function of Indigenous and Torres Strait Islander health workers in facilitating effective care of the individual and the community

Learning resources

Recommended texts and other resources


• Rural and Remote Medical Education Online (RRMEO) - [http://www.rrmeo.com](http://www.rrmeo.com)

• UpToDate® electronic database that provides current, published, summarised evidence and specific recommendations for patient care - [http://www.uptodate.com](http://www.uptodate.com)


• National Health and Medical Research Council - *Values and Ethics: Guidelines for Ethical Conduct in Aboriginal and Torres Strait Islander Health Research*. 2003, National Health and Medical Research Council, Commonwealth of Australia, Canberra (Currently under review).


6.2 Adult Internal Medicine

Domain 1: Provide medical care in the ambulatory and community setting

Themes: Patient-centred clinical assessment, Clinical reasoning, Clinical management

Abilities

AIM 1.1 Establish a doctor-patient relationship and use a patient-centred approach to care

AIM 1.2 Obtain an accurate clinical history that reflects contextual issues including: presenting problems, epidemiology, occupation, family, gender, culture and geographic location

AIM 1.3 Perform a problem-focused physical examination relevant to clinical history and risks, epidemiology and cultural context

AIM 1.4 Use specialised clinical equipment as required for further assessment and interpret findings

AIM 1.5 Order and/or perform diagnostic tests where required to confirm a diagnosis, monitor medical care and/or exclude treatable or serious conditions

AIM 1.6 Apply diagnostic reasoning to arrive at one or more provisional diagnoses, considering uncommon but clinically important differential diagnoses in balance with common or important medical conditions and infections

AIM 1.7 Communicate findings of clinical assessment effectively and sensitively to the patient and/or carer

AIM 1.8 Formulate an appropriate management plan for immediate and urgent treatment, local management, further local and specialist consultation as required and/or arrange referral and transfer

AIM 1.9 Manage concurrent illness and co-morbidities being aware of implications for the primary medical condition and involving specialised advice and treatment if required

AIM 1.10 Ensure safe and appropriate prescribing of medications and treatment options in the clinical context

AIM 1.11 Manage uncertainty and the need to evaluate the risks versus the benefits of clinical decisions

AIM 1.12 Refer, facilitate and coordinate access to specialised medical and diagnostic and other health and social support services fostering a team approach to health care

AIM 1.13 Provide and/or arrange follow-up and continuing medical care for patients with common or important medical conditions including infections
Domain 2: Provide care in the hospital setting

Themes: Medical care of admitted patients, Medical leadership in a hospital team, Health care quality and safety

Abilities

AIM 2.1 Manage admission of patients to hospital in accordance with institutional policies ensuring a relevant clinical diagnostic process with history, physical examination, investigation and differential diagnosis

AIM 2.2 Develop, implement and maintain a management plan for hospitalised patients in concert with the patient and/or carer and in discussion with their community-based general practitioner or other health professional

AIM 2.3 Apply relevant checklists and clinical management pathways

AIM 2.4 Monitor clinical progress, regularly re-evaluate the problem list and modify management accordingly

AIM 2.5 Maintain a clinically relevant plan of fluid, electrolyte and blood product use with relevant pathology testing

AIM 2.6 Order and perform a range of diagnostic and therapeutic procedures in discussion with the patient and/or carer being aware of cost-benefit and medical risk issues

AIM 2.7 Maintain timely and accurate patient documentation in hospital records including drug prescription and administration

AIM 2.8 Communicate effectively with the health care team, patient and/or carer including effective clinical handover

AIM 2.9 Recognise and respond early to the deteriorating patient

AIM 2.10 Anticipate and judiciously arrange safe patient transfer to other facilities, considering clinical indications, service capabilities, patient preferences, transportation and geography

AIM 2.11 Undertake early, planned and multi-disciplinary discharge planning including discussion with the general practitioner or health professional who will provide ongoing care in the community

AIM 2.12 Contribute medical expertise and leadership in a hospital team

AIM 2.13 Provide direct and remote clinical supervision and support to nurses, junior doctors and students

AIM 2.14 Recognise, document and manage adverse events and near misses identifying the benefit for learning and developing expertise

AIM 2.15 Participate in institutional quality and safety improvement and risk management activities
Domain 3: Respond to medical emergencies

Themes: Initial assessment and triage, Emergency medical intervention, Communication and planning

Abilities

AIM 3.1 Undertake initial assessment and triage of patients with acute or life threatening conditions
AIM 3.2 Stabilise critically ill patients and provide primary and secondary care
AIM 3.3 Provide definitive emergency resuscitation and management across the lifespan in keeping with clinical need, own capabilities and local context and resources
AIM 3.4 Perform required emergency procedures
AIM 3.5 Arrange and/or perform emergency patient transport or evacuation when needed
AIM 3.6 Demonstrate resourcefulness in knowing how to access and use available resources locally and in secondary and tertiary referral centres
AIM 3.7 Communicate effectively at a distance with consulting or receiving clinical personnel
AIM 3.8 Participate in disaster planning and implementation of disaster plans, and post-incident analysis and debriefing
AIM 3.9 Provide inter-professional team leadership in emergency care that includes quality assurance and risk management assessment

Domain 4: Apply a population health approach

Themes: Community health assessment, Population-level health intervention, Evaluation of health care, Collaboration with agencies

Abilities

AIM 4.1 Analyse the social, environmental, economic and occupational determinants of health that affect the community burden of disease and access to health-related services
AIM 4.2 Apply a population health approach that is relevant to the clinical practice profile of the population served
AIM 4.3 Integrate evidence-based prevention, early detection and health maintenance activities into practice at a systems level for common or important medical conditions and infections
AIM 4.4 Conduct screening activities to identify patients at high risk of cardiovascular disease
AIM 4.5 Provide continuity and coordination of care for own practice population
AIM 4.6 Evaluate quality of health care for practice populations in collaboration with local primary health care providers
AIM 4.7 Fulfil reporting requirements in relation to statutory notification of health conditions
AIM 4.8 Access and collaborate with agencies responsible for key population health functions including public health services, private health providers, employer groups and local government
AIM 4.9 Participate as a medical advocate in the design, implementation and evaluation of interventions that address determinants of population health
Domain 5: Address the health care needs of culturally diverse and disadvantaged groups

Themes: Differing epidemiology, Cultural safety and respect, working with groups to improve health outcomes

Abilities

AIM 5.1  Apply knowledge of the differing profile of disease and health risks among culturally diverse and disadvantaged groups
AIM 5.2  Communicate effectively and in a culturally safe manner, using interpreters, key community contacts and networks as appropriate
AIM 5.3  Reflect on own assumptions, cultural beliefs and emotional reactions in providing culturally safe care
AIM 5.4  Apply principles of partnership, community ownership, consultation, capacity building, reciprocity and respect to health care delivery, health surveillance and research
AIM 5.5  Harness the resources available in the health care team, the local community and family to improve outcomes of care
AIM 5.6  Work with culturally diverse and disadvantaged groups to address barriers in access to health services and improve the determinants of health

Domain 6: Practise medicine within an ethical, intellectual and professional framework

Themes: Ethical practice, Professional obligations, Intellectual engagement including teaching and research

Abilities

AIM 6.1  Ensure safety, privacy and confidentiality in patient care
AIM 6.2  Maintain appropriate professional boundaries
AIM 6.3  Be aware of duty of care issues arising from providing health care to self, family, colleagues, patients and the community
AIM 6.4  Recognise unprofessional behaviour and signs of the practitioner in difficulty among colleagues and respond according to ethical guidelines and statutory requirements
AIM 6.5  Keep clinical documentation in accordance with legal and professional standards
AIM 6.6  Demonstrate commitment to teamwork, collaboration, coordination and continuity of care
AIM 6.7  Contribute to the management of human and financial resources within a health service
AIM 6.8  Work within relevant national and state legislation and professional and ethical guidelines
AIM 6.9  Provide accurate and ethical certification when required for sickness, employment, social benefits and other purposes
AIM 6.10  Manage, appraise and assess own performance in the provision of medical care for patients
AIM 6.11  Develop and apply strategies for self-care, personal support and caring for family
AIM 6.12  Teach, mentor and clinically supervise health students, junior doctors and other health professionals
AIM 6.13  Engage in continuous learning and professional development
AIM 6.14  Critically appraise and apply relevant research

Domain 7: Practise medicine in the rural and remote context

Themes: Resourcefulness, Flexibility, Teamwork and technology, Responsiveness to context

Abilities

AIM 7.1  Demonstrate resourcefulness, independence and self-reliance while working effectively in geographic, social and professional isolation
AIM 7.2  Provide effective clinical care when away from ready access to specialist medical, diagnostic and allied health services
AIM 7.3  Arrange referral to distant services in concert with the patient and/or carer considering the balance of potential benefits, harms and costs
AIM 7.4  Provide direct and distant clinical supervision and support for other rural and remote health care personnel
AIM 7.5  Use information and communication technology to provide medical care or facilitate access to specialised care for patients
AIM 7.6  Use information and communication technology to network and exchange information with distant colleagues
AIM 7.7  Respect local community norms and values in own life and work practices
AIM 7.8  Identify and acquire extended knowledge and skills as may be required to meet health care needs of the local population
**Definition of terms**

*Common or important medical conditions and infections include*

<table>
<thead>
<tr>
<th>Cardiac</th>
<th>Arrhythmia including:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Supraventricular arrhythmias, ventricular arrhythmias</td>
</tr>
<tr>
<td>Ischaemic heart disease including:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Myocardial infarction, angina</td>
</tr>
<tr>
<td>Hypertensive heart disease</td>
<td></td>
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<tr>
<td>Valvular heart disease including:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aortic and mitral valve disease, ventricular septal defect (VSD), atrial septal defect (ASD), bacterial endocarditis</td>
</tr>
<tr>
<td>Cardiac failure including:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acute left ventricular failure (LVF), congestive heart failure, chronic LVF and cor pulmonale</td>
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</tbody>
</table>

| Peripheral Vascular Disease including:      |                                                            |
|                                              | Arterial and venous ulcers                                |

<table>
<thead>
<tr>
<th>Nephrology</th>
<th>Glomerular Nephropathies</th>
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</thead>
<tbody>
<tr>
<td>Acute and recurrent urinary tract infections including:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pyelonephritis, cystitis, prostatitis, urethritis</td>
</tr>
<tr>
<td>Acute and chronic renal failure</td>
<td></td>
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<tr>
<td>Vascular disease of the kidney including:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Polyarteritis nodosa, hypersensitivity vasculitis, haemolytic uraemic syndrome (HUS) and atypical haemolytic uraemic syndrome (aHUS), renal artery stenosis</td>
</tr>
<tr>
<td>Urinary tract calculi</td>
<td></td>
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<table>
<thead>
<tr>
<th>Thoracic and sleep medicine</th>
<th>Asthma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute respiratory failure</td>
<td></td>
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<tr>
<td>Chronic Obstructive Airways Disease including:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>COPD, Chronic respiratory failure, sleep apnoea</td>
</tr>
<tr>
<td>Respiratory Infections including:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acute and chronic bronchitis, pneumonia, bronchiectasis, tuberculosis, cystic fibrous, psittacosis</td>
</tr>
<tr>
<td>Neoplasia</td>
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<tr>
<td>Pulmonary embolism</td>
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<tr>
<td>Pleural disease</td>
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<tr>
<td>Spontaneous pneumothorax</td>
<td></td>
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<tr>
<td>Hypersensitivity pneumonitis including:</td>
<td></td>
</tr>
<tr>
<td>Infectious diseases</td>
<td>Occupational/Environmental lung disease including:</td>
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<tr>
<td>---------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Occupational asthma, asbestos related pleural and parenchymal disease (benign and malignant), interstitial lung disease from exposure to organic and inorganic dusts</td>
</tr>
<tr>
<td>Zoonoses such as:</td>
<td>Q fever, leptospirosis, brucellosis, rabies, anthrax, toxoplasmosis</td>
</tr>
<tr>
<td>Bacterial infections such as:</td>
<td>Meningococcal meningitis/septicaemia, other meningitides, typhoid, pneumonia, tuberculosis, leprosy, melioidosis</td>
</tr>
<tr>
<td>Hepatitis</td>
<td></td>
</tr>
<tr>
<td>Viral infections such as:</td>
<td>Influenza, Ross River Fever, measles, mumps, varicella, Epstein-Barr virus, dengue, rubella, herpes</td>
</tr>
<tr>
<td>Protozoal infections such as:</td>
<td>Malaria, giardiasis</td>
</tr>
<tr>
<td>Worms such as:</td>
<td>Round worms, hook worms, fluke worms, pin worms</td>
</tr>
<tr>
<td>Sexually transmitted disease such as:</td>
<td>Gonorrhoea, syphilis, NGU/chlamydia, herpes, genital warts, HIV/AIDS</td>
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<table>
<thead>
<tr>
<th>Gastroenterology</th>
<th>Gastrointestinal emergencies including:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acute gastrointestinal haemorrhage, liver failure, hepatic encephalopathy, acute colitis</td>
</tr>
<tr>
<td>Common gastrointestinal symptoms including:</td>
<td>Weight loss, abdominal pain, dysphagia, Iron deficiency anaemia, acute/chronic diarrhoea, nausea and vomiting</td>
</tr>
<tr>
<td>Upper Gastrointestinal Disease including:</td>
<td>Gastro-oesophageal reflux disease, peptic ulcer, helicobacter pylori associated ulcers, NSAID induced conditions including: functional dyspepsia, gastric carcinoma</td>
</tr>
<tr>
<td>Hepatobiliary disease such as:</td>
<td>Alcoholic liver disease, fatty liver, chronic liver disease (cirrhosis) and complications, ascites, liver failure, haemochromatosis, gall bladder disorders</td>
</tr>
<tr>
<td>Pancreatic disease including:</td>
<td>Acute pancreatitis and complications, chronic pancreatitis and complications, pseudocyst formulation and complications</td>
</tr>
<tr>
<td>Small and large bowel diseases including:</td>
<td>Coeliac disease, irritable bowel syndrome, constipation, appendicitis, inflammatory bowel disease, colonic adenoma/carcinoma, diverticulosis/diverticulitis, lactose intolerance</td>
</tr>
<tr>
<td>Anorectal disease such as:</td>
<td></td>
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<tr>
<td>--------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Haemorrhoids, anal fissures, anorectal abscess</td>
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<table>
<thead>
<tr>
<th>Rheumatology</th>
<th>Rheumatological emergencies including:</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Acute mono/oligo arthritis, acute polyarthritis, systemic vasculitis</td>
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<table>
<thead>
<tr>
<th>Common rheumatological problems including:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rheumatoid arthritis, osteoarthritis, gout/pseudogout, back pain, soft tissue rheumatism, recognition of</td>
</tr>
<tr>
<td>arboviral arthropathies, temporal arthritis / polymyalgia rheumatica, sero-negative arthropathies,</td>
</tr>
<tr>
<td>connective tissue disorders including: SLE - vasculitis – scleroderma - myositis</td>
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<table>
<thead>
<tr>
<th>Endocrinology</th>
<th>Common endocrinological disorders including:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Diabetes mellitus including gestational diabetes, thyroid disease, adrenal cortical disease, pituitary</td>
</tr>
<tr>
<td></td>
<td>disease, sex hormone disease, parathyroid disease, sexual dysfunction</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Neurology</th>
<th>Common neurological disorders including:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Abnormal focal neurological signs, cerebrovascular accident, transient ischaemic attacks, headache,</td>
</tr>
<tr>
<td></td>
<td>epilepsy, Parkinson's disease, confusional states and intellectual impairment, CNS infection, Space</td>
</tr>
<tr>
<td></td>
<td>occupying lesions (SOL)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other neurological disorders including:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acoustic neuroma, Guillain-Barre syndrome, temporal arteritis, benign intracranial hypertension, multiple</td>
</tr>
<tr>
<td>sclerosis, Bell’s palsy, trigeminal neuralgia</td>
</tr>
</tbody>
</table>

### Knowledge and Skills

#### Essential knowledge required

- Knows aetiology, pathogenesis, incidence, prevalence and where relevant trigger factors or causes of common or important medical conditions and infections
- Recalls signs and symptoms of common or important medical conditions and infections
- Interprets common investigations including laboratory tests and imaging
- Identifies appropriate pharmacological and non-pharmacological treatment of common or important medical conditions and infections
- Describes indications for referral to specialised care
- Selects national guidelines for common medical conditions e.g. Heart Foundation, Asthma Foundation guidelines
- Knows infection control procedures
- Knows contact tracing, legal requirements and the management of partners with STDs

#### Essential skills required

- Performs and interprets common and important ECG findings
- Uses emergency electrocardiograph and cardioversion
- Performs fundoscopy and assesses common disorders
- Demonstrates urine analysis
• Performs urine microscopy
• Performs spirometry
• Demonstrates technique of use for nebulisers, spacers and turbo-inhalers
• Uses supplemental oxygen
• Performs needle thoracocentesis
• Undertakes a pleural tap
• Inserts an underwater drain
• Performs a lumbar puncture
• Undertakes sigmoidoscopy/proctoscopy (under supervision)
• Demonstrates ascitic tap
• Uses glucometers
• Assist with a focussed assessment with sonography for trauma (FAST Scan)

Learning resources

Recommended texts and other resources

• Therapeutic Guidelines Limited http://www.tg.org.au/


• Rural and Remote Medical Education Online (RRMEO) - [http://www.rrmeo.com](http://www.rrmeo.com)

• UpToDate® electronic database that provides current, published, summarised evidence and specific recommendations for patient care - [http://www.uptodate.com](http://www.uptodate.com)


6.3 Aged Care

Domain 1: Provide medical care in the ambulatory and community setting

Themes: Patient-centred clinical assessment, Clinical reasoning, Clinical management

Abilities

AGE 1.1 Establish a doctor-patient relationship and use a patient-centred approach to care
AGE 1.2 Obtain a clinical history from the older patient and/or carer that reflect contextual issues, consideration of specific conditions with a strong age-associated risk, and conditions that may affect functional status
AGE 1.3 Perform a problem-focused physical examination and comprehensive functional health assessment for the older patient
AGE 1.4 Use specialised clinical equipment as required for further assessment and interpretation of findings
AGE 1.5 Undertake regular medication reviews with advancing age and frailty including monitoring and managing adverse effects of medication
AGE 1.6 Order and/or perform relevant investigations and apply knowledge of age-related changes in interpretation of results
AGE 1.7 Apply diagnostic reasoning to arrive at one or more provisional diagnoses, considering non-specific and differing presentation of diseases in older people as well as uncommon but clinically important differential diagnoses
AGE 1.8 Formulate a management plan in concert with the older patient and/or carer, applying knowledge of community resources, continuity of care and a multi-disciplinary approach
AGE 1.9 Empower patients and/or carers with the knowledge, skills, and resources to self-manage the symptoms of their chronic conditions where possible
AGE 1.10 Identify and manage co-morbidities in the patient and effectively communicate these to the patient/carer
AGE 1.11 Ensure safe and appropriate prescribing of medications and treatment options in the clinical context
AGE 1.12 Participate in development, implementation and review of multidisciplinary care plans for aged patients with complex needs
AGE 1.13 Demonstrate knowledge and skills in assisting families to cope with the issues faced in caring for a deteriorating elderly person, including sustaining family relationships in times of tension, stress and anxiety
AGE 1.14 Demonstrate knowledge and skills in assisting patients and their carers to access respite care or move to residential care
AGE 1.15 Support older patients to develop an Advanced Care Directive, allowing the patients to give directions about what medical treatment they may/may not wish when they are no longer able to speak for themselves
AGE 1.16 Manage uncertainty and the need to evaluate the risks versus the benefits of clinical decisions
AGE 1.17 Refer, facilitate and coordinate access to specialised medical and diagnostic and other health and social support services
AGE 1.18 Provide and/or arrange follow-up and continuing medical care

Domain 2: Provide care in the hospital setting

*Themes: Medical care of admitted patients, Medical leadership in a hospital team, Health care quality and safety*

**Abilities**

AGE 2.1 Manage admission of older patients to hospital in accordance with institutional policies
AGE 2.2 Develop, implement and maintain a priority-based management plan for elderly in patients with a range of acute diagnoses
AGE 2.3 Apply relevant checklists and clinical management pathways for common conditions in the aged population
AGE 2.4 Monitor clinical progress, regularly re-evaluate problem lists and modify management accordingly
AGE 2.5 Maintain a clinically relevant plan of fluid, electrolyte and blood product use with relevant pathology testing
AGE 2.6 Order and perform a range of diagnostic and therapeutic procedures
AGE 2.7 Maintain timely and accurate patient documentation in hospital records including drug prescription and administration
AGE 2.8 Communicate effectively with the health care team, patient and/or carer including effective clinical handover to primary care provider
AGE 2.9 Recognise and respond early to the deteriorating older patient in hospital
AGE 2.10 Anticipate and judiciously arrange safe patient transfer to other facilities, considering clinical indications, Advance Care Directives, service capabilities, patient preferences, transportation and geography
AGE 2.11 Undertake early, planned and multi-disciplinary discharge planning
AGE 2.12 Contribute medical expertise and leadership in a hospital team
AGE 2.13 Provide direct and remote clinical supervision and support to nurses, junior medical staff and students
AGE 2.14 Recognise, document and manage adverse events and near misses
AGE 2.15 Participate in institutional quality and safety improvement and risk management activities
Domain 3: Respond to medical emergencies

Themes: Initial assessment and triage, Emergency medical intervention, Communication and planning

Abilities

AGE 3.1 Respond to acute or life threatening condition in the elderly patient, including assessment of potential risks and adverse reactions
AGE 3.2 Be aware of a current Advanced Care Directive or resuscitation status
AGE 3.3 Provide definitive emergency resuscitation and management for the older patient, in keeping with any Advance Care Directive, clinical need, own capabilities and available resources
AGE 3.4 Arrange and/or perform emergency patient transport or evacuation when needed
AGE 3.5 Communicate effectively at a distance with consulting or receiving clinical personnel
AGE 3.6 Provide inter-professional team leadership in emergency care that includes quality assurance and risk management assessment
AGE 3.7 Plan for emergencies at home and in the community including use of medical alert tags and personal alarms

Domain 4: Apply a population health approach

Themes: Community health assessment, Population-level health intervention, Evaluation of health care, Collaboration with agencies

Abilities

AGE 4.1 Analyse the social, environmental, economic and occupational determinants of healthy ageing that affect the community burden of disease and access to health-related services
AGE 4.2 Apply a population health approach that is relevant to the clinical practice profile
AGE 4.3 Integrate health education and health promotion for healthy ageing into practice at a systems level to prevent illness and improve general health
AGE 4.4 Organise routine comprehensive health assessment for patients aged over 75 years
AGE 4.5 Apply principles of coordination of care and the provision of continuity of care for older patients
AGE 4.6 Evaluate the quality of health care for older patients in the practice population
AGE 4.7 Fulfil reporting requirements in relation to statutory notification of health conditions
AGE 4.8 Access and collaborate with agencies responsible for older person care and support
AGE 4.9 Apply knowledge of the impact and implications of the ageing population on the health system in rural and remote communities in planning health service needs, access to health services and health service utilisation
Domain 5: Address the health care needs of culturally diverse and disadvantaged groups

Themes: Differing epidemiology, Cultural safety and respect, working with groups to improve health outcomes

Abilities

AGE 5.1 Apply knowledge of the differing profile of disease, health risks and beliefs among older patients from culturally and linguistically diverse and disadvantaged groups
AGE 5.2 Communicate effectively and in a culturally safe manner with older patients, using interpreters, key community contacts and networks as appropriate
AGE 5.3 Reflect on and discuss own assumptions, cultural beliefs and emotional reactions in providing culturally safe care for older patients
AGE 5.4 Apply principles of partnership, community ownership, consultation, capacity building, reciprocity and respect to health care delivery, health surveillance and research
AGE 5.5 Harness the resources available in the health care team, the local community and family to improve outcomes of care for older patients
AGE 5.6 Work with culturally and linguistically diverse and disadvantaged groups to address barriers in access to health and support services for older people

Domain 6: Practise medicine within an ethical, intellectual and professional framework

Themes: Ethical practice, Professional obligations, Intellectual engagement including teaching and research

Abilities

AGE 6.1 Recognise and demonstrate strategies for the particular need for and difficulty in maintaining privacy and confidentiality in rural/remote communities
AGE 6.2 Uphold the rights of older patients, their family members and/or carers
AGE 6.3 Promote older people’s dignity and sense of identity in the face of illness and frailty
AGE 6.4 Be aware of duty of care issues arising from providing health care to elderly patients and the community
AGE 6.5 Recognise and manage elder abuse in its various forms
AGE 6.6 Keep clinical documentation in accordance with legal and professional standards
AGE 6.7 Demonstrate commitment to teamwork, collaboration, coordination and continuity of care in the aged population
AGE 6.8 Contribute to the management of human and financial resources within a health service
AGE 6.9 Work within relevant national and state legislation related to the rights of elderly people and improvement of their health care
AGE 6.10 Provide accurate and ethical certification when required for sickness, social benefits and other purposes
AGE 6.11 Recognise and utilise the extended role of other health care practitioners and services in the local area
AGE 6.12 Develop and apply strategies for self-care, personal support and caring for family
AGE 6.13 Critically appraise own clinical performance in providing care to older patients
AGE 6.14 Teach and clinically supervise others in provision of care to older patients
AGE 6.15 Engage in continuous learning and professional development in aged care

Domain 7: Practise medicine in the rural and remote context

Themes: Resourcefulness, Flexibility, Teamwork and technology, Responsiveness to context

Abilities

AGE 7.1 Recognise differences in presentation of older patients that might occur in the rural and remote context
AGE 7.2 Demonstrate resourcefulness, independence and self-reliance while working effectively in geographic, social and professional isolation
AGE 7.3 Recognise the differing availability of medical and allied health care resources in rural/remote communities and demonstrate the ability to improvise where necessary
AGE 7.4 Arrange referral to distant services in concert with the patient and/or carer considering the balance of potential benefits, harms and costs
AGE 7.5 Provide direct and distant clinical supervision and support for other rural and remote health care personnel working with older patients
AGE 7.6 Use information and communication technology effectively to provide medical care or facilitate access to specialised care for patients, as well as maintain a professional network and exchange medical information when required
AGE 7.7 Use information and communication technology to network and exchange information with distant colleagues
AGE 7.8 Respect local community norms and values in own life and work practices
AGE 7.9 Identify and acquire extended knowledge and skills as may be required to meet health care needs of the local elderly population

Definition of terms

<table>
<thead>
<tr>
<th>Specific conditions with a strong age-related risk include</th>
<th>Neurological including:</th>
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<tbody>
<tr>
<td></td>
<td>Parkinson’s disease, dementia, CVA</td>
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<table>
<thead>
<tr>
<th>Ophthalmology disorders including:</th>
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<tbody>
<tr>
<td>Loss of visual acuity, cataracts, glaucoma, macular degeneration, exophthalmia, temporal arteritis</td>
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<tr>
<th>Musculoskeletal including:</th>
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<tbody>
<tr>
<td>Spondylosis, polymyalgia rheumatica, osteoarthritis, spinal canal stenosis, sciatica, osteoporosis and osteoporotic fractures</td>
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<tr>
<th>Pulmonary including:</th>
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<tbody>
<tr>
<td>Asthma, COPD, pneumonia</td>
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<table>
<thead>
<tr>
<th>Gastrointestinal including:</th>
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<tbody>
<tr>
<td>Constipation, incontinence</td>
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| ENT including:                                           |

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| Conditions that may affect functional status include | Nutritional problems, syncope, falls and gait disorders, fractures, osteoarthritis, acute confusional state, behaviour disorders, sleep disorders, pain, cancer, pressure sores, urinary incontinence, sensory loss, polypharmacy, frailty and dementia |
| Comprehensive functional health assessment include | An assessment of impairment, disability and handicap that also includes social - psychological and environmental dimensions |
| Medication reviews | Administration of functional and cognitive assessment scales as appropriate, assessing a patient’s suitability for care at home, identifying the need for aids (including hearing aids) and appliances in the rehabilitation of older disabled patients |
| Medication reviews | DMMR (Domiciliary Medication Management Review) |
| Medication reviews | RMMR (Residential Medication Management Review) |
| Health education and health promotion for healthy ageing include | Activities to promote health: exercise, diet, social interaction and accident prevention, Current population health initiatives including national targets and priority areas in population health, state and local health promotion and illness prevention activities |
| Agencies responsible for older persons’ care and support include | Residential care facilities including nursing homes, hostels, respite care services, community resources available to support older people in the home, roles of allied health care workers, role of Office of Public Guardian/Public Trustee |
| National and state legislation related to the rights of elderly people include | Legislation and regulations regarding euthanasia, enduring power of attorney, Advance Health Directives, fitness to drive and the legal standing of alternative decision-makers |
Knowledge and Skills

Essential knowledge required

• Interprets epidemiological characteristics of the ageing population in Australia
• Knows national and state legislation related to the rights of elderly people
• Describes physiological, psychological and social age-related changes commonly experienced by the elderly
• Defines issues in prescribing medications in older people and polypharmacy
• Describes issues that may affect treatment compliance in older people

Essential skills required

• Performs physical, psychological and functional clinical assessment
• Develops an Advanced Care Directive with the patient
• Prepares an application to the Guardianship board
• Makes appropriate referrals to other agencies

Learning resources

Recommended texts and other resources

• Australian & New Zealand Society for Geriatric Medicine website - http://www.anzsgm.org
6.4 Anaesthetics

Domain 1: Provide medical care in the ambulatory and community setting

Themes: Patient-centred clinical assessment, Clinical reasoning, Clinical management

Abilities

ANA 1.1 Establish a doctor-patient relationship and use a patient-centred approach to care
ANA 1.2 Perform a problem-focussed physical examination relevant to clinical history and risks, epidemiology and cultural context
ANA 1.3 Perform an accurate **pre-anaesthetic assessment** for elective surgery
ANA 1.4 Identify general pre-anaesthetic risk factors for all age groups and **anaesthetic-specific conditions**
ANA 1.5 Use specialised clinical equipment as required for further assessment and interpret findings
ANA 1.6 Order and/or perform diagnostic tests where required to confirm a diagnosis, monitor medical care and/or exclude treatable or serious conditions
ANA 1.7 Apply diagnostic reasoning to arrive at one or more provisional diagnoses, considering uncommon but clinically important differential diagnoses
ANA 1.8 Diagnose and classify pain by **pain type**
ANA 1.9 Recognise when significant medical conditions exist and consult with or refer to a specialist or generalist anaesthetist
ANA 1.10 Communicate findings of clinical assessment effectively and sensitively to the patient and/or carer
ANA 1.11 Formulate a management plan in concert with the patient and/or carer, judiciously applying best evidence and the advice of expert colleagues
ANA 1.12 Administer topical anaesthesia and **local and regional nerve blocks**, applying knowledge of techniques, effects and complications and their management
ANA 1.13 Provide safe and appropriate child and adult sedation for painful procedures in accordance with relevant standards and service capability
ANA 1.14 Provide pain interventions relevant to the pain type and recognise when referral is required
ANA 1.15 Manage uncertainty and the need to evaluate the risks versus the benefits of clinical decisions
ANA 1.16 Refer, facilitate and coordinate access to specialised medical and diagnostic and other health and social support services
ANA 1.17 Provide and/or arrange follow-up and continuing medical care
Domain 2: Provide care in the hospital setting

Themes: Medical care of admitted patients, Medical leadership in a hospital team, Health care quality and safety

Abilities

ANA 2.1 Manage admission of patients to hospital in accordance with institutional policies
ANA 2.2 Develop, implement and maintain a management plan for hospitalised patients in concert with the patient and/or carer
ANA 2.3 Apply relevant checklists and clinical management pathways
ANA 2.4 Manage the pre and post-anaesthetic care of patients having surgery or other procedures
ANA 2.5 Manage the care of admitted patients who have received analgesia (including epidural opiates and spinal opiates)
ANA 2.6 Recognise and manage common and important complications of anaesthesia and analgesia
ANA 2.7 Order and perform a range of diagnostic and therapeutic procedures
ANA 2.8 Maintain a clinically relevant management plan of drug dosage, fluid, electrolyte and blood product and associated use of relevant pathology testing
ANA 2.9 Maintain timely and accurate patient documentation in hospital records including drug prescription and administration
ANA 2.10 Communicate effectively with the health care team, patient and/or carer including effective clinical handover
ANA 2.11 Recognise and respond early to the deteriorating patient
ANA 2.12 Anticipate and judiciously arrange safe patient transfer to other facilities, considering clinical indications, service capabilities, patient preferences, transportation and geography
ANA 2.13 Undertake early, planned and multi-disciplinary discharge planning
ANA 2.14 Contribute medical expertise and leadership in a hospital team
ANA 2.15 Provide direct and remote clinical supervision and support to nurses, junior medical staff and students
ANA 2.16 Recognise, document and manage adverse events and near misses
ANA 2.17 Participate in regular clinic audit and other institutional quality and safety improvement and risk-management activities
Domain 3: Respond to medical emergencies

Themes: Initial assessment and triage, Emergency medical intervention, Communication and planning

Abilities

ANA 3.1 Undertake initial assessment and triage of patients with acute or life-threatening conditions
ANA 3.2 Stabilise and support the critically ill patient at local hospital before transport or retrieval is arranged and support local facility staff
ANA 3.3 Perform anaesthetic skills as required in medical emergencies including: venous access, non-invasive ventilation techniques, sedation (e.g. of acutely psychotic patients) and arterial line insertion
ANA 3.4 Perform rapid sequence induction and intubation in an emergency
ANA 3.5 Use a mechanical ventilator in the emergency situation, initiating pharmacological management and monitoring the ventilated patient
ANA 3.6 Arrange and/or perform emergency patient transport or evacuation when needed
ANA 3.7 Communicate effectively and at a distance with consulting or receiving clinical teams
ANA 3.8 Provide inter-professional team leadership in emergency care that includes quality assurance and risk management assessment
ANA 3.9 Participate in disaster planning and implementation of disaster plans, and post-incident analysis and debriefing
ANA 3.10 Provide inter-professional team leadership in emergency care that includes quality assurance and risk management assessment

Domain 4: Apply a population health approach

Themes: Community health assessment, Population-level health intervention, Evaluation of health care, Collaboration with agencies

Abilities

ANA 4.1 Analyse the social, environmental, economic and occupational determinants of health that affect the community burden of disease and access to health-related services
ANA 4.2 Apply a population health approach that is relevant to the clinical practice profile
ANA 4.3 Integrate evidence-based prevention, early detection and health maintenance activities into practice at a systems level
ANA 4.4 Provide continuity and coordination of care for own practice population
ANA 4.5 Evaluate quality of anaesthetic health services for the community
ANA 4.6 Fulfil reporting requirements in relation to statutory notification of health conditions
ANA 4.7 Access and collaborate with agencies responsible for key population health functions including public health services, employer groups and local government
ANA 4.8 Participate as a medical advocate in the design, implementation and evaluation of interventions that address determinants of population health
Domain 5: Address the health care needs of culturally diverse and disadvantaged groups

Themes: Differing epidemiology, Cultural safety and respect, working with groups to improve health outcomes

Abilities

ANA 5.1 Apply knowledge of the differing profile of disease and health risks among culturally diverse and disadvantaged groups
ANA 5.2 Communicate effectively and in a culturally safe manner, using interpreters, key community contacts and networks as appropriate to provide anaesthetic services to a culturally diverse and disadvantaged groups
ANA 5.3 Reflect on own assumptions, cultural beliefs and emotional reactions in providing culturally safe care
ANA 5.4 Apply principles of partnership, community ownership, consultation, capacity building, reciprocity and respect to health care delivery, health surveillance and research
ANA 5.5 Harness the resources available in the health care team, the local community and family to improve outcomes of care
ANA 5.6 Work with culturally diverse and disadvantaged groups to address barriers in access to health services and improve the determinants of health

Domain 6: Practise medicine within an ethical, intellectual and professional framework

Themes: Ethical practice, Professional obligations, Intellectual engagement including teaching and research

Abilities

ANA 6.1 Ensure safety, privacy and confidentiality in patient care
ANA 6.2 Maintain appropriate professional boundaries
ANA 6.3 Be aware of duty of care issues arising from providing health care to self, family, colleagues, patients and the community
ANA 6.4 Recognise unprofessional behaviour and signs of the practitioner in difficulty among colleagues and respond according to ethical guidelines and statutory requirements
ANA 6.5 Keep clinical documentation in accordance with legal and professional standards
ANA 6.6 Demonstrate commitment to teamwork, collaboration, coordination and continuity of care
ANA 6.7 Demonstrate ability to obtain valid and informed consent
ANA 6.8 Work within relevant national and state legislation and professional and ethical guidelines
ANA 6.9 Provide accurate and ethical certification when required for sickness, employment, social benefits and other purposes
ANA 6.10 Manage, appraise and assess own performance in the provision of medical care for patients
ANA 6.11 Develop and apply strategies for self-care, personal support and caring for family
ANA 6.12 Teach and clinically supervise health students, junior doctors and other health professionals

ANA 6.13 Engage in continuous learning and professional development

ANA 6.14 Critically appraise and apply relevant research

Domain 7: Practise medicine in the rural and remote context

Themes: Resourcefulness, Flexibility, teamwork and technology, Responsiveness to context

Abilities

ANA 7.1 Demonstrate resourcefulness, independence and self-reliance while working effectively in geographic, social and professional isolation

ANA 7.2 Communicate and cooperate with a range of rural specialist anaesthetists in the provision of safe anaesthetic services in accordance with relevant standards, scope of practice and service capability

ANA 7.3 Arrange referral to distant services in concert with the patient and/or carer considering the balance of potential benefits, harms and costs

ANA 7.4 Provide direct and distant clinical supervision and support for other rural and remote health care personnel

ANA 7.5 Use information and communication technology to provide medical care or facilitate access to specialised care for patients

ANA 7.6 Use information and communication technology to network and exchange information with distant colleagues

ANA 7.7 Respect local community norms and values in own life and work practices

ANA 7.8 Identify and acquire extended knowledge and skills as may be required to meet health care needs of the local population
Definition of terms

<table>
<thead>
<tr>
<th>Pre-anaesthetic assessment include</th>
<th>Physical and mental states which may influence conduct of anaesthesia; previous family history; relevance of previous medical, surgical and anaesthetic events; clinical examination and investigation; significant symptoms and signs requiring further investigations; post-operative pain relief methods; disease and drug therapy; the primary surgical condition; intercurrent disease and drug therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anaesthetic-specific conditions include</td>
<td>Suxamethonium apnoea, malignant hyperthermia and halothane hepatitis</td>
</tr>
<tr>
<td>Pain types include</td>
<td>Nociceptive, neuropathic, phantom, psychogenic, break-through and incident pain</td>
</tr>
<tr>
<td>Local and regional nerve blocks include</td>
<td>Digital nerve block, intercostal nerve block, femoral nerve block, Bier’s block, peripheral nerve block</td>
</tr>
<tr>
<td>Common and important complications of anaesthesia and analgesia</td>
<td>Nausea, vomiting, damage to teeth, sore throat, laryngeal damage, nerve injuries, backache, headache, allergic reaction mild to severe, respiratory depression, cardiovascular collapse, aspiration pneumonitis, hypothermia, hypoxic brain damage, embolism, death</td>
</tr>
</tbody>
</table>

Knowledge and Skills

Essential knowledge required

- Know the anatomy and physiology of the upper airway
- Interpret radiography and lung function testing
- Define the natural history of post-anaesthesia recovery
- Recognise physiological changes resulting from drug use in anaesthesia
- Know the effects of anaesthesia and analgesia in various medical conditions and on the foetus
- Outline physical and mental states which may influence conduct of anaesthesia
- Define pathophysiological differences in children including oxygen needs, temperature control, and fluid replacement
- Knows physiology, anatomy relevant to local, topical and conduction anaesthesia
- Recall pharmacology of commonly used topical and local anaesthetic agents
- Recognise overuse and abnormal response to local and conduction anaesthesia
- Know anaesthetic aspects of the early management of severe trauma
- Recall theories of pain and pain control
- Know the influence of emotional, psychological and social factors on an individual’s response to pain
- Recognise causes, symptoms and signs of impending cardiac or respiratory arrest
- Define principles of and indications for use of mechanical ventilators
- Know when to use a defibrillator
- Outline pharmacology and indications for drugs used in advanced life support
Essential skills required

- Demonstrate intravenous access in adults and children
- Demonstrate intravenous cutdown
- Perform interosseous access
- Perform the peripheral line Seldinger technique
- Deliver a blood transfusion
- Demonstrate oxygen saturation monitoring
- Insert an oropharyngeal airway
- Insert a nasopharyngeal airway
- Use a laryngeal mask
- Demonstrate endotracheal intubation (adult and child)
- Conduct mouth to mouth/mask ventilation
- Conduct bag/mask ventilation
- Perform jet insufflation
- Conduct cricothyroidotomy for emergency access
- Perform external cardiac massage
- Conduct rapid sequence induction
- Administer defibrillation
- Perform synchronised DC cardioversion (adult and child)
- Demonstrate emergency use of mechanical ventilator (in particular, the Oxylog)
- Administer nitrous oxide (as analgesia)

Learning Resources

Recommended Texts and Other Resources

- Australian and New Zealand College of Anaesthetists - http://www.anzca.edu.au
6.5 Business and Professional Management

Domain 1: Provide medical care in the ambulatory and community setting

*Themes: Patient-centred clinical assessment, Clinical reasoning, Clinical management*

**Abilities**

BPM 1.1 Communicate operational policies such as, opening hours, appointment systems, after hours, patient test results, fees, complaints procedures, policies on prescribing drugs of addiction, and expectations of patient behaviour

BPM 1.2 Apply communication skills and strategies for dealing effectively with patient feedback and complaints, including dealing with angry or aggressive patients

BPM 1.3 Understand and implement policies and procedures such as recall systems, disease registers (for chronic disease management), handling of referrals, reports, letters, records, screening and infection control

BPM 1.4 Understand the roles, responsibilities and skill set of the practice team

BPM 1.5 Demonstrate effective work relationships with staff and colleagues through appropriate leadership, support, communication, negotiation and decision making

BPM 1.6 Apply techniques of conflict resolution effectively in managing conflicts with patients, staff and colleagues

BPM 1.7 Use and interpret the Medical Benefits Scheme (MBS) and Pharmaceutical Benefits Scheme (PBS) in a manner that complies with Federal, State or Territory law

BPM 1.8 Use and interpret other fees schedules including those published by the AMA, Worker’s compensation, Transport / Road Traffic Accident, insurance companies and corporations according to Federal, State and Territory expectations

BPM 1.9 Identify and use structures and financial rewards/incentive programs such as: Chronic Disease Management item numbers, Practice Incentive Program, Rural Retention Scheme and other remuneration packages/programs available to the practitioner and or practice

BPM 1.10 Meet financial, reporting and legal requirements for superannuation, income taxation, GST, worker’s compensation, staff remuneration and insurance matters

BPM 1.11 Identify sources of debt related to unpaid fees (private, Medicare or other source) and have an effective strategy for debt collection

BPM 1.12 Manage own time effectively in line with organisation policies whilst achieving work-life balance

BPM 1.13 Undertake clinical audit and quality improvement activities including accreditation activities and show how to respond constructively to the outcomes

BPM 1.14 Contribute to providing a safe working environment for all staff through the practice of injury prevention and observance of Occupational Health and Safety rules and regulations
Domain 2: Provide care in the hospital setting

Themes: Medical care of admitted patients, Medical leadership in a hospital team, Health care quality and safety

Abilities

BPM 2.1 Work in accordance with institutional policies in managing both public and private patients admitted to hospital
BPM 2.2 Demonstrate good communication with external providers with respect to patients with chronic diseases with aim of preventing re-admission
BPM 2.3 Use and interpret fee for service schedules where appropriate and undertake accurate coding of inpatient care for patients
BPM 2.4 Contribute to the development of institutional policy and procedures
BPM 2.5 Demonstrate organisational and professional meeting skills
BPM 2.6 Participate in the recruitment and selection of staff or colleagues and the performance management of staff when required
BPM 2.7 Assess when it is safe and relevant to delegate
BPM 2.8 Use a considered and rational approach to the use of resources including disposable items, limited / expensive resources and human resources
BPM 2.9 Contribute to planning, maintaining and developing local healthcare services, and interpret the difference between governance and management issues
BPM 2.10 Contribute medical expertise and leadership in a hospital team while working effectively with the roles, responsibilities and skill set of the team
BPM 2.11 Recognise, document and manage adverse events and near misses in a timely fashion including involvement of patient / family and other third parties
BPM 2.12 Participate in institutional quality and safety improvement
BPM 2.13 Participate in accreditation and risk management activities including injury prevention strategies

Domain 3: Respond to medical emergencies

Themes: Initial assessment and triage, Emergency medical intervention, Communication and planning

Abilities

BPM 3.1 Demonstrate resourcefulness in knowing how to access and use and maintain available resources
BPM 3.2 Maintain systems to ensure that emergency equipment is working and that drugs are current
BPM 3.3 Manage medical retrieval within your team and liaise with external medical retrieval personnel
BPM 3.4 Communicate effectively at a distance with consulting or receiving clinical personnel
BPM 3.5 Participate and describe the principles of disaster planning and implementation of disaster plans, and post-incident analysis and debriefing

BPM 3.6 Provide inter-professional team leadership in emergency care that includes quality assurance and risk management assessment

**Domain 4: Apply a population health approach**

*Themes: Community health assessment, Population-level health intervention, Evaluation of health care, Collaboration with agencies*

**Abilities**

BPM 4.1 Analyse the social, environmental, economic and occupational determinants of health that affect the community burden of disease and access to health-related services

BPM 4.2 Describe how implementation of policies in your location will improve access to health for the most disadvantaged population

BPM 4.3 Apply a population health approach that is relevant to the clinical practice profile that addresses federal National Priority Areas in health

BPM 4.4 Integrate evidence-based prevention, early detection and health maintenance activities into practice at a systems level

BPM 4.5 Provide continuity and coordination of care for own practice population

BPM 4.6 Evaluate quality of health care for practice populations and set targets for improvement

BPM 4.7 Fulfil reporting requirements in relation to statutory notification of health conditions and drug reactions, medical device related incidents

BPM 4.8 Access and collaborate with agencies responsible for key population health functions including Federal agencies, public health services, employer groups and local government

BPM 4.9 Participate as a medical advocate in the design, implementation and evaluation of interventions that address determinants of population health

**Domain 5: Address the health care needs of culturally diverse and disadvantaged groups**

*Themes: Differing epidemiology, Cultural safety and respect, working with groups to improve health outcomes*

**Abilities**

BPM 5.1 Apply knowledge of the differing profile of disease and health risk among culturally diverse and disadvantaged groups to patient care

BPM 5.2 Communicate effectively and practice in a culturally safe manner, using interpreters, key community contacts and networks as appropriate

BPM 5.3 Apply principles of partnership, community ownership, consultation, capacity building, reciprocity and respect to health care delivery, health surveillance and research
BPM 5.4 Harness the resources available in the health care team, the local community and family to improve outcomes of care

BPM 5.5 Identify funding opportunities and programs to work with culturally diverse and disadvantaged groups to address barriers in access to health services and improve the determinants of health

BPM 5.6 Demonstrate planning and time management skills in order to meet reporting requirements on time for any funded activities undertaken

BPM 5.7 Formulate and undertake quality improvement activities that will benefit culturally diverse communities and disadvantaged groups

**Domain 6: Practise medicine within an ethical, intellectual and professional framework**

**Themes: Ethical practice, Professional obligations, Intellectual engagement including teaching and research**

**Abilities**

BPM 6.1 Ensure safety, privacy and confidentiality in patient care

BPM 6.2 Maintain appropriate professional boundaries

BPM 6.3 Be aware of duty of care issues and mandatory reporting requirements arising from providing health care to self, family, colleagues, patients and the community

BPM 6.4 Keep clinical documentation in accordance with legal and professional standards

BPM 6.5 Demonstrate commitment to teamwork, collaboration, coordination and continuity of care

BPM 6.6 Contribute to the management of human and financial resources within a health service

BPM 6.7 Work within relevant national and state legislation and professional and ethical guidelines including Trade Practices Act, occupational health and safety regulations, equal employment opportunity legislation and Privacy Act Including Taxation, superannuation, AHPRA, Insurance Acts including Medicare

BPM 6.8 Provide accurate and ethical certification when required for sickness, employment, social benefits and other purposes according to State and Territory Law

BPM 6.9 Undertake ethically responsible practice when dealing with patients making end of life decisions

BPM 6.10 Manage, appraise and assess own performance in the provision of medical care for patients

BPM 6.11 Show ability to participate effectively as a member of a professional/medico-political organisation
Domain 7: Practise medicine in the rural and remote context

**Themes:** Resourcefulness, Flexibility, teamwork and technology, Responsiveness to context

**Abilities**

BPM 7.1 Demonstrate resourcefulness, independence and self-reliance while working effectively in geographic, social and professional isolation

BPM 7.2 Provide effective clinical care when away from ready access to specialist medical, diagnostic and allied health services

BPM 7.3 Arrange referral to distant services in concert with the patient and/or carer considering the balance of potential benefits, harms and costs

BPM 7.4 Provide direct and distant clinical supervision and support for other rural and remote health care personnel

BPM 7.5 Use information and communication technology to provide medical care or facilitate access to specialised care for patients

BPM 7.6 Use information and communication technology to network and exchange information with distant colleagues

BPM 7.7 Undertake continuous professional development

BPM 7.8 Respect local community norms and values in own life and work practices

BPM 7.9 Identify and acquire extended knowledge and skills as may be required to meet health care needs of the local population

**Knowledge and Skills**

**Essential knowledge required**

*Management principles*

- Describe the difference between governance and management
- Know the role and responsibilities of a Board, role and responsibilities of a chairperson, understand what is meant by "terms of reference" and how they are developed and applied to committees, committee protocol and meeting protocol
- Define roles and responsibilities of management and leadership such as basic principles of quality management, leadership theory, team development and delegation

*Practice organisation*

- Know where to seek information on setting up or purchasing a practice
- Describe important elements of health facility infrastructure design
- Understand the practical, financial, administrative and legal implications of the range of practice and employment models including traditional solo or group practice, partnerships, associateships, employee, contractor, locum, blended private and public, corporations, government/public health positions and education/academic positions
- Know how to access to relief staff/locums
Operational management

- Know how to establish procedures for line of responsibility, communications, patient flow and scheduling, front desk duties, phone calls, handling of referrals, reports, letters, screening, recall systems, infection control, complaints and equipment maintenance

- Understand safe management of medical records such as storage and filing, indexing and coding, confidentiality, security, incorporating clinical results/reports/correspondence, risk management in backup (onsite and offsite) and restoration of data

Human resource management

- Know staff management principles

- Understand policies and procedures for staff such as recruitment, appraisal/productivity assessment, staff development/training, contracts/remuneration, disciplinary guidelines and performance management of staff and holiday/sickness/sabbatical/CME leave entitlements

- Have awareness of resources available through professional organisations on operation management topics and the ability to access such information as the need arises

- Understand and navigate the relevant levels of bureaucracy both within and external to the organisation

- Know statutory and regulatory requirements relating to staff including, OH&S Legislation, Trade Practices Act, Equal Opportunity Legislation, Privacy Act, Health Practitioners Act, Workers Compensation, Workplace Relations Act, Superannuation, taxation and Public Liability

Financial management

- Know how to develop a basic business plan

- Interpret basic financial statements including profit and loss and balance sheet and to be able to understand the basis of depreciation and depreciation schedules

- Understand how to effectively manage practitioner investment in the practice and returns on investment

- Identify the types of finance available to the organisation

- Know day-to-day cash flow management

- Understand patient fees and fee collection processes including debt collection

- Use service companies to control finance as necessary

Patient service

- Define methods of continuous quality improvement applied within the organisation or practice including clinical/management audit, performance appraisal benchmarked against local and national standards, practice accreditation/hospital ACHS accreditation, evaluate objectives of accreditation requirements and follow through accreditation processes deemed appropriate to the location

- Explore opportunities to improve patient satisfaction

- Understand basic marketing concepts
Professional Systems

- Know the roles and responsibilities of relevant local, state and national professional and medico-political organisations including, accreditation organisations, Medicare Locals, Rural Workforce Agencies, RDA, AMA and Medical Indemnity Insurers
- Understand the role and function of academic, financial, and legal advisers including, management consultants, accountants, solicitors, financial planning consultants

Personal Financial Management

- Effectively manage personal finances including debt consolidation, insurance needs, taxation, superannuation and retirement planning
- Outline the range of sources of financial advice
- Outline long-term financial plan and describe alternative investment strategies managed funds and portfolio management
- Demonstrate an understanding of the interplay between lifestyle, practice and personal financial needs
- Consider the issues surrounding family involvement in financial matters

Essential skills required

- Undertake an audit – clinical or financial
- Participate in an accreditation activity
- Undertake a CQI activity
- Manage a project

Learning resources

Recommended texts and other resources

Your own area health will have standards relevant to your location

- Medicare Benefits Schedule (MBS) online: http://www.mbsonline.gov.au/
• The Royal Australasian College of Medical Administrators (RACMA) - http://www.racma.edu.au/ offers relevant Clinician Manager Courses.

The content of the Business and Professional Management curriculum statement was in part derived from an outline developed by UNE Partnerships Pty Ltd, the Education and Training Company of the University of New England, Armidale, NSW. The original outline is copyright to UNE Partnerships.
6.6 Child and Adolescent

Domain 1: Provide medical care in the ambulatory and community setting

Themes: Patient-centred clinical assessment, Clinical reasoning, Clinical management

Abilities

CAH 1.1 Establish a doctor-patient relationship with parent and child and use a patient-centred approach to care

CAH 1.2 Establish effective therapeutic relationships with adolescents recognising that a young person may feel self-conscious, anxious, alienated, or have difficulty disclosing distress and maintain appropriate confidentiality

CAH 1.3 Obtain a clinical history from the adolescent, child and/or parent that reflects contextual issues, epidemiology and cultural context

CAH 1.4 Consider the particular needs and anxieties of parents with sick children, whilst recognising their expertise as the close observer of the child and the illness

CAH 1.5 Engage with and perform a problem-focussed physical examination relevant to clinical history and risks, remembering that the child's alertness, interest and responsiveness are critical to accurate assessment

CAH 1.6 Identify early indicators of 'at risk' behaviours of adolescents and initiate harm minimisation strategies

CAH 1.7 Use specialised clinical equipment as required for further assessment and interpret findings

CAH 1.8 Order and/or perform diagnostic tests where required to confirm a diagnosis, monitor medical care and/or exclude treatable or serious conditions

CAH 1.9 Apply diagnostic reasoning to arrive at one or more provisional diagnoses, considering common and important conditions in childhood and adolescence, the limitations of clinical indicators of serious illness in children and the effect of dynamics and beliefs on presentations in young people

CAH 1.10 Communicate findings of clinical assessment effectively and sensitively and establish the child's/adolescents and parent’s levels of understanding of any conditions or risks

CAH 1.11 Formulate a management plan for common and important conditions in childhood and adolescence in concert with the parent and/or child, that sets realistic expectations between the parent, child and doctor including the indicators and mechanisms for follow-up

CAH 1.12 Identify and manage co-morbidities in the patient and effectively communicate these to the child, adolescent and/or parent

CAH 1.13 Prescribe medications for children and adolescents in a safe manner and according to appropriate treatment guidelines
CAH 1.14 Promote parental self-confidence and skills both directly and indirectly and encourage family and community support in the immediate environment in which care occurs.

CAH 1.15 Anticipate the need for respite care for children, adolescents and families dealing with chronic paediatric illness or disability and implement appropriate strategies for these families.

CAH 1.16 Manage uncertainty and the need to evaluate the risks versus the benefits of clinical decisions.

CAH 1.17 Refer, facilitate and coordinate access to specialised paediatric medical and other health and social support services.

CAH 1.18 Provide and arrange follow-up and continuing medical care.

**Domain 2: Provide care in the hospital setting**

*Themes: Medical care of admitted patients, Medical leadership in a hospital team, Health care quality and safety*

**Abilities**

CAH 2.1 Manage admission of paediatric patients to hospital in accordance with institutional policies.

CAH 2.2 Develop, implement and maintain a management plan for hospitalised children with a range of acute conditions requiring inpatient admission specific to children and adolescents in concert with the parents.

CAH 2.3 Manage the normal and common abnormalities postnatal period both in the context of hospital care and early discharge.

CAH 2.4 Effectively manage neonates admitted with common neonatal medical conditions and be sensitive to the conditions and events that affect the mother-baby interrelationship.

CAH 2.5 Apply relevant checklists and clinical management pathways for common conditions in children and adolescents.

CAH 2.6 Monitor clinical progress, regularly re-evaluate the problem list and modify management accordingly.

CAH 2.7 Maintain a clinically relevant plan of fluid, electrolyte and blood product use with relevant pathology testing considering the limitations of laboratory indicators of serious illness in children.

CAH 2.8 Order and perform a range of diagnostic and therapeutic procedures.

CAH 2.9 Maintain timely and accurate patient documentation in hospital records including appropriate drug dosing and administration.

CAH 2.10 Communicate effectively with the health care team, patient and/or carer including effective clinical handover to the primary care provider.

CAH 2.11 Recognise and respond early to the deteriorating paediatric patient in hospital.

CAH 2.12 Anticipate and judiciously arrange safe patient transfer to other facilities, considering clinical indications, service capabilities, patient and parent preferences, transportation and geography.

CAH 2.13 Undertake early, planned and multi-disciplinary discharge planning.
CAH 2.14 Participate in creating a hospital environment sympathetic to children including theatre and anaesthetic considerations

CAH 2.15 Provide direct and remote clinical supervision and support to nurses, junior medical staff and students

CAH 2.16 Recognise, document and manage adverse events and near misses

CAH 2.17 Participate in institutional quality and safety improvement and risk management activities

**Domain 3: Respond to medical emergencies**

*Themes: Initial assessment and triage, Emergency medical intervention, Communication and planning*

**Abilities**

CAH 3.1 Undertake initial assessment and triage of paediatric and adolescent patients with acute or life-threatening conditions

CAH 3.2 Stabilise critically ill paediatric and adolescent patients and provide primary and secondary care

CAH 3.3 Competently perform definitive emergency resuscitation of paediatric and neonatal patients, including the severely compromised newborn and in keeping with clinical need, own capabilities and local context and resources

CAH 3.4 Perform required emergency procedures specific to children and adolescents

CAH 3.5 Manage abnormal perinatal care, emergencies, and with neonatal resuscitation, including intubation and umbilical catheterisation, and the necessary work up, in consultation with referral centres, for evacuation when indicated

CAH 3.6 Arrange and/or perform emergency patient transport or evacuation when needed

CAH 3.7 Demonstrate resourcefulness in knowing how to access and use available resources

CAH 3.8 Communicate effectively at a distance with consulting or receiving clinical personnel

CAH 3.9 Provide inter-professional team leadership in paediatric emergency care that includes quality assurance and risk management assessment

CAH 3.10 Plan for emergencies at home and in the community including use of medical alert tags and Epi-Pens®
Domain 4: Apply a population health approach

Themes: Community health assessment, Population-level health intervention, Evaluation of health care, Collaboration with agencies

Abilities

CAH 4.1 Analyse the social, environmental, economic and occupational determinants of child and adolescent health that affect the community burden of disease and access to health-related services
CAH 4.2 Apply a population health approach that is relevant to the clinical practice profile
CAH 4.3 Undertake health promotion activities appropriate to the needs of children and adolescents
CAH 4.4 Integrate evidence-based prevention, early detection, mental and physical health maintenance activities in children and adolescents into practice at a systems level
CAH 4.5 Encourage parent-held record as a means of facilitating health promotion, developmental surveillance and communication between health professionals
CAH 4.6 Utilise available practitioners including podiatrists, orthotists and physiotherapists to encourage physical achievement and fitness as well as injury treatment and prevention
CAH 4.7 Utilise available practitioners including audiologists and speech therapists to encourage and maintain important language development in children
CAH 4.8 Liaise with school and education department staff in the management of problems when necessary
CAH 4.9 Evaluate the quality of health care for younger patients in the practice population
CAH 4.10 Access and collaborate with agencies responsible for care and support of children
CAH 4.11 Plan health service needs and access to services by applying knowledge of the impact and implications on the paediatric and adolescent population
CAH 4.12 Fulfil mandatory reporting requirements in relation to health conditions, abuse and vaccinations
CAH 4.13 Participate as a medical advocate in the design, implementation and evaluation of interventions that address determinants of child and adolescent health

Domain 5: Address the health care needs of culturally diverse and disadvantaged groups

Themes: Differing epidemiology, Cultural safety and respect, Working with groups to improve health outcomes

Abilities

CAH 5.1 Apply knowledge of the differing profile of disease, health risks and beliefs among younger patients from culturally diverse and disadvantaged groups
CAH 5.2 Communicate effectively and in a culturally safe manner with younger patients and their families, using diagrams, interpreters, key community contacts and networks as appropriate

CAH 5.3 Reflect on own assumptions, cultural beliefs and emotional reactions in providing culturally safe care for younger patients and their families

CAH 5.4 Apply principles of partnership, community ownership, consultation, capacity building, reciprocity and respect to health care delivery, health surveillance and research

CAH 5.5 Harness the resources available in the health care team, the local community and family to improve outcomes of care for younger patients

CAH 5.6 Work with culturally diverse and disadvantaged groups to address barriers in access to health and support services for younger people

Domain 6: Practise medicine within an ethical, intellectual and professional framework

*Themes: Ethical practice, Professional obligations, Intellectual engagement including teaching and research*

**Abilities**

CAH 6.1 Act as an advocate for the developmental and health needs of children and adolescents in the context of their family and community

CAH 6.2 Enhance the autonomy and personal responsibility of the young patient and their families

CAH 6.3 Ensure safety, privacy and confidentiality for children and adolescents whilst integrating the concepts of consent and the mature minor

CAH 6.4 Maintain appropriate professional boundaries with children and adolescents and their families

CAH 6.5 Recognise and manage child abuse in its various forms including those at risk or in a situation of abuse, violence, neglect, homelessness or accidental injury

CAH 6.6 Disclose suspected emotional, physical and sexual abuse or neglect of children or young people, with particular reference to mandatory reporting

CAH 6.7 Utilise community resources to assist in the management of childhood abuse, in the context of concurrent State and Territory Legislative requirements

CAH 6.8 Keep clinical documentation in accordance with legal and professional standards

CAH 6.9 Identify ways in which health outcomes may be improved for children and adolescents through enhancing family and social function

CAH 6.10 Demonstrate commitment to teamwork, collaboration, coordination and continuity of care for younger patients

CAH 6.11 Provide accurate and ethical certification when required for sickness, employment, social benefits and other purposes for the young patient and their families

CAH 6.12 Manage, appraise and assess own performance in the provision of medical care for younger patients

CAH 6.13 Develop and apply strategies for self-care, personal support and caring for family

CAH 6.14 Teach and clinically supervise health students, junior doctors and other health professionals
CAH 6.15 Engage in continuous learning and professional development in child and adolescent health
CAH 6.16 Critically appraise and apply research relevant to child and adolescent health

Domain 7: Practise medicine in the rural and remote context

Themes: Resourcefulness, Flexibility, teamwork and technology, Responsiveness to context

Abilities

CAH 7.1 Take into account differences in paediatric presentations that might occur in the rural and remote context
CAH 7.2 Demonstrate resourcefulness, independence and self-reliance while working effectively in geographic, social and professional isolation
CAH 7.3 Recognise the differing availability of medical and allied health care resources in rural/remote communities and demonstrate the ability to improvise where necessary
CAH 7.4 Demonstrate an awareness of local issues which impact on the decision to treat or refer, such as patient preference, local transport, costs and potential benefits
CAH 7.5 Provide direct and distant clinical supervision and support for other rural and remote health care personnel working with children
CAH 7.6 Use information and communication technology effectively to provide medical care or facilitate access to specialised care for patients
CAH 7.7 Use information and communication technology to network and exchange information with distant colleagues
CAH 7.8 Respect local community norms and values in own life and work practices
CAH 7.9 Identify and acquire extended knowledge and skills as may be required to meet health care needs of the local paediatric population
CAH 7.10 Contribute to the development of the discipline of rural/remote general practice by gaining skills in teaching, research and advocacy aimed at improving the well-being of children and adolescents
**Definition of terms**

<table>
<thead>
<tr>
<th>'At risk' behaviours of adolescents includes</th>
<th>'At risk' behaviours are those that can have adverse effects on the overall development and well-being of the child or youth, or that might prevent them from future successes and development. This includes behaviours that cause immediate physical injury (e.g., fighting), as well as behaviours with cumulative negative effects (e.g., substance use). Behaviour that could lead to unplanned adverse consequences, such as harm to the person, or conflict with family, friends or the law.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harm minimisation strategies include</td>
<td>Strategies that allow children and adolescents to experiment with risky behaviour in a manner that limits risks of adverse consequences.</td>
</tr>
</tbody>
</table>
| Common and important conditions in childhood, and adolescents include | **Upper respiratory, mouth, eye and ear includes:**
- Recurrent viral infections, croup (acute, recurrent), stridor, laryngomalacia, rhinitis, sinusitis, nasal septal haematoma, epistaxis, sleep apnoea, hearing loss, ASOM, CSOM, otitis externa, cholesteatoma, stomatitis, thrush, herpes, coxsackie virus, teething, caries prevention, tonsillitis, epiglottitis, cervical adenopathy, congenital glaucoma, cataract, blocked tear duct, conjunctivitis: infectious & allergic, unilateral red eye, retinoblastoma, amblyopia, squint, periorbital cellulitis

**Lower respiratory includes:**
- Recurrent bronchitis, bronchiolitis, asthma, wheezy cough under 3 years, cough, psychogenic cough, pneumonia, atypical pneumonia, pertussis, cystic fibrosis, TB, bronchiectasis

**Cardiac includes:**
- Murmurs (innocent and pathological), coarctation of the aorta, supraventricular tachycardia, abnormal BP, SBE prophylaxis

**Gastrointestinal includes:**
- Abdominal pain, acute abdomen, headache, vomiting, diarrhoea, acute and chronic, dehydration as a factor in acute illness, rehydration techniques, gastro-oesophageal reflux disease, pyloric stenosis, coeliac disease, appendicitis, hernia, abdominal mass, intussusception, constipation, encopresis, rectal bleeding, jaundice, hepatitis

**Genitourinary includes:**
- Abnormal / ambiguous genitalia, fluid - electrolyte imbalance, hydrocoele, undescended testis (early, late), inguinal hernia, urinary tract infection, vesicoureteric reflux, congenital abnormality urinary tract, acute urinary obstruction, glomerulonephritis, nephrotic syndrome, enuresis, vulvitis, labial adhesions, phimosis, paraphimosis, torsion of testis, circumcision, tumours

**Dermatological includes:**
- Normal skin variation, aboriginal skin problems, birth marks, viral exanthems (specific and non-specific), solar pathology/prevention, napkin rash, thrush, tinea, kerion, eczema, psoriasis, seborrhoeic dermatitis, scabies, lice, molluscum contagiosum, orf, pityriasis, perianal streptococcus, infections, impetigo, urticaria, drug/food rashes, septicemia, meningococcus

**Musculoskeletal includes:**
- Limp, Perthes' disease, hip dysplasia, lower limb problems, patello-femoral syndromes, epiphysitis, apophysitis, soft tissue trauma, minor dislocations, progressive muscular weakness, sepsis, bone/joint infections

**Infections include:**
- Measles, mumps, rubella, Epstein-Barr virus, herpes simplex, haemophilus influenza B, meningococcus, varicella zoster, streptococcus, staphylococcus, chronic viral, HIV, hepatitis, tropical infestations, congenital (rubella, cytomegalovirus, hepatitis) |
Haematological, immunological, and rheumatological includes:

Normal age haematology, anaemia, lymphoma, leukaemia, inherited conditions, purpura, haemophilia, thalassaemia, sickle cell disease, allergies (general concepts and fads), vasculidities, angioedema, Kawasaki syndrome, autoimmune disease, general arthralgia, systemic lupus erythematosus, rheumatoid arthritis, immunodeficiency, HIV, AIDS

Endocrine

Diabetes, thyroid disorder/s, short stature, abnormal puberty

General Issues

Growth problems, failure to thrive, obesity, behavioural issues, (normal versus 'problem'), the social context, developmental delay, disruptive children, disorders - ADHD, autism spectrum disorder, sleep disorder, the crying baby, oppositional behaviour and alienation, disability, (learning; specific/general), intellectual disability (subnormality), physical disability, language disability, SIDS prevention and management

<table>
<thead>
<tr>
<th>Acute conditions requiring inpatient admission specific to children and adolescents include</th>
<th>Head injury, hypovolaemia, acidosis, hypoxia and blood transfusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common neonatal medical conditions include</td>
<td>Respiratory distress, asphyxia, cyanosis, hypoglycaemia, hypothermia, vomiting, failure to pass meconium, physiological and non-physiological jaundice, intraterm and neonatal infection, seizures, maternal infection including syphilis, hepatitis B, hepatitis C, HIV</td>
</tr>
<tr>
<td>Conditions and events that affect the mother-baby interrelationship include</td>
<td>Effects of maternal drug dependency, immediate neonatal care, bonding, rooming in, neonatal screening, post (early) discharge care, breast feeding in detail, breast feeding problems including infections, formula feeding including special needs, puerperal complications, family adjustment maternal exhaustion - anxiety, formula feeding</td>
</tr>
<tr>
<td>Emergency procedures specific to children and adolescents include</td>
<td>Basic life support, early management severe trauma, neck stabilisation, airway management (intubation), hypovolaemia correction, hypoxia correction, thoracocentesis, chest drain, paediatric infusion, intravenous infusion, paediatric radiology, catheterisation, suprapubic aspiration, removal of foreign bodies with and without GA, simple fractures management with and without GA, simple dislocations: joint and epiphyseal, neonatal resuscitation: (intubation and umbilical catheterisation), burns management: simple, moderate, severe, ingestion of poisons and drug overdose</td>
</tr>
<tr>
<td>Mature minor</td>
<td>The common law recognises that a child or young person may have the capacity to consent to medical treatment on their own behalf, and without their parents’ knowledge. The child or young person must have a sufficient understanding and intelligence to enable him or her to fully understand what is proposed. The level of maturity required to provide consent will vary with the nature and complexity of the medical treatment. The treatment must be in the best interests of the health and wellbeing of the child</td>
</tr>
<tr>
<td>Mandatory reporting includes</td>
<td>Specified people are required to report suspected child maltreatment (abuse or neglect) to statutory child protection services in Australia. The legal requirement to report suspected cases of child abuse and neglect is known as mandatory reporting. All jurisdictions possess mandatory reporting requirements of some description. However, the people mandated to report and the abuse types for which it is mandatory to report vary across Australian states and territories. Doctors are mandated to report across all jurisdictions in Australia</td>
</tr>
</tbody>
</table>
Knowledge and Skills

Essential knowledge required

- Demonstrate a working knowledge of problems common during the infant, toddler, school-age and adolescent years that warrant management in the general practice setting
- Understand the principles and issues relating to patterns of inheritance, newborn screening and counselling
- Know the principles and issues associated with nutritional goals by age group including flexible feeding patterns, risk factors for deficiencies, as well as food allergy and sensitivity
- Demonstrate the application of knowledge to age-specific exercise, recreation and fitness programs and reducing the risk of obesity and other related diseases
- Define the rights of children and adolescents including individual rights, use of chaperones, age of consent, confidentiality, and power of guardians over the rights of minors, in everyday patient care
- Understand the normal striving for independence and the issues of concern to young people as they progress through adolescence
- Comprehend the barriers perceived by adolescents which may limit access to effective medical care
- Understand the effect of peer pressure, school, mass media and employment prospects on the attitude and behaviour of adolescents
- Recognise common developmental issues for adolescents including individuation, sexual maturation, cognitive development and self-esteem
- Know strategies to manage problems that can arise during adolescence including peer issues, and problems with body image, support/alienation from family/school/peers, oppositional behaviour, school dysfunction and self-harm
- Understand and demonstrate strategies to manage psycho-social issues in adolescents including effects of homelessness, unemployment and their health impact, risk-taking behaviour including substance misuse (normal, experimentation, at risk, out of control), suicidal intention or self-harm, dysfunctional families, eating disorders
- Understand financial and compliance issues when prescribing for adolescents
- Be informed about family development and dynamics affecting children including parental substance use, the effects of smoking, childhood caffeine use and high risk families
- Apply knowledge of the epidemiological characteristics of the paediatric population in Australia to improving care provision

Essential skills required

- Perform physical and functional clinical assessment
- Undertake a paediatric neurological assessment
- Apply skills in a range of adolescent communication/assistance strategies including emergency strategies, confidential history taking, minimising anxiety, encouraging compliance, direct family counselling and assist in coping with imprisonment
- Perform endotracheal intubation (child and neonate)
- Conduct defibrillation
- Perform synchronised DC cardioversion (child)
- Apply external cardiac massage
- Apply mouth to mouth/mask ventilation
- Apply bag/mask ventilation
- Insert oropharyngeal airway
- Gain intravenous access (child)
- Insert umbilical catheter (neonate)
- Gain intraosseous access
- Use of medication delivery devices (child)
- Use of spacer devices (child)
- Conduct nebulisation therapy (child)
- Insert intercostal catheter (child)
- Conduct thoracocentesis (child)
- Insert nasogastric tube (child)
- Administer local anaesthesia (child)
- Administer nitrous oxide (as analgesia)
- Administer child sedation
- Conduct lumbar puncture
- Reduce a fracture (child)
- Reduce a dislocated joint (child)
- Repair of superficial skin lacerations (child)
- Remove a subcutaneous foreign body (child)
- Conduct urethral catheterisation (child)
- Demonstrate suprapubic aspiration (child)
- Conduct hearing assessment
- Perform an ear toilet
- Remove a foreign body from external auditory meatus and nasal cavity
- Cauterise for nasal bleeding
- Perform venous blood sampling (child)

**Learning resources**

**Recommended texts and other resources**


• Rural and Remote Medical Education Online (RRMEO) – [http://www.rrmeo.com](http://www.rrmeo.com)

• Youth BeyondBlue: [http://www.youthbeyondblue.com/](http://www.youthbeyondblue.com/)


6.7 Dermatology

Domain 1: Provide medical care in the ambulatory and community setting

Themes: Patient-centred clinical assessment, Clinical reasoning, Clinical management

Abilities

DERM 1.1 Establish a doctor-patient relationship and use a patient-centred approach to care
DERM 1.2 Elicit an accurate and relevant dermatological history and dermatological examination
DERM 1.3 Perform a problem-focused physical examination relevant to clinical history and risks, epidemiology and cultural context
DERM 1.4 Use specialised clinical equipment for further examination of the skin, including a magnifying lamp, Woods light and dermatoscope
DERM 1.5 Undertake or arrange and interpret dermatological investigations
DERM 1.6 Apply diagnostic reasoning to arrive at one or more provisional diagnoses, considering uncommon but clinically important differential diagnoses and involving specialised advice and treatment if required
DERM 1.7 Communicate findings of clinical assessment effectively and sensitively to the patient and/or carer
DERM 1.8 Formulate a management plan in concert with the patient and/or carer, judiciously applying best evidence and the advice of expert colleagues
DERM 1.9 Treat common and important skin disorders using common pharmacological agents safely
DERM 1.10 Perform cryotherapy of skin lesions and demonstrate an understanding of associated medico-legal implications
DERM 1.11 Perform different types of skin biopsy
DERM 1.12 Manage uncertainty and the need to evaluate the risks versus the benefits of clinical decisions
DERM 1.13 Refer, facilitate and coordinate access to specialised medical and diagnostic and other health and social support services
DERM 1.14 Provide and/or arrange follow-up and continuing medical care
Domain 2: Provide care in the hospital setting

Themes: Medical care of admitted patients, Medical leadership in a hospital team, Health care quality and safety

Abilities

DERM 2.1  Manage admission of dermatological patients to hospital in accordance with institutional policies
DERM 2.2  Manage the symptoms of admitted patients including sufficient analgesia and anti-pruritics
DERM 2.3  Develop, implement and maintain a management plan for hospitalised patients in concert with the patient and/or carer and in discussion with their community based general practitioner, relevant specialist or other health professional
DERM 2.4  Apply relevant checklists and clinical management pathways
DERM 2.5  Monitor clinical progress, regularly re-evaluate the problem list and modify management accordingly
DERM 2.6  Maintain a clinically relevant plan of fluid, electrolyte and blood product use with relevant pathology testing
DERM 2.7  Order and perform a range of diagnostic and therapeutic procedures. Maintain timely and accurate patient documentation in hospital records including drug prescription and administration
DERM 2.8  Communicate effectively with the health care team, patient and/or carer including effective clinical handover
DERM 2.9  Recognise and respond early to the deteriorating patient
DERM 2.10 Anticipate and judiciously arrange safe patient transfer to other facilities, considering clinical indications, service capabilities, patient preferences, transportation and geography
DERM 2.11 Undertake early, planned and multi-disciplinary discharge planning
DERM 2.12 Contribute medical expertise and leadership in a hospital team
DERM 2.13 Provide direct and remote clinical supervision and support to nurses, junior medical staff and students
DERM 2.14 Recognise, document and manage adverse events and near misses
DERM 2.15 Participate in institutional quality and safety improvement and risk management activities
Domain 3: Respond to medical emergencies

*Themes: Initial assessment and triage, Emergency medical intervention, Communication and planning*

**Abilities**

DERM 3.1 Undertake initial assessment and triage of patients with acute or life threatening dermatological conditions

DERM 3.2 Stabilise critically ill patients and provide primary and secondary care

DERM 3.3 Provide definitive emergency resuscitation and management across the lifespan in keeping with clinical need, own capabilities and local context and resources

DERM 3.4 Perform required emergency procedures

DERM 3.5 Arrange and/or perform emergency patient transport or evacuation when needed

DERM 3.6 Demonstrate resourcefulness in knowing how to access and use available resources

DERM 3.7 Communicate effectively at a distance with consulting or receiving clinical personnel

DERM 3.8 Participate in disaster planning and implementation of disaster plans, and post-incident analysis and debriefing

Domain 4: Apply a population health approach

*Themes: Community health assessment, Population-level health intervention, Evaluation of health care, Collaboration with agencies*

**Abilities**

DERM 4.1 Analyse the social, environmental, economic and occupational determinants of health that affect the community burden of disease and access to health-related services

DERM 4.2 Apply a population health approach that is relevant to the clinical practice profile

DERM 4.3 Integrate evidence-based prevention, early detection and health maintenance activities into practice at a systems level

DERM 4.4 Provide continuity and coordination of care for own practice population

DERM 4.5 Evaluate quality of health care for practice populations

DERM 4.6 Fulfil reporting requirements in relation to statutory notification of health conditions

DERM 4.7 Access and collaborate with agencies responsible for key population health functions including public health services, employer groups and local government

DERM 4.8 Participate as a medical advocate in the design, implementation and evaluation of interventions that address determinants of population health
Domain 5: Address the health care needs of culturally diverse and disadvantaged groups

Themes: Differing epidemiology, Cultural safety and respect, Working with groups to improve health outcomes

Abilities

DERM 5.1 Apply knowledge of the differing profile of dermatological disease and health risks among culturally diverse and disadvantaged groups
DERM 5.2 Communicate effectively and in a culturally safe manner, using interpreters, key community contacts and networks as appropriate
DERM 5.3 Reflect on own assumptions, cultural beliefs and emotional reactions in providing culturally safe care
DERM 5.4 Apply principles of partnership, community ownership, consultation, capacity building, reciprocity and respect to health care delivery, health surveillance and research
DERM 5.5 Harness the resources available in the health care team, the local community and family to improve outcomes of care
DERM 5.6 Work with culturally diverse and disadvantaged groups to address barriers in access to health services and improve the determinants of health

Domain 6: Practise medicine within an ethical, intellectual and professional framework

Themes: Ethical practice, Professional obligations, Intellectual engagement including teaching and research

Abilities

DERM 6.1 Ensure safety, privacy and confidentiality in patient care
DERM 6.2 Maintain appropriate professional boundaries
DERM 6.3 Be aware of duty of care issues arising from providing health care to self, family, colleagues, patients and the community
DERM 6.4 Recognise unprofessional behaviour and signs of the practitioner in difficulty among colleagues and respond according to ethical guidelines and statutory requirements
DERM 6.5 Keep clinical documentation in accordance with legal and professional standards
DERM 6.6 Demonstrate commitment to teamwork, collaboration, coordination and continuity of care
DERM 6.7 Work within relevant national and state legislation and professional and ethical guidelines
DERM 6.8 Provide accurate and ethical certification when required for sickness, employment, social benefits and other purposes
DERM 6.9 Manage, appraise and assess own performance in the provision of medical care for patients
DERM 6.10 Develop and apply strategies for self-care, personal support and caring for family
DERM 6.11 Teach and clinically supervise health students, junior doctors and other health professionals
DERM 6.12 Engage in continuous learning and professional development
DERM 6.13 Critically appraise and apply relevant research

Domain 7: Practise medicine in the rural and remote context

Themes: Resourcefulness, Flexibility, teamwork and technology, Responsiveness to context

Abilities

DERM 7.1 Recognise dermatological problems commonly occurring in rural/remote general practice
DERM 7.2 Demonstrate resourcefulness, independence and self-reliance while working effectively in geographic, social and professional isolation
DERM 7.3 Provide effective clinical care when away from ready access to specialist medical, diagnostic and allied health services
DERM 7.4 Arrange referral to distant services in concert with the patient and/or carer considering the balance of potential benefits, harms and costs
DERM 7.5 Provide direct and distant clinical supervision and support for other rural and remote health care personnel
DERM 7.6 Use information and communication technology to provide medical care or facilitate access to specialised care for patients
DERM 7.7 Use information and communication technology to network and exchange information and photos with distant colleagues
DERM 7.8 Respect local community norms and values in own life and work practices
DERM 7.9 Identify and acquire extended dermatological knowledge and skills as may be required for example excise benign and malignant skin lesions using specialised excision techniques to meet health care needs of the local population

Definition of terms

<table>
<thead>
<tr>
<th><strong>Dermatological history</strong></th>
<th>Includes: history of the presenting complaint including time course, distribution, associated symptoms and illnesses such as pain, itch or fever and response to previous therapies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Medications: current and previous; including topical and complementary therapies</td>
</tr>
<tr>
<td></td>
<td>Past medical history, including previous skin conditions and cancers</td>
</tr>
<tr>
<td></td>
<td>Family history, particularly of skin conditions and cancers</td>
</tr>
<tr>
<td></td>
<td>Domestic and international travel in the last year.</td>
</tr>
<tr>
<td></td>
<td>Occupation</td>
</tr>
<tr>
<td></td>
<td>Hobbies for example gardening, crafts</td>
</tr>
<tr>
<td></td>
<td>Skin care routines including frequency and temperature of showers and baths; types of cosmetics, soaps, oils, and products used clothing and jewellery</td>
</tr>
<tr>
<td></td>
<td>Lifetime and current sun exposure</td>
</tr>
<tr>
<td>Topic</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Hair and nail care products and routines</td>
<td>Hair and nail care products and routines</td>
</tr>
<tr>
<td>Tattoos</td>
<td>Tattoos</td>
</tr>
<tr>
<td>Skin slashing, cutting</td>
<td>Skin slashing, cutting</td>
</tr>
<tr>
<td>Dermatological examination must include, but is not limited to:</td>
<td>Mucous membranes: eyelids, nose, mouth - buccal, pharyngeal, sub-lingual, tongue, Hair: texture, colour, quantity, distribution, brittleness, hair loss including pattern, Scalp: scales, crusts, or lesions. Facial hair distribution, quantity, texture; hirsutism in females. Nails: length, color, configuration, symmetry, hygiene, thickness, deformities, hyperpigmented bands, pitting, and splinter haemorrhages Skin of the neck, arms, hands, chest and abdomen, legs, back, back of legs, feet, including soles and between the toes, buttocks, and genital area Description of lesions to include: primary or secondary in nature, colour, exudates, pattern, size, shape, change in sensation, inflammation, location, distribution, symmetry, tenderness, consistency, temperature, moisture, texture, turgor, and fragility</td>
</tr>
<tr>
<td>Types of skin biopsies include</td>
<td>Excision, Shave, Curettage, Punch, Incisional</td>
</tr>
<tr>
<td>Common and important skin disorders include</td>
<td>Eczema (dermatitis) – atopic- discoid, asteatotic eczema and venous stasis, seborrhoeic dermatitis, solar keratosis, lichen planus, lichen simplex, psoriasis, pityriasis rosea, erythema multiforme, urticaria, vasculitis, photosensitivity, acne, rosacea, drug related eruptions, warts, naevi, BCC, SCC, Melanoma</td>
</tr>
<tr>
<td>Common pharmacological agents include</td>
<td>Topical corticosteroids, moisturisers and emollients, antibacterials, antifungals, antivirals, antipsoriatic agents, acne therapies, topical cytotoxics e.g. fluorouracil, imiquimod</td>
</tr>
<tr>
<td>Specialised excision techniques include</td>
<td>Ellipse excisions, flap repairs, skin grafts</td>
</tr>
<tr>
<td>Acute or life-threatening dermatological conditions include</td>
<td>Staphylococcal toxic shock syndrome, angioedema, exfoliative erythroderma, necrotising fasciitis, meningococcemia, Stevens-Johnson Syndrome and toxic epidermal necrolysis, malignant melanoma</td>
</tr>
<tr>
<td>Common viral, bacterial and insect related skin infections include</td>
<td>Viral warts, molluscum contagiosum, exanthemata, herpes simplex, herpes zoster, HIV Bacterial including erysipelas/ cellulitis, staphylococcal infections, folliculitis, pitted keratolysis, erythrasma, syphilis, impetigo, leprosy Fungal: candidiasis, tinea, pityriasis versicolor Insects: scabies, lice, flea bites</td>
</tr>
<tr>
<td>Common and important skin tumours include</td>
<td>Non-melanocytic, benign: seborrhoeic keratosis, skin tags, keratoacanthoma, haemangioma, - premalignant: solar keratosis, - malignant: basal cell carcinoma, squamous cell carcinoma, Bowen’s disease, keratoacanthoma Melanocytic: melanocytic naevi, malignant melanoma</td>
</tr>
</tbody>
</table>

Taken from Canadian Medical Association Journal [http://www.cmaj.ca/content/173/11/1317.full.pdf](http://www.cmaj.ca/content/173/11/1317.full.pdf)
Knowledge and Skills

Essential knowledge required

- Know essential features, cause, and specific treatment for common viral, bacterial and insect related skin infections
- Recognise and distinguish between sun damaged skin conditions including, ephelides, solar lentigines, solar elastosis, solar keratoses and sun related skin malignancies
- Recognise the essential features, cause, and specific treatment for common and important skin tumours
- Know the essential features, cause, and specific treatment for systemic diseases with possible cutaneous associations including systemic malignancy, metabolic diseases, endocrine disorders e.g. diabetes, thyroid, Cushing’s, Addison’s, gastrointestinal disorders, Paget’s disease, extra-mammary Paget’s disease, Lichen sclerosus
- Describe rashes related to pregnancy including pruritus gravidarum, prurigo of pregnancy, pruritic urticarial papules and plaques of pregnancy and pruritic folliculitis of pregnancy
- Know essential features, causes, and specific treatments for leg ulcers
- Know anatomical considerations, specific diagnostic tests and treatment for conditions associated with hair including hair loss, alopecia areata, alopecia totalis, trichotillomania, traction alopecia, scalp ringworm, lichen simplex, psoriasis, plus excessive hair growth, aetiology, differences, hirsutism and hypertrichosis
- Define anatomical considerations, specific diagnostic tests and treatment for dermatological conditions associated with nails including, nail pitting, nail ridging, nail discolouration, nail plate thickening – tinea and onychogryphosis
- Recognise nail changes that occur due to psoriasis, dermatitis and paronychia
- Recognise, distinguish between and treat nappy rash related to irritant dermatitis, candida and seborrhoeic dermatitis
- Differential diagnosis and management of facial rashes associated with rosacea, seborrhoeic, perioral, contact dermatitis, fungal infection, systemic and discoid lupus erythematosus and melasma
- Differential diagnosis and management of hand rashes related to irritant dermatitis, contact allergic dermatitis, endogenous eczema, fungal infection and psoriasis
- Describe the indications and contraindications for each type of biopsy and the role of special testing e.g. immunofluorescence
- Apply general principles for selecting a vehicle for topical treatment

Essential skills required

- Describe a rash or skin lesion accurately using medical terminology
- Arrange and interpret results of patch testing, bacteriology, mycology, virology and PCR / NAAT testing, including details such as transport delays and sampling errors
- Collect skin scrapings and clippings for mycology
- Examine skin lesions with a dermatoscope
- Perform punch and shave skin biopsies
- Perform basic excisions of skin lesions using specialised techniques (desirable)
- Supervise the choice and application of dressings for ulcers
- Apply wet wraps / dressings for eczema
Learning Resources

Recommended texts and other resources

- [http://www.rrmeo.com](http://www.rrmeo.com) – provides access to Telederm and other online courses.
6.8 Information Management and Information Technology

Domain 1: Provide medical care in the ambulatory and community setting

Themes: Patient-centred clinical assessment, Clinical reasoning, Clinical management

Abilities

IMIT 1.1 Establish a doctor-patient relationship and use a patient-centred approach to care when providing telehealth consultations, collecting and retrieving data, facilitating patients' access to relevant e-health records, and utilising other e-health systems and tools

IMIT 1.2 Perform physical examinations on behalf of distant specialists during telehealth consultations, ensuring that the specialist has a clear view of the examination

IMIT 1.3 Select and support appropriate patients for telehealth consultations taking into account clinical, practical and patient factors

IMIT 1.4 Ensure informed consent is obtained when introducing telehealth and e-health options

IMIT 1.5 Manage the logistical environment for telehealth consultations including booking people, equipment and space

IMIT 1.6 Manage the physical environment during telehealth consultations including effective use of camera, lighting and audio

IMIT 1.7 Use imaging devices, point of care devices and tests, and equipment that is fit for purpose when conducting telehealth consultations

IMIT 1.8 Use telehealth, decision support tools and clinical guidelines to support diagnostic reasoning

IMIT 1.9 Determine and apply the role of telehealth judiciously in overall patient management

IMIT 1.10 Inform patients about the risks and benefits of e-health and telehealth, including risks to privacy, safety and quality, plus the other relevant options for providing care

IMIT 1.11 Use e-health and telehealth options to access specialist advice and institute shared care arrangements

IMIT 1.12 Use technology and secure messaging to refer, facilitate and coordinate access to specialised medical and diagnostic and other health and social support services, including e-pathology, e-prescribing, and e-discharge summaries

IMIT 1.13 Provide and/or arrange follow-up and continuing medical care utilising ehealth and telehealth options as appropriate, and ensuring that the division of follow-up responsibilities arising from a telehealth consultation are clear to both patient-end and distant clinicians
Domain 2: Provide care in the hospital setting

Themes: Medical care of admitted patients, Medical leadership in a hospital team, Health care quality and safety

Abilities

IMIT 2.1 Manage admission of patients to hospital in accordance with institutional policies
IMIT 2.2 Develop, implement and maintain a management plan for hospitalised patients in concert with the patient and/or carer, and with reference to e-health records where applicable
IMIT 2.3 Maintain timely and accurate patient documentation in the patient record system and shared e-health summary, ensuring that the patient information is coded using SNOMED Clinical Terms
IMIT 2.4 Apply relevant checklists and clinical management pathways, using decision support tools where appropriate
IMIT 2.5 Communicate effectively with e-health and telehealth when distant advice is required to optimise management
IMIT 2.6 Contribute medical expertise and leadership in a hospital team, including the establishment of telehealth services and ehealth implementation strategies
IMIT 2.7 Use e-health and telehealth equipment to provide remote supervision and support to nurses, junior medical staff and students where appropriate
IMIT 2.8 Participate in regular audits of telehealth services as part of institutional quality and safety improvement

Domain 3: Respond to medical emergencies

Themes: Initial assessment and triage, Emergency medical intervention, Communication and planning

Abilities

IMIT 3.1 Undertake initial assessment and triage of patients with acute or life threatening conditions, accessing e-health records where appropriate
IMIT 3.2 Access advice and support from distant clinicians as required using telehealth and e-health methods where appropriate to stabilise critically-ill patients and provide primary and secondary care
IMIT 3.3 Provide definitive emergency resuscitation and management across the lifespan in keeping with clinical need, own capabilities and local context and resources including e-health and telehealth resources
IMIT 3.4 Demonstrate resourcefulness in knowing how to access specialist support via telehealth
IMIT 3.5 Communicate effectively at a distance with consulting or receiving clinical personnel
IMIT 3.6 Participate in disaster planning and implementation of disaster plans, and post-incident analysis and debriefing with consideration of the role of telehealth and e-health
Domain 4: Apply a population health approach

*Themes: Community health assessment, Population-level health intervention, Evaluation of health care, Collaboration with agencies*

**Abilities**

IMIT 4.1 Analyse data from practice records to identify clinical practice profile to inform a population health approach
IMIT 4.2 Establish telehealth arrangements with distant clinicians to improve coordination of care and establish shared care arrangements
IMIT 4.3 Evaluate quality of health care for practice populations, including patient experiences of telehealth and the usefulness of telehealth to the health care organisation as a whole
IMIT 4.4 Fulfil responsibilities for managing e-health summaries for eligible patients
IMIT 4.5 Participate as a medical advocate in the design, implementation and evaluation of interventions that address determinants of population health, with specific attention to the use of telehealth and e-health arrangements

Domain 5: Address the health care needs of culturally diverse and disadvantaged groups

*Themes: Differing epidemiology, Cultural safety and respect, working with groups to improve health outcomes*

**Abilities**

IMIT 5.1 Take patient factors into account when deciding whether to use telehealth, such as the ability of the patient to travel, plus their family, work and cultural situation
IMIT 5.2 Communicate effectively and in a culturally safe manner, when using telehealth
IMIT 5.3 Access the services of Aboriginal Health Workers as cultural brokers when conducting telehealth consultations for consenting Aboriginal patients
IMIT 5.4 Discuss how to undertake a needs analysis to determine optimal use of telehealth for your patient population
IMIT 5.5 Work with culturally diverse and disadvantaged groups to establish telehealth services to address barriers in access to services and to improve the determinants of health
Domain 6: Practise medicine within an ethical, intellectual and professional framework

Themes: Ethical practice, Professional obligations, Intellectual engagement including teaching and research

Abilities

IMIT 6.1 Ensure safety, privacy and confidentiality in patient care when using e-health systems and conducting telehealth consultations
IMIT 6.2 Keep clinical documentation in accordance with legal and professional standards and e-health standards
IMIT 6.3 Demonstrate how to keep contemporaneous notes of telehealth consultations in the patient record systems of patient-end clinicians and distant clinicians
IMIT 6.4 Demonstrate commitment to teamwork, collaboration, coordination and continuity of care in establishing e-health and telehealth arrangements
IMIT 6.5 Contribute to the management of human and financial resources within a health service, including the development of a business case for telehealth
IMIT 6.6 Work within relevant national and state legislation, regulations, and professional and ethical guidelines, including the ACRRM Telehealth Guidelines
IMIT 6.7 Manage, appraise and assess own performance in the provision of telehealth services for patients
IMIT 6.8 Teach and clinically supervise health students, junior doctors and other health professionals, using telehealth equipment where appropriate
IMIT 6.9 Engage in continuous learning and professional development, including e-learning, e-health knowledge and skills, and opportunistic learning from specialists during clinical telehealth consultations
IMIT 6.10 Critically appraise and apply relevant research related to e-health

Domain 7: Practise medicine in the rural and remote context

Themes: Resourcefulness, Flexibility, teamwork and technology, Responsiveness to context

Abilities

IMIT 7.1 Demonstrate resourcefulness, independence and self-reliance while working effectively in geographic, social and professional isolation, including the establishment of telehealth to expand scope of practice
IMIT 7.2 Use e-health and telehealth to provide effective clinical care when away from ready access to face-to-face specialist medical, diagnostic and allied health services
IMIT 7.3 Provide direct and distant clinical supervision and support for other rural and remote health care personnel using telehealth equipment
IMIT 7.4 Use information and communication technology including telehealth equipment to provide medical care or facilitate access to specialised care for patients
IMIT 7.5 Use information and communication technology including e-health records and telehealth to network and exchange information with distant colleagues

IMIT 7.6 Respect local community norms and values in own life and work practices

IMIT 7.7 Identify and acquire extended knowledge and skills in telehealth as may be required to meet health care needs of the local population

Knowledge and Skills

Essential knowledge required

- Know commonly used operating systems, software and hardware
- Know internet terminology and how to choose an internet provider
- Understand basic technical infrastructure including the principles of connectivity, the value of different types of equipment and how networks work
- Know how to follow procedures for detecting, diagnosing and fixing equipment problems
- Know business continuity and risk management requirements, e.g. theft prevention, offsite backup, dedicated resources, reliable technical support, uninterruptible power supply, cloud access to server
- Understand the importance of strategic and long-term system security and privacy, including virus protection, server firewall set up, encryption of patient information through emails or system networks, data recovery and back up procedures, and where needed, delegate these tasks to information technology professionals
- Describe the standard components of a medical practice computer system
- Recognise that hospital IM/IT systems vary from modern to legacy platforms and that different skills and knowledge will be required for different systems
- Understand the ACRRM Telehealth Standards Framework in the establishment and routine use of Telehealth within your practice or organisation
- Understand the potential and limitations of e-health and telehealth in rural/remote general practice
- Know how to select telehealth equipment that is fit for clinical purpose
- Know how to reduce risks of telehealth consultation
- Understand issues related to confidentiality and the internet including when using, smartphones, tablets and other mobile devices, applications and interactive programs, disease management tools, medical records, shared e-records, firewalls, online vs. offline, cloud applications, photography and online consultations
- Understand own limitations and the range and accessibility of local IT support resources including, Medicare Locals, hospitals, community-based health organisations, local IT companies and distant support
- Describe the principles of using patient information databases for activities such as:
  - Patient registers including: age, sex, disease, patient recall and reminder systems
  - Electronic diagnosis and treatment support: drug-drug interaction alerts, patient medication and clinical histories
  - Contribution to research/clinical audit activities
  - Health data management for the community e.g. incidence of diabetes or tuberculosis in a community
Essential skills required

- Demonstrate basic skills in the use of the internet
- Use electronic information sources to acquire and enhance knowledge and skills
- Use online learning platforms to access ongoing professional development and training
- Apply basic skills in using communication tools as necessary for communication and consultation with other medical professionals, including secure transmission of data and images, and use of telehealth and e-health systems
- Apply the ACRRM Telehealth Guidelines when establishing, conducting telehealth services and monitoring quality
- Use the Rural and Remote Medical Education Online (RRMEO) website www.rrmeo.com and www.ehealth.acrrm.org.au communication tools as appropriate to communicate with peers and participate in clinical discussion forums
- Apply appropriate and ethical conduct in use of social media

Learning Resources

Recommended texts and other resources

- ACRRM eHealth website - http://www.ehealth.acrrm.org.au
- PICO Search Protocol - http://www.biomedcentral.com/1472-6947/7/16
- Health Online Code - useful vs. useless information.
- UpToDate® - http://www.uptodate.com/home
- PubMed Clinical Queries and other EBM.
6.9 Mental Health

Domain 1: Provide medical care in the ambulatory and community setting

Themes: Patient-centred clinical assessment, Clinical reasoning, Clinical management

Abilities

MH 1.1 Establish a doctor-patient relationship and use a patient-centred approach to care
MH 1.2 Obtain a comprehensive mental health history and conduct an accurate mental health status examination
MH 1.3 Recognise the signs and symptoms of mental health disorders and mental health problems with an emphasis on early detection
MH 1.4 Apply diagnostic classification systems and recognise when diagnostic classification labels may not be appropriate
MH 1.5 Differentiate between functional and organic causes of altered mental status
MH 1.6 Communicate findings of clinical assessment effectively and sensitively to the patient and/or carer
MH 1.7 Work with patients, families and other health care providers to develop mutually acceptable treatment and care plans and strategies for relapse prevention
MH 1.8 Manage uncertainty and the need to evaluate the risks versus the benefits of clinical decisions
MH 1.9 Consider the needs of those with mental health disorders as well as existing co-morbidities
MH 1.10 Identify and use mental health clinical practice guidelines to assist in determining best practice patient management strategies
MH 1.11 Diagnose and manage mental health problems in specific age groups
MH 1.12 Provide mental health care using a range of mental health care interventions in collaboration with other health care professionals and community/government organisations
MH 1.13 Manage pharmacotherapy for the full spectrum of mental illness including monitoring and managing adverse effects of medication
MH 1.14 Support patients and families to access self-help and carer organisations
Domain 2: Provide care in the hospital setting

Themes: Medical care of admitted patients, Medical leadership in a hospital team, Health care quality and safety

Abilities

MH 2.1 Manage admission of patients with mental health conditions requiring inpatient care in accordance with institutional policies
MH 2.2 Develop, implement and maintain a relevant in-patient management plan for a range of mental health problems and conditions
MH 2.3 Apply relevant hospital checklists and clinical management pathways for mental health conditions
MH 2.4 Monitor and regularly re-evaluate patient progress and problem list and modify the management plan accordingly
MH 2.5 Perform effective clinical handover to team members and the primary care provider
MH 2.6 Order and perform a range of diagnostic and therapeutic procedures
MH 2.7 Maintain timely and accurate patient documentation in hospital records including drug prescription and administration
MH 2.8 Communicate effectively with the health care team, patient and/or carer including effective clinical handover
MH 2.9 Recognise and respond early to the deteriorating patient
MH 2.10 Anticipate and judiciously arrange safe patient transfer to other facilities, considering clinical indications, service capabilities, patient preferences, transportation and geography
MH 2.11 Undertake early, planned and multi-disciplinary discharge planning. Contribute medical expertise and leadership in a hospital team
MH 2.12 Provide direct and remote clinical supervision and support to nurses, junior medical staff and students
MH 2.13 Recognise, document and manage adverse events and near misses
MH 2.14 Participate in institutional quality and safety improvement and risk management activities

Domain 3: Respond to medical emergencies

Themes: Initial assessment and triage, Emergency medical intervention, Communication and planning

Abilities

MH 3.1 Undertake initial assessment and triage of patients with acute or life-threatening conditions
MH 3.2 Respond to a mental health crisis or emergency, including assessment of potential risks and adverse reactions of patients
MH 3.3 Apply strategies to ensure safety of patient, health professionals, and family
MH 3.4 Institute emergency management of patients with a mental illness, using only as a last resort, the involvement of police, chemical and/or physical restraint
MH 3.5 Recognise the indicators for an emergency psychiatric consultation
MH 3.6 Apply a plan/protocol for referring or transferring patients who require specialised care
MH 3.7 Use the legislative framework for involuntary psychiatric care, guardianship/power of attorney and child protection correctly where relevant
MH 3.8 Demonstrate resourcefulness in knowing how to access and use available resources
MH 3.9 Communicate effectively at a distance with consulting or receiving clinical personnel
MH 3.10 Participate in disaster planning and implementation of disaster plans, and post-incident analysis and debriefing
MH 3.11 Provide inter-professional team leadership in emergency care that includes quality assurance and risk management assessment

Domain 4: Apply a population health approach

Themes: Community health assessment, Population-level health intervention, Evaluation of health care, Collaboration with agencies

Abilities

MH 4.1 Identify local risk behaviours, prevalence of mental disorders and mental health problems and specific needs of local community for community education and mental health promotion
MH 4.2 Undertake community education and health promotion activities to increase community awareness and understanding of mental health issues and mental health disorders and strategies for promoting and maintaining good mental health
MH 4.3 Consider current national mental health priorities and policies and their application to rural/remote medical practice
MH 4.4 Integrate systematic evidence-based screening, brief interventions and other mental health maintenance activities into practice
MH 4.5 Use clinical information systems for the organised management and evaluation of mental health care in practice populations
MH 4.6 Provide continuity and coordination of care for own practice population
MH 4.7 Evaluate quality of mental health care for practice populations
MH 4.8 Participate as a medical advocate in the design, implementation and evaluation of interventions that address determinants of population mental health
Domain 5: Address the health care needs of culturally diverse and disadvantaged groups

**Themes:** Differing epidemiology, Cultural safety and respect, Working with groups to improve health outcomes

**Abilities**

MH 5.1 Apply knowledge of the differing profile of mental health problems and disease among culturally diverse and disadvantaged groups

MH 5.2 Communicate effectively and in a culturally safe manner, using interpreters, key community contacts and networks as appropriate

MH 5.3 Consider strategies to address social and environmental determinants of mental health problems among culturally diverse and disadvantaged groups

MH 5.4 Reflect on own assumptions, cultural beliefs and emotional reactions in providing culturally safe care

MH 5.5 Apply principles of partnership, community ownership, consultation, capacity building, reciprocity and respect to health care delivery, health surveillance and research

MH 5.6 Harness the resources available in the health care team, the local community and family to improve outcomes of mental health care

MH 5.7 Work with culturally diverse and disadvantaged groups to address barriers in access to mental health services and support services and improve the determinants of health

Domain 6: Practise medicine within an ethical, intellectual and professional framework

**Themes:** Ethical practice, Professional obligations, Intellectual engagement including teaching and research

**Abilities**

MH 6.1 Uphold the rights of people affected by mental health disorders or mental health problems, their family members and/or carers

MH 6.2 Ensure safety, privacy and confidentiality in patient care

MH 6.3 Maintain appropriate professional boundaries

MH 6.4 Be aware of duty of care issues arising from providing health care to self, family, colleagues, patients and the community

MH 6.5 Recognise unprofessional behaviour and signs of the practitioner in difficulty among colleagues and respond according to ethical guidelines and statutory requirements

MH 6.6 Keep clinical documentation in accordance with legal and professional standards

MH 6.7 Demonstrate commitment to teamwork, collaboration, coordination and continuity of mental health care

MH 6.8 Work within relevant national and state legislation and professional and ethical guidelines related to the care and rights of people with mental illness

MH 6.9 Apply protocols for media management
MH 6.10 Provide accurate and ethical certification when required for sickness, employment, social benefits and other purposes
MH 6.11 Manage, appraise and assess own performance in the provision of mental health treatment for patients
MH 6.12 Develop and apply strategies for self-care, personal support and caring for family
MH 6.13 Teach and clinically supervise health students, junior doctors and other health professionals
MH 6.14 Engage in continuous learning and professional development
MH 6.15 Critically evaluate and apply published literature and research pertaining to psychiatry and mental health issues

**Domain 7: Practise medicine in the rural and remote context**

*Themes: Resourcefulness, Flexibility, teamwork and technology, Responsiveness to context*

**Abilities**

MH 7.1 Demonstrate resourcefulness, independence and self-reliance while working effectively in geographic, social and professional isolation
MH 7.2 Recognise the impact of rural and remote context on mental illness presentations
MH 7.3 Recognise the differing availability of mental health resources in rural/remote communities and demonstrate the ability to improvise where necessary
MH 7.4 Provide effective clinical care when away from ready access to specialist medical, diagnostic and allied health services
MH 7.5 Arrange referral to distant services in concert with the patient and/or carer considering the balance of potential benefits, harms and costs
MH 7.6 Provide direct and distant clinical supervision and support for other rural and remote health care personnel
MH 7.7 Use information and communication technology to provide medical care or facilitate access to specialised care for patients
MH 7.8 Use information and communication technology to network and exchange information with distant colleagues
MH 7.9 Respect local community norms and values in own life and work practices
MH 7.10 Identify and acquire extended mental health knowledge and skills such as psychotherapeutic techniques to meet health care needs of the local population

**Definition of terms**

<p>| <strong>A comprehensive mental health history includes</strong> | Effective communication with patients in a respectful, empathic and empowering manner, with effective listening skills, an appreciation of different patient decision-making processes, an ability to interpret body language and an ability to recognise hidden agendas |
| <strong>Mental health status examination has the following general elements</strong> | General appearance, psychomotor behaviour, mood and affect, speech, cognition, thought patterns, level of consciousness |
| <strong>Mental health disorders and mental health</strong> | Depression (major and minor), anxiety disorders (generalised anxiety disorder, acute stress disorder, adjustment disorder, obsessive compulsive disorder, panic disorder, post-traumatic stress disorder) |</p>
<table>
<thead>
<tr>
<th><strong>Problems Include</strong></th>
<th>Disorder, sleep disorders, personality disorders, psycho-geriatrics (dementia, depression delirium), psychoses (bipolar, unipolar, schizophrenia, toxic and organic brain disorders), substance misuse</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diagnostic Classification Systems Include</strong></td>
<td>There are two internationally recognised manuals of mental health disorders; the Diagnostic and Statistical Manual of Mental Disorders, fifth Edition (DSM-V) and the International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD-10), which are both categorical classification systems that provide prototypes of recognised mental health disorders</td>
</tr>
<tr>
<td><strong>Existing Co-morbidities Include</strong></td>
<td>Substance misuse, developmental disability, physical disability, personality disorder, trauma, acquired brain injury, physical illness with which mental illnesses are commonly associated - e.g. Parkinson’s disease, hearing or sight impairment and co-existing psychiatric morbidities</td>
</tr>
<tr>
<td><strong>Mental Health Clinical Practice Guidelines Include</strong></td>
<td>Mental health guidelines including those dealing with depression, anxiety, anger, self-harm, violence and aggression</td>
</tr>
</tbody>
</table>
| **Mental Health Problems in Specific Age Groups Include** | Children: ‘the difficult child’, encopresis and enuresis, school refusal, attention deficit hyperactivity disorder, aggression, organic brain disorder, oppositional defiant disorder, loss and grief reaction, recognition of sexual abuse and child abuse  
Young people: relationship problems at home, low self-esteem, peer group imitation, oppositional behaviour, self-harm, substance misuse (alcohol, marijuana, amphetamine derivatives, solvents, sedatives and others), depression, psychoses, teen pregnancy, eating disorders, loss and grief reaction, sexual abuse  
Adults: substance abuse, marriage/relationship problems, family conflict/parenting issues  
Aged: dementia, depression, delirium |
| **Mental Health Care Interventions Include** | Providing education and information, empathic listening, behavioural and counselling therapies, the full range of pharmacotherapy for mental illness |
| **Mental Health Conditions Requiring Inpatient Care Include** | Alcohol detoxification, initiation of new medications in some circumstances, crisis situations |
| **Respond to a Mental Health Crisis Includes** | Assess the risk of: suicide/self-harm, violence to others, damage to property, drug overdose, severity of psychiatric illness, availability of guns  
Techniques for aggression management, acute situational crisis counselling, conflict resolution, violence interventions, debriefing |
Knowledge and Skills

Essential knowledge required

- Know an overview of the history of development of psychiatry and theories of personality
- Understand national mental health priorities and their application to rural/remote medical practice
- Know the social, cultural, ethic, geographical, and environmental characteristics of rural/remote communities that have an impact on the presentation and management of mental health problems
- Understand the national and state legislation that relating to mental health
- Define the nature, natural history, incidence and prevalence of mental health disorders across the lifespan and current psychiatric diagnostic classification systems
- Basic understanding of the aetiology and pathogenesis of mental health disorders, including: depression (major and minor), anxiety disorders (generalised anxiety disorder, acute stress disorder, adjustment disorder, obsessive compulsive disorder, panic disorder, post-traumatic stress disorder), sleep disorders, personality disorders, psycho-geriatrics (dementia, depression delirium), psychoses (bipolar, unipolar, schizophrenia, toxic and organic brain disorders), substance misuse
- Describe a range of psychotherapeutic techniques appropriate for use in general practice
- Understand the major drug classes of pharmacotherapeutics for the treatment of mental health disorders

Essential skills required

- Demonstrate an ability to communicate with patients in a respectful, empathic and empowering manner
- Use effective active/empathic listening
- Interpret non-verbal language
- Conduct a mental state examination and synthesis of differential diagnosis
- Assess suicide risk
- Help patients develop and institute a personal relapse prevention plan

Learning resources

Recommended texts and other resources

• Youth BeyondBlue – youth focused consumer and support information - http://www.youthbeyondblue.com/
• Consumer self-help, professional resources and research information - http://www.ehub.anu.edu.au/
• Sane Australia - Patient information - http://www.sane.org/
• Headspace - Consumer information and resources - http://www.headspace.org.au/
• Australian Indigenous Mental Health - http://indigenous.ranzcp.org/index.php
### 6.10 Musculoskeletal Medicine

**Domain 1: Provide medical care in the ambulatory and community setting**

*Themes: Patient-centred clinical assessment, Clinical reasoning, Clinical management*

<table>
<thead>
<tr>
<th>Abilities</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSK 1.1</td>
<td>Establish a doctor-patient relationship and use a patient-centred approach to care</td>
</tr>
<tr>
<td>MSK 1.2</td>
<td>Obtain a clinical history that reflects contextual issues including: presenting problems, detailed characteristics of pain or dysfunction and effects on patient’s life and work</td>
</tr>
<tr>
<td>MSK 1.3</td>
<td>Perform an appropriate <em>musculoskeletal examination</em>, expanded where indicated into examination of other systems</td>
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<tr>
<td>MSK 1.4</td>
<td>Accurately reproduce pain specifically related to the presenting complaint</td>
</tr>
<tr>
<td>MSK 1.5</td>
<td>Order and interpret appropriate imaging including X-ray, CT, bone scan, ultrasound scan and MRI</td>
</tr>
<tr>
<td>MSK 1.6</td>
<td>Apply diagnostic reasoning to arrive at one or more provisional diagnoses, considering uncommon but clinically important differential diagnosis taking into account <em>common and important conditions affecting the musculoskeletal system</em></td>
</tr>
<tr>
<td>MSK 1.7</td>
<td>Communicate findings of clinical assessment effectively and sensitively to the patient and/or carer</td>
</tr>
<tr>
<td>MSK 1.8</td>
<td>Formulate a comprehensive evidence-based management plan in concert with the patient and/or carer, designed to restore the patient as far as possible to optimum functionality</td>
</tr>
<tr>
<td>MSK 1.9</td>
<td>Integrate allied musculoskeletal therapy into patient management plans, in accordance with patient preference and evidence</td>
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<tr>
<td>MSK 1.10</td>
<td>Manage uncertainty and the need to evaluate the risks versus the benefits of clinical decisions</td>
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<tr>
<td>MSK 1.11</td>
<td>Enhance autonomy and personal responsibility of patients with both acute and chronic musculoskeletal conditions</td>
</tr>
<tr>
<td>MSK 1.12</td>
<td>Encourage the family to be a resource in recovery, including psychological support</td>
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<tr>
<td>MSK 1.13</td>
<td>Recognise any <em>Red Flag</em> or <em>Yellow Flag</em> factors that may require urgent attention or impede recovery for patients</td>
</tr>
<tr>
<td>MSK 1.14</td>
<td>Provide and/or arrange follow-up to monitor recovery and institute appropriate intermediate activities in the return to full function</td>
</tr>
<tr>
<td>MSK 1.15</td>
<td>Refer, facilitate and coordinate access to specialised support services as required to assist patients to return to functional life / work</td>
</tr>
</tbody>
</table>
Domain 2: Provide care in the hospital setting

Themes: Medical care of admitted patients, Medical leadership in a hospital team, Health care quality and safety

 Abilities

MSK 2.1 Manage admission of patients to hospital in accordance with institutional policies
MSK 2.2 Develop, implement and maintain a management plan for hospitalised patients with a range of acute conditions specific to the musculoskeletal system requiring inpatient admission in concert with the patient and/or carer
MSK 2.3 Apply relevant checklists and clinical management pathways for common conditions affecting the musculoskeletal system
MSK 2.4 Monitor clinical progress, regularly re-evaluate the problem list and modify management accordingly
MSK 2.5 Order and perform a range of diagnostic and therapeutic procedures
MSK 2.6 Maintain timely and accurate patient documentation in hospital records including drug prescription and administration
MSK 2.7 Communicate effectively with the health care team, patient and/or carer and external third parties including effective clinical handover
MSK 2.8 Recognise and respond early to the deteriorating patient
MSK 2.9 Anticipate and judiciously arrange safe patient transfer to other facilities, considering clinical indications, service capabilities, patient preferences, transportation and geography
MSK 2.10 Undertake early, planned and multi-disciplinary planning for discharge and return to work including liaison with external third parties
MSK 2.11 Contribute medical expertise and leadership in a hospital team
MSK 2.12 Provide direct and remote clinical supervision and support to nurses, junior medical staff and students
MSK 2.13 Recognise, document and manage adverse events and near misses
MSK 2.14 Participate in institutional quality and safety improvement and risk management activities
Domain 3: Respond to medical emergencies

**Themes:** Initial assessment and triage, Emergency medical intervention, Communication and planning

**Abilities**

- **MSK 3.1** Conduct initial assessment and triage of patients with acute or life-threatening musculoskeletal conditions
- **MSK 3.2** Stabilise critically ill patients and provide primary and secondary care
- **MSK 3.3** Provide definitive emergency resuscitation and management across the lifespan in keeping with clinical need, own capabilities and local context and resources
- **MSK 3.4** Perform required emergency procedures
- **MSK 3.5** Arrange and/or perform emergency patient transport or evacuation when needed
- **MSK 3.6** Demonstrate resourcefulness in knowing how to access and use available resources
- **MSK 3.7** Communicate effectively at a distance with consulting or receiving clinical personnel
- **MSK 3.8** Participate in disaster planning and implementation of disaster plans, and post-incident analysis and debriefing
- **MSK 3.9** Provide inter-professional team leadership in emergency care that includes quality assurance and risk management assessment

Domain 4: Apply a population health approach

**Themes:** Community health assessment, Population-level health intervention, Evaluation of health care, Collaboration with agencies

**Abilities**

- **MSK 4.1** Analyse the social, environmental, economic and occupational determinants of health that affect the community burden of musculoskeletal disease and access to health-related services
- **MSK 4.2** Apply a population health approach that is relevant to the clinical practice profile
- **MSK 4.3** Integrate evidence-based injury prevention, early detection of musculoskeletal problems and health maintenance activities including podiatrists, chiropractors, osteopaths, physiotherapists, personal trainers to encourage physical achievement and fitness
- **MSK 4.4** Provide continuity and coordination of care for own practice population
- **MSK 4.5** Evaluate quality of health care for musculoskeletal patients
- **MSK 4.6** Fulfil reporting requirements in relation to statutory notification of health conditions
- **MSK 4.7** Access and collaborate with agencies responsible for key population health functions including public health services, employer groups and local government
- **MSK 4.8** Participate as a medical advocate in the design, implementation and evaluation of interventions that address determinants of population health
Domain 5: Address the health care needs of culturally diverse and disadvantaged groups

Themes: Differing epidemiology, Cultural safety and respect, working with groups to improve health outcomes

Abilities

MSK 5.1 Apply knowledge of the differing profile of disease and health risks among culturally diverse and disadvantaged groups

MSK 5.2 Communicate effectively and in a culturally safe manner with patients and their families and external third parties, using interpreters, key community contacts and networks as appropriate

MSK 5.3 Reflect on own assumptions, cultural beliefs and emotional reactions in providing culturally safe care

MSK 5.4 Apply principles of partnership, community ownership, consultation, capacity building, reciprocity and respect to health care delivery, health surveillance and research

MSK 5.5 Harness the resources available in the health care team, the local community and family to improve outcomes of care

MSK 5.6 Work with culturally diverse and disadvantaged groups to address barriers in access to health services and the determinants of musculoskeletal health

Domain 6: Practise medicine within an ethical, intellectual and professional framework

Themes: Ethical practice, Professional obligations, Intellectual engagement including teaching and research

Abilities

MSK 6.1 Ensure safety, privacy and confidentiality in patient care

MSK 6.2 Maintain appropriate professional boundaries

MSK 6.3 Be aware of duty of care issues arising from providing health care to self, family, colleagues, patients and the community

MSK 6.4 Recognise unprofessional behaviour and signs of the practitioner in difficulty among colleagues and respond according to ethical guidelines and statutory requirements

MSK 6.5 Disclose suspected physical abuse with particular reference to mandatory reporting

MSK 6.6 Keep clinical documentation in accordance with legal and professional standards and provide accurate and timely reports to third parties when required

MSK 6.7 Use community resources to assist in musculoskeletal conditions to aid in quality of life and return to work

MSK 6.8 Maintain appropriate professional boundaries with patients and their families

MSK 6.9 Demonstrate commitment to teamwork, collaboration, coordination and continuity of care

MSK 6.10 Liaise with employers, work insurance officials, rehabilitation agencies and where necessary with lawyers, in facilitating return to work

MSK 6.11 Provide accurate and ethical certification when required for sickness, employment, social benefits and other purposes
MSK 6.12 Manage, appraise and assess own performance in the provision of medical care for patients

MSK 6.13 Teach and clinically supervise health students, junior doctors and other health professionals

MSK 6.14 Engage in continuous learning and professional development and pursue further training in musculoskeletal medicine as required to service your local area

MSK 6.15 Critically appraise and apply relevant research

**Domain 7: Practise medicine in the rural and remote context**

**Themes: Resourcefulness, Flexibility, teamwork and technology, Responsiveness to context**

**Abilities**

MSK 7.1 Recognise differences in presentation of patients in a rural and remote context

MSK 7.2 Demonstrate resourcefulness, independence and self-reliance while working effectively in geographic, social and professional isolation

MSK 7.3 Provide effective clinical care when away from ready access to musculoskeletal specialist medical, diagnostic and allied health services

MSK 7.4 Arrange referral to distant services in concert with the patient and/or carer considering the balance of potential benefits, harms and costs

MSK 7.5 Provide direct and distant clinical supervision and support for other rural and remote health care personnel

MSK 7.6 Use information and communication technology to provide medical care or facilitate access to specialised care for patients

MSK 7.7 Use information and communication technology to network and exchange information with distant colleagues

MSK 7.8 Respect local community norms and values in own life and work practices

MSK 7.9 Identify and acquire extended musculoskeletal medicine knowledge and skills as may be required to meet health care needs of the local population
## Definition of terms

**Musculoskeletal examination includes**

<table>
<thead>
<tr>
<th>Look</th>
<th>Inspection including: surface appearance, symmetry, alignment and gait</th>
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</thead>
<tbody>
<tr>
<td>Feel</td>
<td>Palpation of surface temperature, bones, muscles, tendons, joint lines</td>
</tr>
<tr>
<td>Move</td>
<td>active, passive, resisted, relative smoothness and end point quality</td>
</tr>
<tr>
<td>Test function</td>
<td>appropriate provocation tests (special tests)</td>
</tr>
<tr>
<td>Measure</td>
<td>length or circumference</td>
</tr>
</tbody>
</table>

**Look elsewhere** - compare to the other side for all aspects above, assess neurovascular if appropriate

## Common and important conditions affecting the musculoskeletal system include

**General include:**

- Spinal referred pain, neoplasia, including myeloma and cancer of lung - breast and prostate

**Inflammatory conditions including:**

- Gout, pseudogout, osteoarthritis, rheumatoid arthritis, psoriatic arthritis, SLE, polymyalgia rheumatica, ankylosing spondylitis, Reiter’s disease, inflammatory bowel (disease related), fibromyalgia syndrome

**Infections including:**

- TB, other bacterial, herpes zoster, discitis, osteomyelitis, osteoporosis and spinal wedging, Paget’s disease

**Referred including:**

- Referred visceral and somatic pain both serious and benign, vascular claudication, migrainous phenomena, neurological conditions including Complex Regional Pain Syndromes. Depression induced spinal pain, psychogenic pain, anticoagulant intraspinal haemorrhage, Raynaud’s phenomenon and other neurovascular disorders, Sympathetic dystrophy (diabetics)

**Cervical spine including:**

- Vertebral stiffening - age, ankylosis, spondylitis, postural syndromes, facet joint dysfunction, disc prolapse, disruption, foraminal obstruction, radiculopathy, myelopathy, torticollis (wry neck), trauma, sprain, ‘whiplash’, (fractures), cervical syndromes / cervicogenic headache

**Temporomandibular conditions:**

- Dental malocclusion, stress-related tooth grinding, referred cervical (e.g. whiplash), TMJ syndrome, locked jaw, sprains, arthritic conditions, trauma

**Shoulder conditions including:**

- Capsulitis/frozen shoulder, subdeltoid bursitis/supraspinatus tendinitis, infraspinatus and other shoulder muscle conditions, rotator cuff syndromes, bicpital tendinitis, acromioclavicular conditions, sternoclavicular arthritis, psychogenic shoulder/arm syndromes, recurrent shoulder dislocations

**Elbow and arm conditions including:**

- Lateral elbow pain, medial elbow pain, toddler's pulled elbow, biceps lesions, olecranon bursitis, entrampment neuropathies, loose bodies, overuse syndromes, industrial, psychosomatic, thoracic outlet syndromes

**Wrist and hand conditions including:**

- Carpal tunnel syndrome (and pronator teres syndrome), de-Quervain's tenosynovitis, trigger finger and thumb, spindle finger, scaphoid fracture, ganglion, lunate avascular necrosis, dislocation, occult foreign body
Thoracic spine conditions including:
Postural syndromes including minor kyphoscoliosis and TV backache, simple thoracic spine dysfunction, sprains, costovertebral and facet joint syndromes, T4 syndrome, combined thoracic and cervical dysfunction, thoracic myofascial syndrome, Tietze’s costochondritis, kyphoscoliosis (moderate to severe), Scheuermann’s disorder, age changes, osteoporosis, vertebral compression

Lower back conditions including:
Mechanical back pain including facet/zygapophyseal and disc joint dysfunction, posture syndromes, dysfunction syndromes, sprains and ‘derangements’, minor and major trauma to muscle/bone, spondylosis (degenerative osteoarthritis), symptomatic spondylolisthesis, acute and chronic intervertebral disc prolapse and other discogenic pain, nerve root compression, spinal stenosis, acute cauda equina syndrome

Buttock, hip, pelvis and thigh including:
Sacroiliac joint related pain: sacroiliitis, mechanical hypermobile and hypo mobile sacroiliac syndromes, psoas bursitis, trochanteric bursitis, hip arthritis, capsulitis, loose bodies in the hip, muscle strain, irriatbility, referred spasm, tendinitis including psoas, glutei, piriformis, adductors (rider’s sprain), quadriceps, hamstrings, coxalgia, coccydynia, referred lumbar and sacral syndromes: nerve entrapment / meralgia paraesthetica, injuries, fracture, snapping hip (iliopsoas tendinitis or dancer’s hip), pregnancy related pain

Knee including:
Minor trauma, strain, sprain, synovitis, bursitis, tendinitis, cartilage, ligamentous injury (ACL, PCL, medial collateral), effusion, haemarthrosis, fracture, loose bodies, Baker’s cyst (simple and leaking), osteochondritis dissecans, locking and pseudolocking, chondromalacia patella (jogger’s knee), patella subluxation and dislocation, patellar tendinitis (jumper’s knee), Osgood-Schlatter's, traction epiphysitis, osteoarthritis, iliotibial band syndrome

Lower leg, ankle and foot including:
Achilles tendinitis, bursitis, partial and complete rupture, peroneal muscle strain, tibialis posterior tendinitis, Periostitis (shin splints), compartment syndrome, common peroneal entrapment, ankle sprains and associated minor fractures, deltoid ligament sprain, loose body in ankle, plantar fascitis, mid-tarsal sprain, metatarsal metatarsalgia, stress fracture, tarsal tunnel syndrome, disparate leg length, corns, calluses, ingrowing toenail, bunion, hallux rigidus and other osteoarthritides, Morton’s neuroma, fractured 5th toe or metatarsal, claw toe, hammer toe, postural problems including inversion, eversion and bumbling

Children including:
Congenital dislocation of hip, synovitis, Perthes Disease, slipped upper femoral epiphysis, stress fracture, iliac traction apophysitis, gait problems, calf tightness, Sever’s traction apophysitis, Toddler’s pulled elbow, Injury, sprain, bone and chondral fracture, Kohler’s and Freiberg’s Diseases, Infection including septic arthritis

"Red Flag" factors in musculoskeletal assessments include
Infection, underlying disease process, immunosuppression, penetrating wound, fracture; history of trauma or minor trauma if > 50 years or history of osteoporosis and taking corticosteroids, tumour; past history of malignancy, age > 50 years, failure to improve with treatment, unexplained weight loss, pain at multiple sites, pain at rest, aortic aneurysm; will have absence of aggravating features

"Yellow Flag" factors in musculoskeletal assessments include
Personal, family and social issues include: high levels of pain, attitudes and beliefs about their pain and dysfunction (avoidance, fear of re-injury, catastrophising), diagnosis and treatment, emotional state e.g. anxiety, depression, grief and family/relationship difficulties.

Workplace and injured worker interaction include: workplace environment (physical, safety issues, past safety record), interpersonal life and relationships at work (support, reaction to injury, return to work), specific return to work issues (availability of duties, industrial pressures).

Workers compensation issues (financial and legal) include: dispute about the injury or cause of injury, dispute about income maintenance payments, financial hardship if no income maintenance, claim lodgement delays, lack of understanding of workers compensation e.g. your patient or their employer misunderstands the compensation or rehabilitation process or the information provided.

Poor outcomes predictors: the presence of a belief that all pain is always harmful/ potentially severely disabling, fear-avoidance behaviour (avoiding movement or activity due to misplaced
anticipation of harm from any increase in pain) and reduced activity levels, tendency to low mood and withdrawal from social interaction, an expectation that passive treatment rather than active participation in therapy would help.

<table>
<thead>
<tr>
<th>Mandatory reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specified people are required to report suspected child maltreatment (abuse or neglect) to statutory child protection services in Australia. The legal requirement to report suspected cases of child abuse and neglect is known as mandatory reporting. All jurisdictions possess mandatory reporting requirements of some description. However, the people mandated to report and the abuse types for which it is mandatory to report vary across Australian states and territories. Doctors are mandated to report across all jurisdictions in Australia.</td>
</tr>
</tbody>
</table>

### Knowledge and Skills

**Essential knowledge required**

- Know the scope of musculoskeletal problems commonly occurring in rural/remote general practice, in particular those affecting school age children, different sporting groups, different industrial groups especially manual labourers, women of child-bearing age and the aged
- Describe basic anatomy, physiology and biomechanics relevant to musculoskeletal disorders including normal functioning of the axial and appendicular skeleton and musculature, pathways of innervation of muscles, dermatome innervation, functional anatomy of joints and surface anatomy
- Outline the functional anatomy of the patellofemoral system
- Understand the mechanisms, characteristics and patterns of pain, including somatic, referred somatic, radicular, referred visceral and referred trigger point pain
- Understand and work with the “look, feel, move, test function/sensation, measure, look elsewhere and image” algorithm.
- Use a comprehensive approach to recovery including specific therapy, psychological support, self-directed activities, therapist conducted therapies, motivation, a supportive environment and general health initiatives
- Demonstrate awareness of the importance of foot problems in determining mobility and general fitness especially in the elderly
- Understand the general principles of podiatry and how the correct application of orthotic devices can restore effective ambulation and relieve pain
- Interpret the differential diagnosis and patterns of pain in, referred within and from the thorax, and the cervical spine
- Use algorithms for the differentiation of visceral and somatic pain in the thorax and pain referred to the abdomen, especially for red flag conditions, such as cardiac ischaemia, aortic dissection, pneumothorax, pulmonary neoplasm, spinal infections and neoplasia, confusing painful conditions such as herpes zoster, oesophagitis, peptic ulcer, cholelithiasis and psychogenic pain
- Explain the differential diagnosis and patterns of somatic pain in and referred from the low back and lumbar spine and visceral sources of pain
- Explain the sources of pain referred to and emanating from buttock, hip, pelvis and thigh, particularly from the spine and the sacroiliac joint, and the downward referral of hip pain to the leg. Know the age and sex related conditions of this region
- Knows appropriate use of orthotic devices
Essential skills required

- Conduct a musculoskeletal examination of the all parts of the body with functional testing that includes:
  - Cervical spine glide and foraminal compression test, brachial plexus tension
  - Shoulder apprehension and specific impingement tests
  - Elicit Tinel’s and Phalen’s sign at the wrist
  - Waddell’s test when appropriate in spinal examinations
  - Hip – Trendelenburg’s sign
  - Special tests for the hip in children – Barlow’s, Ortolani’s tests
  - Knee tests including Lachman’s, McMurray’s, Apley’s, and pivot shift tests as appropriate to assess functionality

- Apply active, passive and resisted movements in examination, including neurological testing by resisted movement

- Provide management of acute soft tissue trauma

- Administer corticosteroid injections of joints, ganglions and around tendons

- Aspirate of bursae and joints

- Undertakes skin/muscle biopsy

- Unlock a locked temporomandibular joint or knee

- Teach exercises / stretches relevant to all common musculoskeletal conditions including techniques for self-correction of posture, use of appropriate lumbar support and improving posture whilst lying down

- Order and evaluate hydrodilatation of the shoulder

- Apply fibreglass and plaster casts or immobilisation of other fractures

- Reduce simple dislocations

- Inject and dry needle trigger points (desirable)

- Provide instruction on when to avoid certain exercises and stretches

- Provide instruction on relevant pharmacotherapy

- Administer caudal epidural injection (desirable)

- Provide treatment of plantar wart

Learning resources

Recommended texts and other resources


• Family Practice Notebook website - [http://www.fpnotebook.com/ortho/index.htm](http://www.fpnotebook.com/ortho/index.htm)


6.11 Obstetrics and Women’s Health

Domain 1: Provide medical care in the ambulatory and community setting

Themes: Patient-centred clinical assessment, Clinical reasoning, Clinical management

Abilities

O&WH 1.1 Establish a doctor-patient relationship and use a patient-centred approach to care

O&WH 1.2 Obtain a comprehensive obstetric and gynaecological history that reflects contextual issues including: presenting problems, epidemiology, culture and geographic location

O&WH 1.3 Conduct a thorough pre-pregnancy consultation including lifestyle counselling

O&WH 1.4 Provide non-directive advice and counselling to patients presenting with an unplanned pregnancy

O&WH 1.5 Perform an initial antenatal assessment and identifying the potential risk factors for mother and foetus during pregnancy

O&WH 1.6 Undertake routine antenatal screening and counsel women about screening for chromosomal abnormalities

O&WH 1.7 Determine an antenatal management plan tailored to the specific needs of individual patients including counselling and advice on the management of common antenatal conditions in pregnant women

O&WH 1.8 Recognise and manage important first trimester conditions and late pregnancy complications and non-pregnancy related conditions

O&WH 1.9 Work with patients, families and other health care providers to develop mutually acceptable birthing plans

O&WH 1.10 Provide advice and support regarding conditions affecting breastfeeding

O&WH 1.11 Provide counselling and advice on the physical and emotional issues experienced by women in the first 12 months following childbirth

O&WH 1.12 Recognise the spectrum of psychological responses to pregnancy or infertility, to childbirth, to complications of pregnancy and childbirth including miscarriage and stillbirth, and to the care of an infant

O&WH 1.13 Recognise, support and manage postnatal depression

O&WH 1.14 Diagnose and manage common gynaecological, menstrual and breast problems

O&WH 1.15 Identify and use maternal and perinatal clinical practice guidelines to assist in determining best practice patient management strategies

O&WH 1.16 Identify and manage co-morbidities in the patient and effectively communicate these to the patient/carer

O&WH 1.17 Ensure safe and appropriate prescribing of medications and treatment options in the clinical context

O&WH 1.18 Educate patients about choice and use of contraceptive methods and negotiating safe sex

O&WH 1.19 Diagnose and manage sexually transmitted diseases
O&WH 1.20 Demonstrate non-judgemental attitude to the human sexual response, sexuality and the spectrum of sexual behaviours

O&WH 1.21 Recognise and provide advice and treatment to patients experiencing menopause

O&WH 1.22 Communicate findings of clinical assessment effectively and sensitively to the patient and/or carer

O&WH 1.23 Provide and/or arrange follow-up and continuing medical care

**Domain 2: Provide care in the hospital setting**

**Themes:** Medical care of admitted patients, Medical leadership in a hospital team, Health care quality and safety

**Abilities**

O&WH 2.1 Manage admission of patients to hospital in accordance with institutional policies

O&WH 2.2 Participate in the management of labour and birthing complications

O&WH 2.3 Perform a postnatal assessment, identifying the ongoing care requirements

O&WH 2.4 Perform a routine neonatal examination and provide ongoing care of common neonatal problems

O&WH 2.5 Manage common gynaecological conditions

O&WH 2.6 Apply relevant hospital checklists and clinical management pathways for obstetric and gynaecological health conditions

O&WH 2.7 Monitor and regularly re-evaluate patient progress and problem list and modify the management plan accordingly

O&WH 2.8 Maintain a clinically relevant plan of fluid, electrolyte and blood product use with relevant pathology testing

O&WH 2.9 Order and perform a range of diagnostic and therapeutic procedures

O&WH 2.10 Maintain timely and accurate patient documentation in hospital records including drug prescription and administration

O&WH 2.11 Communicate effectively with the health care team, patient and/or carer including effective clinical handover

O&WH 2.12 Recognise and respond early to the deteriorating condition of a woman during labour and post-partum

O&WH 2.13 Anticipate and judiciously arrange safe patient transfer to other facilities, considering clinical indications, service capabilities, patient preferences, transportation and geography

O&WH 2.14 Undertake early, planned and multi-disciplinary discharge planning

O&WH 2.15 Participate in maternity service teams contributing medical expertise and leadership

O&WH 2.16 Provide direct clinical supervision and support to junior medical staff and students

O&WH 2.17 Recognise, document and manage adverse events and near misses

O&WH 2.18 Participate in institutional quality and safety improvement and risk-management activities
Domain 3: Respond to medical emergencies

Themes: Initial assessment and triage, Emergency medical intervention, Communication and planning

Abilities

O&WH 3.1 Perform an assessment and emergency management of a woman in third trimester presenting as acutely unwell
O&WH 3.2 Stabilise critically ill patients and provide primary and secondary care
O&WH 3.3 Provide definitive emergency resuscitation and management of primary and secondary postpartum haemorrhage and endometritis in keeping with clinical need, own capabilities and local context and resources
O&WH 3.4 Perform required emergency procedures
O&WH 3.5 Manage normal labour and delivery under emergency circumstances in consultation with a GP Obstetrician, specialist or retrieval program as appropriate
O&WH 3.6 Recognise the signs and symptoms of abnormal labour that require further emergency assistance
O&WH 3.7 Arrange and/or perform emergency patient transport or evacuation when needed
O&WH 3.8 Demonstrate resourcefulness in knowing how to access and use available resources
O&WH 3.9 Communicate effectively at a distance with consulting or receiving clinical personnel
O&WH 3.10 Participate in disaster planning and implementation of disaster plans, and post-incident analysis and debriefing
O&WH 3.11 Provide inter-professional team leadership in emergency care that includes quality assurance and risk management assessment

Domain 4: Apply a population health approach

Themes: Community health assessment, Population-level health intervention, Evaluation of health care, Collaboration with agencies

Abilities

O&WH 4.1 Identify local community maternal and infant health problems and sexual health risk behaviours
O&WH 4.2 Identify antenatal problems of specific high risk groups
O&WH 4.3 Undertake community education and health promotion activities to promote improved maternal and infant health status
O&WH 4.4 Consider current national maternal and infant health priorities and policies and their application to rural/remote medical practice and the local community
O&WH 4.5 Integrate systematic evidence-based screening, brief interventions and other health maintenance activities into practice
O&WH 4.6 Use clinical information systems for the organised management and evaluation of fertile women in practice populations
O&WH 4.7 Provide continuity and coordination of care for own practice population
O&WH 4.8 Evaluate quality of antenatal care for practice populations
O&WH 4.9 Fulfil reporting requirements in relation to statutory notification of health conditions
O&WH 4.10 Access and collaborate with agencies responsible for key population health functions including public health services, employer groups and local government

O&WH 4.11 Participate as a medical advocate in the design, implementation and evaluation of interventions that address determinants of maternal and infant wellbeing

Domain 5: Address the health care needs of culturally diverse and disadvantaged groups

Themes: Differing epidemiology, Cultural safety and respect, working with groups to improve health outcomes

Abilities

O&WH 5.1 Apply knowledge of the differing profile of disease, health risks and beliefs among women and babies from culturally diverse and disadvantaged groups

O&WH 5.2 Communicate effectively and in a culturally safe manner with mothers and babies, using interpreters, key community contacts and networks as appropriate

O&WH 5.3 Reflect on own assumptions, cultural beliefs and emotional reactions in providing culturally safe care to mothers and babies

O&WH 5.4 Apply principles of partnership, community ownership, consultation, capacity building, reciprocity and respect to health care delivery, health surveillance and research

O&WH 5.5 Harness the resources available in the health care team, the local community and family to improve outcomes of care

O&WH 5.6 Work with culturally diverse and disadvantaged groups to address barriers in access to health services and the improve the determinants of mothers’ and babies’ health

Domain 6: Practise medicine within an ethical, intellectual and professional framework

Themes: Ethical practice, Professional obligations, Intellectual engagement including teaching and research

Abilities

O&WH 6.1 Ensure safety, privacy and confidentiality in patient care

O&WH 6.2 Maintain appropriate professional boundaries

O&WH 6.3 Be aware of duty of care issues arising from providing health care to self, family, colleagues, patients and the community

O&WH 6.4 Recognise unprofessional behaviour and signs of the practitioner in difficulty among colleagues and respond according to ethical guidelines and statutory requirements

O&WH 6.5 Keep clinical documentation in accordance with legal and professional standards

O&WH 6.6 Demonstrate commitment to teamwork, collaboration, coordination and continuity of care of mothers and babies

O&WH 6.7 Contribute to the management of human and financial resources within a health service

O&WH 6.8 Work within relevant national and state legislation relating to women’s health and work within the professional and ethical guidelines
O&WH 6.9 Provide accurate and ethical certification when required for sickness, employment, social benefits and other purposes

O&WH 6.10 Manage, appraise and assess own performance in the provision of medical care for women and babies

O&WH 6.11 Develop and apply strategies for self-care, personal support and caring for family

O&WH 6.12 Teach and clinically supervise others in providing care to mothers and babies

O&WH 6.13 Engage in continuous learning and professional development

O&WH 6.14 Critically appraise and apply relevant published literature and research pertaining to maternal and infant health issues

**Domain 7: Practise medicine in the rural and remote context**

*Themes: Resourcefulness, Flexibility, teamwork and technology, Responsiveness to context*

**Abilities**

O&WH 7.1 Demonstrate an understanding of the social, cultural and environmental influences on obstetric and women’s health service needs in rural/remote communities

O&WH 7.2 Provide effective clinical care when away from ready access to specialist medical, diagnostic and allied health services

O&WH 7.3 Arrange referral to distant services in concert with the patient and/or carer considering the balance of potential benefits, harms and costs

O&WH 7.4 Provide direct and distant clinical supervision and support for other rural and remote health care personnel

O&WH 7.5 Use information and communication technology to provide medical care or facilitate access to specialised care for patients

O&WH 7.6 Use information and communication technology to network and exchange information with distant colleagues

O&WH 7.7 Respect local community norms and values in own life and work practices

O&WH 7.8 Identify and acquire extended knowledge and skills as may be required to meet health care needs of the local women and babies

**Definition of terms**

<table>
<thead>
<tr>
<th>Pre-pregnancy consultation includes</th>
<th>Health assessment that includes rubella immunity, consideration of Pap smear, determination of blood group and blood group antibodies. Lifestyle counselling which includes drug and alcohol use; smoking; nutrition; exercise; safe sex, folic acid supplementation; avoidance of listeria prone foods and reducing risk of toxoplasmosis and CMV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifestyle counselling includes</td>
<td>Alcohol use, drug use, smoking, nutrition, exercise, folate supplementation, safe sex, avoiding listeria prone foods, reducing risk of toxoplasma and CMV infections</td>
</tr>
<tr>
<td>Initial antenatal assessment includes</td>
<td>Take a detailed obstetric history and antenatal examination to identify women who are at high risk of complications</td>
</tr>
<tr>
<td>Routine antenatal screening includes</td>
<td>Testing for anaemia, Group B streptococcus, HIV, hepatitis B, rubella, syphilis, asymptomatic bacteriuria</td>
</tr>
</tbody>
</table>
### Common antenatal conditions in pregnancy include
- Nausea, vomiting, urinary frequency, cramps, syncope, back pain, pelvic pain and intercurrent infections

### Important first trimester conditions include
- Early bleeding, miscarriage, blighted ovum, molar pregnancy and ectopic pregnancy

### Common and important late pregnancy complications include
- Preeclampsia, eclampsia, fetal growth restriction, spontaneous preterm birth, bleeding, placental complications

### Conditions affecting breastfeeding include
- Inverted and cracked nipples, mastitis, breast engorgement, misconceptions regarding lactation and supply and demand, decreased supply, drug contraindications

### Physical and emotional issues experienced by women in the first 12 months following childbirth include
- Tone of pelvic floor and other muscles, mastitis, UTI, perineal wound infections, sexuality after childbirth, stress and social demands, depression

### Labour and birthing complications include
- Haemorrhage, pre-eclampsia, eclampsia, failure to progress in labour, analgesia, fever, amnionitis, various presentations such as breech, OP, shoulder dystocia

### Common neonatal problems include
- Transient tachypnoea of the newborn, neonatal hypoglycaemia and hypothermia

### Abnormal labour includes
- Incoordinate labour, abnormal bleeding, hypertension, failure to progress in labour, induction of labour

### Common gynaecological conditions include
- Urinary tract infections, candidal infections, abnormal cervical smear results, endometriosis, pelvic pain, sexually transmitted infections, pelvic inflammatory disease, Bartholin’s cysts/abscess, ovarian cysts, uterine fibroids, cervical and uterine polyps, uterine prolapse cystocele and rectocele

### Specific high risk groups in obstetrics include
- Aboriginal and Torres Strait Islander women; migrant women, women with a drug addiction and women over 35 years of age

### National and state legislation relating to women’s health
- Legal responsibilities regarding notification of disease, birth, death and autopsy relevant to the state concerned. State legislation and relevant cost, availability and accessibility of services for termination of pregnancy
Knowledge and Skills

Essential knowledge required

- Describe relevant anatomy, physiology, pathology and current research findings in the management of common obstetric post natal and women's health conditions
- Outline the principles management of labour and delivery complications
- Describe current treatment options for infertility
- Have knowledge of the use of therapeutics during pregnancy, in particular an awareness of medication that may pose a risk to the foetus or affect breast feeding

Essential skills required

- Perform a pelvic examination
- Perform pap smear
- Insert an IUCD (desirable)
- Insert an Implanon
- Perform urine pregnancy testing
- Perform fetal heart sound detection using a doppler or ultrasound
- Perform fundal height assessment
- Perform CTG interpretation
- Perform episiotomy
- Perform perineal repair
- Catheterise the urethra
- Manage an unplanned normal delivery
- Manage a shoulder dystocia
- Assist with an obstetrics ultrasound
Learning resources

Recommended texts and other resources

6.12 Ophthalmology

Domain 1: Provide medical care in the ambulatory and community setting

*Themes: Patient-centred clinical assessment, Clinical reasoning, Clinical management*

**Abilities**

- OPH 1.1 Establish a doctor-patient relationship and use a patient-centred approach to care
- OPH 1.2 Obtain a general and ocular history, taking into account the special needs of the patient
- OPH 1.3 Perform a problem-focused eye examination relevant to clinical history and risks, epidemiology and cultural context
- OPH 1.4 Use *specialised clinical equipment for examination of the eye* as required for further assessment and interpret findings
- OPH 1.5 Order and/or perform diagnostic tests where required to confirm a diagnosis, monitor medical care and/or exclude treatable or serious conditions
- OPH 1.6 Diagnose and interpret *abnormalities of the optic nerve and fundus*
- OPH 1.7 Diagnose and provide initial treatment for *strabismus and abnormal eye movements*
- OPH 1.8 Communicate findings of clinical assessment effectively and sensitively to the patient and/or carer
- OPH 1.9 Manage a range of ophthalmological conditions including *common and important eye pathologies*, *injuries to the eye* and *acute visual loss*
- OPH 1.10 Perform therapeutic ocular procedures necessary to fulfil management of patient care including prescription of *topical and systemic medical treatments*
- OPH 1.11 Understand the psycho-social effects of visual loss and demonstrate a compassionate and supportive approach to care
- OPH 1.12 Formulate a management plan in concert with the patient and/or carer, judiciously applying best evidence and the advice of expert colleagues
- OPH 1.13 Identify and manage co-morbidities in the patient and effectively communicate these to the patient/carer
- OPH 1.14 Ensure safe and appropriate prescribing of medications and treatment options in the clinical context
- OPH 1.15 Manage uncertainty and the need to evaluate the risks versus the benefits of clinical decisions
- OPH 1.16 Refer, facilitate and coordinate access to specialised medical and diagnostic and other health and social support services
- OPH 1.17 Provide and/or arrange follow-up and continuing medical care
Domain 2: Provide care in the hospital setting

Themes: Medical care of hospitalised patients, Medical leadership in a hospital team, Health care quality and safety

Abilities

OPH 2.1 Manage admission of patients to hospital in accordance with institutional policies ensuring a sound clinical diagnostic process
OPH 2.2 Develop, implement and maintain a management plan for hospitalised patients in concert with the patient and/or carer and in discussion with their community based general practitioner or other health professional
OPH 2.3 Identify ocular conditions that raise suspicion of child abuse
OPH 2.4 Apply relevant checklists and clinical management pathways
OPH 2.5 Monitor clinical progress, regularly re-evaluate and modify management as required
OPH 2.6 Order and perform a range of diagnostic and therapeutic procedures
OPH 2.7 Identify ocular conditions that raise suspicion of child abuse
OPH 2.8 Explain to the patient the role of other health care professionals including ophthalmologists, optometrists, opticians and general practitioners
OPH 2.9 Communicate effectively with the health care team, patient and/or carer including effective clinical handover to other specialisations if required in systemic disease
OPH 2.10 Recognise and respond early to the deteriorating patient
OPH 2.11 Anticipate and judiciously arrange safe patient transfer of patients with ocular conditions that require specialist care to other facilities, considering clinical indications, service capabilities, patient preferences, transportation and geography
OPH 2.12 Undertake early, planned and multi-disciplinary discharge planning utilising support systems in the community to assist patients with ocular disease
OPH 2.13 Participate in institutional quality and safety improvement

Domain 3: Respond to medical emergencies

Themes: Initial assessment and triage, Emergency medical intervention, Communication and planning

Abilities

OPH 3.1 Undertake initial assessment and triage of patients with injuries to the eye and acute loss of vision
OPH 3.2 Stabilise critically-ill patients and provide primary and secondary care
OPH 3.3 Perform required emergency procedures
OPH 3.4 Arrange and/or perform emergency patient transport or evacuation when needed for patients with eye trauma or other emergencies
OPH 3.5 Demonstrate resourcefulness in knowing how to access and use available resources
OPH 3.6 Communicate effectively at a distance with consulting or receiving clinical personnel
OPH 3.7 Participate in disaster planning and implementation of disaster plans, and post-incident analysis and debriefing

OPH 3.8 Provide inter-professional team leadership in emergency care that includes quality assurance and risk management assessment

Domain 4: Apply a population health approach

Themes: Community health assessment, Population-level health intervention, Evaluation of health care, Collaboration with agencies

Abilities

OPH 4.1 Analyse the social, environmental, economic and occupational determinants of health that affect the community burden of disease and access to health-related services for ocular conditions including diabetic retinopathy, cataracts and glaucoma

OPH 4.2 Apply a population health approach that is relevant to the clinical practice profile

OPH 4.3 Integrate evidence-based prevention, early detection and health maintenance activities into practice at a systems level to prevent blindness and minimise deterioration of function

OPH 4.4 Provide continuity and coordination of care for own practice population

OPH 4.5 Evaluate quality of health care for patients with ocular conditions

OPH 4.6 Access and collaborate with agencies responsible for key population health functions including public health services, employer groups and local government

OPH 4.7 Participate as a medical advocate in the design, implementation and evaluation if interventions that address determinants of population health

Domain 5: Address the health care needs of culturally diverse and disadvantaged groups

Themes: Differing epidemiology, Cultural safety and respect, working with groups to improve health outcomes

Abilities

OPH 5.1 Apply knowledge of the differing profile of disease and health risks among culturally diverse and disadvantaged groups

OPH 5.2 Communicate effectively with the patient and their families/carers and in a culturally safe manner, using interpreters, key community contacts and networks as appropriate

OPH 5.3 Reflect on own assumptions, cultural beliefs and emotional reactions in providing culturally safe care

OPH 5.4 Apply principles of partnership, community ownership, consultation, capacity building, reciprocity and respect to health care delivery, health surveillance and research

OPH 5.5 Harness the resources available in the extended health care team, the local community and family to improve outcomes of care for ophthalmology patients

OPH 5.6 Work with culturally diverse and disadvantaged groups to address barriers in access to health services and the determinants of ocular health
Domain 6: Practise medicine within an ethical, intellectual and professional framework

Themes: Ethical practice, Professional obligations, Intellectual engagement including teaching and research

Abilities

OPH 6.1 Ensure safety, privacy and confidentiality in patient care
OPH 6.2 Maintain appropriate professional boundaries with patients and their families
OPH 6.3 Be aware of duty of care issues arising from providing health care to self, family, colleagues, patients and the community
OPH 6.4 Recognise unprofessional behaviour and signs of the practitioner in difficulty among colleagues and respond according to ethical guidelines and statutory requirements
OPH 6.5 Keep clinical documentation in accordance with legal and professional standards
OPH 6.6 Demonstrate commitment to teamwork, collaboration, coordination and continuity of care
OPH 6.7 Contribute to the management of human and financial resources within a health service
OPH 6.8 Work within relevant national and state legislation and professional and ethical guidelines
OPH 6.9 Provide accurate and ethical certification when required for sickness, employment, social benefits and other purposes for patients with ocular conditions
OPH 6.10 Manage, appraise and assess own performance in the provision of medical care for patients
OPH 6.11 Develop and apply strategies for self-care, personal support and caring for family
OPH 6.12 Teach, mentor and clinically supervise health students, juniors and other health professionals learning about ocular conditions, examinations and treatment
OPH 6.13 Engage in continuous learning and professional development
OPH 6.14 Critically appraise and apply relevant research

Domain 7: Practise medicine in the rural and remote context

Themes: Resourcefulness, Flexibility, teamwork and technology, Responsiveness to context

Abilities

OPH 7.1 Demonstrate resourcefulness, independence and self-reliance while working effectively in geographic, social and professional isolation
OPH 7.2 Provide effective clinical care when away from ready access to specialist medical, diagnostic and allied health services
OPH 7.3 Arrange referral to distant services in concert with the patient and/or carer considering the balance of potential benefits, harms and costs
OPH 7.4 Provide direct and distant clinical supervision and support for other rural and remote health care personnel
OPH 7.5 Use information and communication technology to provide medical care or facilitate access to specialised care for patients

OPH 7.6 Use information and communication technology to network and exchange information with distant colleagues

OPH 7.7 Respect local community norms and values in own life and work practices

OPH 7.8 Identify and acquire extended knowledge and skills as may be required to meet health care needs of the local population

Definition of terms

<table>
<thead>
<tr>
<th>Specialised clinical equipment for examination of the eye</th>
<th>Fine beamed torch (with optional blue filter for examination using Fluorescein), local anaesthetic eye drops, fluorescein strips or Minims, Magnification – slit lamp, indirect ophthalmoscope, loupes or Woods lamp</th>
</tr>
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<tbody>
<tr>
<td>Abnormalities of the optic nerve and fundus include</td>
<td>Glaucoma, optic disc swelling, optic atrophy, diabetic retinopathy, hypertensive retinopathy and age related maculopathy</td>
</tr>
<tr>
<td>Strabismus and abnormal eye movements include</td>
<td>Hypermetropia and convergent squint, amblyopia, divergent squint, palsies and other adult squints</td>
</tr>
<tr>
<td>Common and important eye pathologies include</td>
<td>Conjunctivitis (viral, herpetic eye disease, herpes simplex, herpes zoster, bacterial, allergic, trachoma, and trichiasis), conjunctival tumours, corneal diseases: (keratitis - corneal ulcers), conjunctival naevus: (pterygium, pinguecula), iritis, uveitis and drug allergy, nasolacrimal obstruction, episcleritis / scleritis, neonatal sticky eye, dry eyes, eyelid disorders (blepharitis, entropion, ectropion, sty and chalazion), cataracts, vitreous floaters, double vision, visual impairment including refractive errors, palsies, and thyroid eye disease</td>
</tr>
<tr>
<td>Injuries to the eye include</td>
<td>Chemical, blunt and penetrating trauma to eye and surrounding tissues, subursal and corneal foreign bodies, scratches and abrasions, hyphaema, blowout fracture, signs of child abuse, UV trauma, welders’ flash burns and snow blindness</td>
</tr>
<tr>
<td>Acute loss of vision includes</td>
<td>Vascular occlusion, giant cell arteritis, acute glaucoma, vitreous haemorrhage, retinal detachment, optic neuritis, papilloedema and proptosis</td>
</tr>
<tr>
<td>Topical and systemic medications for eye treatment include</td>
<td>Antibiotics, antivirals, topical steroids, anti-glaucoma, mydriatics and cycloplegics, diagnostic agents, local anaesthetics</td>
</tr>
</tbody>
</table>
Knowledge and Skills

Essential knowledge required

- Describe the anatomy of the eye and visual pathways
- Know the physiology of vision
- Explain normal neurological, motor responses and appearance of the eye
- General understanding of how ophthalmic optics are designed to correct vision
- Understand the ageing process of the eye
- Know common causes of blindness, and how to use screening and low vision services
- Describe signs, symptoms, diagnosis, treatment options, management and epidemiology of cataracts, glaucoma and diabetic retinopathy
- Explain the ocular side effects of topical and systemic drugs
- Describe the irrigation of a blocked nasolacrimal duct

Essential skills required

- Test and evaluate visual function including: eye movements and position, visual acuity, visual fields, colour vision, ocular motility and pupillary function
- Perform an examination of the external eye including the conjunctivae, sclera, cornea and eyelids and be able to evert the upper lid
- Perform examinations using an ophthalmoscope, including fundoscopy
- Measure intraocular pressure using applanation tonometry techniques and be familiar with other techniques for measuring intraocular pressure
- Instil eye drops and ointment, tape lids to prevent corneal and conjunctival exposure
- Perform fluorescein staining of the cornea and sclera
- Perform dilatation of the pupils
- Assess for strabismus including the cover test and differentiate from pseudostrabismus
- Perform slit lamp examinations to diagnose and remove corneal foreign bodies diagnose iritis, assess corneal ulcers and assess eye trauma
- Perform the following therapeutic procedures
  - pressure patch an eye
  - irrigate an eye
  - remove contact lenses
  - shield eye
  - removal of corneal foreign bodies
  - removal of subtarsal foreign bodies
Learning resources

Recommended texts and other resources

6.13 Oral Health

Domain 1: Provide medical care in the ambulatory and community setting

Themes: Patient-centred clinical assessment, Clinical reasoning, Clinical management

Abilities

ORAL 1.1 Establish a doctor-patient relationship and use a patient-centred approach to care

ORAL 1.2 Obtain a clinical history that reflects contextual issues including: presenting problems, epidemiology, culture and geographic location

ORAL 1.3 Perform a problem-focussed physical examination relevant to clinical history and risks, epidemiology and cultural context

ORAL 1.4 Use specialised clinical equipment as required for further assessment and interpret findings

ORAL 1.5 Order and/or perform diagnostic tests where required to confirm a diagnosis, monitor medical care and/or exclude treatable or serious conditions

ORAL 1.6 Apply diagnostic reasoning to arrive at one or more provisional diagnoses of common and important oral and dental conditions in both children and adults, considering uncommon but clinically important differential diagnoses

ORAL 1.7 Communicate findings of clinical assessment effectively and sensitively to the patient and/or carer

ORAL 1.8 Formulate a management plan common and important oral and dental conditions in concert with the patient and/or carer, judiciously applying best evidence and the advice of expert colleagues

ORAL 1.9 Provide prophylactic tetanus booster when warranted and prescribe appropriate oral pain relief and antibiotic treatment as necessary

ORAL 1.10 Identify and manage co-morbidities in the patient and effectively communicate these to the patient/carer

ORAL 1.11 Ensure safe and appropriate prescribing of medications and treatment options in the clinical context

ORAL 1.12 Manage uncertainty and the need to evaluate the risks versus the benefits of clinical decisions

ORAL 1.13 Refer, facilitate and coordinate access to specialised medical and diagnostic and other health and social support services

ORAL 1.14 Provide and/or arrange follow-up and continuing medical care
Domain 2: Provide care in the hospital setting

Themes: Medical care of admitted patients, Medical leadership in a hospital team, Health care quality and safety

Abilities

ORAL 2.1 Manage admission of patients to hospital in accordance with institutional policies
ORAL 2.2 Develop, implement and maintain a management plan for hospitalised patients in concert with the patient and/or carer
ORAL 2.3 Apply relevant checklists and clinical management pathways
ORAL 2.4 Monitor clinical progress, regularly re-evaluate the problem list and modify management accordingly
ORAL 2.5 Identify potential oral complications associated with systemic conditions such as diabetes, HIV, bulimia and malignancy as well as prolonged use of steroids, anti-depressant medication and also associated with prolonged hospitalisation and palliative care
ORAL 2.6 Maintain a clinically relevant plan of fluid, electrolyte and blood product use with relevant pathology testing
ORAL 2.7 Order and perform a range of diagnostic and therapeutic procedures
ORAL 2.8 Maintain timely and accurate patient documentation in hospital records including drug prescription and administration
ORAL 2.9 Communicate effectively with the health care team, patient and/or carer including effective clinical handover
ORAL 2.10 Recognise and respond early to the deteriorating patient
ORAL 2.11 Anticipate and judiciously arrange safe patient transfer to other facilities, considering clinical indications, service capabilities, patient preferences, transportation and geography
ORAL 2.12 Undertake early, planned and multi-disciplinary discharge planning
ORAL 2.13 Contribute medical expertise and leadership in a hospital team
ORAL 2.14 Provide direct and remote clinical supervision and support to nurses, junior medical staff and students
ORAL 2.15 Recognise, document and manage adverse events and near misses
ORAL 2.16 Participate in institutional quality and safety improvement and risk management activities
Domain 3: Respond to medical emergencies

Themes: Initial assessment and triage, Emergency medical intervention, communication and planning

Abilities

ORAL 3.1 Undertake initial assessment and triage of patients with acute or traumatic dental injuries and acute dental conditions
ORAL 3.2 Stabilise critically ill patients and provide primary and secondary care
ORAL 3.3 Provide definitive emergency procedures and management in keeping with clinical need, own capabilities and local context and resources
ORAL 3.4 Arrange and/or perform emergency patient transport or evacuation when needed
ORAL 3.5 Demonstrate resourcefulness in knowing how to access and use available resources
ORAL 3.6 Communicate effectively at a distance with consulting or receiving clinical personnel
ORAL 3.7 Participate in disaster planning and implementation of disaster plans, and post-incident analysis and debriefing
ORAL 3.8 Provide inter-professional team leadership in emergency care that includes quality assurance and risk management assessment

Domain 4: Apply a population health approach

Themes: Community health assessment, Population-level health intervention, Evaluation of health care, Collaboration with agencies

Abilities

ORAL 4.1 Analyse the social, environmental, economic and occupational determinants of health that affect the community burden of dental and oral disease and access to health-related services
ORAL 4.2 Apply a population health approach that is relevant to the clinical practice profile
ORAL 4.3 Integrate evidence-based prevention, early detection and health maintenance activities into practice at a systems level
ORAL 4.4 Provide parental instruction in oral hygiene techniques for children to prevent dental caries, and injury prevention
ORAL 4.5 Advise parents on remedies for excessive or prolonged thumb/finger sucking
ORAL 4.6 Provide continuity and coordination of care for own practice population
ORAL 4.7 Evaluate quality of health care for practice populations
ORAL 4.8 Fulfil reporting requirements in relation to statutory notification of health conditions
ORAL 4.9 Access and collaborate with agencies responsible for key population health functions including public health services, employer groups and local government
ORAL 4.10 Participate as a medical advocate in the design, implementation and evaluation of interventions that address determinants of population health
Domain 5: Address the health care needs of culturally diverse and disadvantaged groups

Themes: Differing epidemiology, Cultural safety and respect, working with groups to improve health outcomes

Abilities

ORAL 5.1 Apply knowledge of the differing profile of general and oral disease and health risks among culturally diverse and disadvantaged groups

ORAL 5.2 Communicate effectively and in a culturally safe manner, using interpreters, key community contacts and networks as appropriate

ORAL 5.3 Reflect on own assumptions, cultural beliefs and emotional reactions in providing culturally safe care

ORAL 5.4 Apply principles of partnership, community ownership, consultation, capacity building, reciprocity and respect to health care delivery, health surveillance and research

ORAL 5.5 Harness the resources available in the health care team, the local community and family to improve outcomes of dental care

ORAL 5.6 Work with culturally diverse and disadvantaged groups to address barriers in access to dental and oral health services and improve the determinants of health

Domain 6: Practise medicine within an ethical, intellectual and professional framework

Themes: Ethical practice, Professional obligations, Intellectual engagement including teaching and research

Abilities

ORAL 6.1 Ensure safety, privacy and confidentiality in patient care

ORAL 6.2 Maintain appropriate professional boundaries

ORAL 6.3 Be aware of duty of care issues arising from providing health care to self, family, colleagues, patients and the community

ORAL 6.4 Recognise unprofessional behaviour and signs of the practitioner in difficulty among colleagues and respond according to ethical guidelines and statutory requirements

ORAL 6.5 Keep clinical documentation in accordance with legal and professional standards

ORAL 6.6 Demonstrate commitment to teamwork, collaboration, coordination and continuity of care

ORAL 6.7 Contribute to the management of human and financial resources within a health service

ORAL 6.8 Work within relevant national and state legislation and professional and ethical guidelines

ORAL 6.9 Provide accurate and ethical certification when required for sickness, employment, social benefits and other purposes

ORAL 6.10 Manage, appraise and assess own performance in the provision of medical and oral health care for patients

ORAL 6.11 Develop and apply strategies for self-care, personal support and caring for family
ORAL 6.12 Teach and clinically supervise health students, junior doctors and other health professionals
ORAL 6.13 Engage in continuous learning and professional development
ORAL 6.14 Critically appraise and apply relevant research

Domain 7: Practise medicine in the rural and remote context

Themes: Resourcefulness, Flexibility, teamwork and technology, Responsiveness to context

Abilities

ORAL 7.1 Demonstrate resourcefulness, independence and self-reliance while working effectively in geographic, social and professional isolation
ORAL 7.2 Provide effective clinical care when away from ready access to specialist medical, dental, diagnostic and allied health services
ORAL 7.3 Arrange referral to distant services in concert with the patient and/or carer considering the balance of potential benefits, harms and costs
ORAL 7.4 Provide direct and distant clinical supervision and support for other rural and remote health care personnel
ORAL 7.5 Use information and communication technology to provide medical care or facilitate access to specialised care for patients
ORAL 7.6 Use information and communication technology to network and exchange information with distant colleagues
ORAL 7.7 Respect local community norms and values in own life and work practices
ORAL 7.8 Identify and acquire extended knowledge and skills as may be required to meet health care needs of the local population
Definition of terms

<table>
<thead>
<tr>
<th>Common oral and dental conditions include</th>
<th>Children</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Oral thrush, teething, nursing or bottle caries, juvenile periodontal disease, ulcerations, oral swellings, dental caries, tooth abscess, fluorosis cleft lip and palate</td>
</tr>
<tr>
<td></td>
<td>Adults</td>
</tr>
<tr>
<td></td>
<td>Oral cancer, gingivitis/periodontal disease, pregnancy related gingivitis, ulcerations, swellings, salivary and parotid gland blockage, dental caries, dry socket, pericoronitis, tooth abscess, wisdom teeth, sensitive teeth, dry mouth, temporomandibular joint pain and bruxism, denture hygiene, candida and other oral infections</td>
</tr>
</tbody>
</table>

| Traumatic dental injuries include        | Injuries to periodontal structures: intrusion, subluxation, concussion, intrusive luxation, extrusive luxation, lateral luxation, avulsion, trauma involving bone, jaw dislocation, jaw fracture, enamel fracture, pulpal exposure, soft tissue injuries of the oral cavity |

| Acute dental conditions include         | Root abscess, fractured cusp in filled tooth                                                                                                               |

| Emergency procedures include            | Re-implantation of adult teeth, management of dental fractures, initial treatment for root abscess                                                         |

Knowledge and Skills

Essential knowledge required

- Understand the main concepts and principles of:
  - dental history taking
  - brief stages of dentition
  - tooth structure
  - extra- and intra-oral examination
  - dental treatment procedures

Essential skills required

- Perform a neurological assessment if head trauma is sustained
- Re-implantation of adult teeth (desirable)
- Management of dental fractures (desirable)
- Perform dental blocks using different techniques (desirable)

Learning resources

Recommended texts and other resources

• Dental Health Services of Victoria - Knocked out or broken teeth -
• Australian Dental Association Inc - http://www.ada.org.au/
• Australian Research Centre for Population Oral Health - The University of Adelaide -
  National Oral Health Plan 2004-2013 -
6.14 Palliative Care

Domain 1: Provide medical care in the ambulatory and community setting

Themes: Patient-centred clinical assessment, Clinical reasoning, Clinical management

Abilities

PAL 1.1 Establish a doctor-patient relationship and use a patient-centred approach to care
PAL 1.2 Obtain a clinical history including assessment of pain that reflects contextual issues including: presenting problems, epidemiology, culture, geographic location, family support systems and access to social services
PAL 1.3 Perform a problem-focused physical examination relevant to clinical history and risks, epidemiology and cultural context
PAL 1.4 Use specialised clinical equipment as required for further assessment of conditions experienced by palliative patients and interpret findings
PAL 1.5 Order and/or perform diagnostic tests where required to confirm a diagnosis, monitor medical care and/or exclude treatable or serious conditions
PAL 1.6 Diagnose and manage common recurrent conditions including any psychological disturbances experienced by the palliative care patient
PAL 1.7 Communicate findings of clinical assessment effectively and sensitively to the patient and/or carer
PAL 1.8 Respect the need for maintenance of autonomy by giving the patient and family a central role in determining treatment
PAL 1.9 Formulate a management plan in concert with the patient and/or carer, judiciously applying best evidence and the advice of expert colleagues
PAL 1.10 Set realistic pain management goals in consultation with the patient and their family
PAL 1.11 Utilise both pharmacological and non-pharmacological treatment options
PAL 1.12 Anticipate and minimise potential problems caused by either the disease or treatments
PAL 1.13 Manage uncertainty and the need to evaluate the risks versus the benefits of clinical decisions including the main goal of symptom control rather than diagnosis
PAL 1.14 Utilise palliative care resources in the community including appliances, physiotherapy and community support services
PAL 1.15 Refer, facilitate and coordinate access to specialised medical and diagnostic and other health, respite care and social support services
PAL 1.16 Provide and/or arrange follow-up and continuing medical care
PAL 1.17 Respect the right of patients and carers to have his/her beliefs, needs and wishes recognised and respected with regard to end of life care
PAL 1.18 Continue to be responsible for the patient after death and be an advocate for the family and friends during their time of grief
Domain 2: Provide care in the hospital setting

Themes: Medical care of admitted patients, Medical leadership in a hospital team, Health care quality and safety

Abilities

PAL 2.1 Manage admission of patients to hospital in accordance with institutional policies and Patients Advanced Care Directive

PAL 2.2 Develop, implement and maintain a management plan for common recurrent conditions including any psychological disturbances experienced by the palliative care patient in concert with the patient and/or carer

PAL 2.3 Apply relevant checklists and clinical management pathways

PAL 2.4 Monitor clinical progress, regularly re-evaluate the problem list and modify management accordingly

PAL 2.5 Maintain a plan of food and fluids relevant to patient condition and patient and family wishes

PAL 2.6 Maintain timely and accurate patient documentation in hospital records including drug prescription and administration

PAL 2.7 Communicate effectively with the health care team, patient and/or carer including effective clinical handover

PAL 2.8 Provide accurate and comprehensible information about diagnosis and/or deterioration to patients and carers in a sensitive manner

PAL 2.9 Anticipate and judiciously arrange safe patient transfer to other facilities such as hospice services, considering clinical indications, service capabilities, patient preferences, transportation and geography

PAL 2.10 Undertake early, planned and multi-disciplinary discharge planning involving palliative care and community services

PAL 2.11 Contribute medical expertise and leadership in a hospital team

PAL 2.12 Provide direct and remote clinical supervision and support to nurses, junior medical staff and students

PAL 2.13 Respond appropriately to any negative outcomes of terminal illness on patients and carers, in particular the loss of independence, role, appearance, sexuality and perceived self-worth

PAL 2.14 Participate in institutional quality and safety improvement and risk management activities
Domain 3: Respond to medical emergencies

Themes: Initial assessment and triage, Emergency medical intervention, Communication and planning

Abilities

PAL 3.1 Undertake initial assessment and triage of palliative care patients with acute conditions
PAL 3.2 Stabilise critically-ill patients and provide primary and secondary care if appropriate for the palliative care patient
PAL 3.3 Arrange and/or perform emergency patient transport when needed
PAL 3.4 Demonstrate resourcefulness in knowing how to access and use available resources
PAL 3.5 Communicate effectively at a distance with consulting or receiving clinical personnel
PAL 3.6 Participate in disaster planning and implementation of disaster plans, and post-incident analysis and debriefing
PAL 3.7 Provide inter-professional team leadership in emergency care that includes quality assurance and risk management assessment

Domain 4: Apply a population health approach

Themes: Community health assessment, Population-level health intervention, Evaluation of health care, Collaboration with agencies

Abilities

PAL 4.1 Provide continuity and coordination of care for own practice population
PAL 4.2 Evaluate quality of health care for practice populations

Domain 5: Address the health care needs of culturally diverse and disadvantaged groups

Themes: Differing epidemiology, Cultural safety and respect, working with groups to improve health outcomes

Abilities

PAL 5.1 Apply knowledge of the differing profile of disease and health risks among culturally diverse and disadvantaged groups
PAL 5.2 Communicate effectively and in a culturally safe manner, using interpreters, key community contacts and networks as appropriate
PAL 5.3 Demonstrate respect for life and acceptance of death as a natural part of living
PAL 5.4 Reflect on own assumptions, cultural beliefs and emotional reactions in providing culturally safe care
PAL 5.5 Seek help in responding to the cultural and spiritual needs and questions of the patient when appropriate
PAL 5.6 Use family dynamics, cultural, social, and religious supports to assist the patient in all aspects of palliative care

PAL 5.7 Apply principles of partnership, community ownership, consultation, capacity building, reciprocity and respect to health care delivery, health surveillance and research

PAL 5.8 Harness the resources available in the health care team, the local community and family to improve outcomes of palliative care

PAL 5.9 Work with culturally diverse and disadvantaged groups to address barriers in access to health services and improve the determinants of health

Domain 6: Practise medicine within an ethical, intellectual and professional framework

Themes: Ethical practice, Professional obligations, Intellectual engagement including teaching and research

Abilities

PAL 6.1 Ensure safety, privacy and confidentiality in patient care

PAL 6.2 Be an advocate for palliative care patients and seek to provide the highest possible quality of life for the patient and their carers throughout the palliative care process

PAL 6.3 Acknowledge that a patient’s comfort and dignity is the ultimate priority of care provision

PAL 6.4 Integrate a supportive component into all aspects of providing palliative care

PAL 6.5 Maintain appropriate professional boundaries

PAL 6.6 Understand the issues surrounding requests for euthanasia

PAL 6.7 Be aware of duty of care issues arising from providing health care to self, family, colleagues, patients and the community

PAL 6.8 Recognise unprofessional behaviour and signs of the practitioner in difficulty among colleagues and respond according to ethical guidelines and statutory requirements

PAL 6.9 Keep clinical documentation in accordance with legal and professional standards

PAL 6.10 Demonstrate commitment to teamwork, collaboration, coordination and continuity of care

PAL 6.11 Work within relevant national and state legislation and professional and ethical guidelines

PAL 6.12 Fulfil reporting requirements in relation to medico-legal requirements and statutory notification of health conditions when dealing with certification of death, cremation, liaison with coroner’s office and the role of the undertaker

PAL 6.13 Manage, appraise and assess own performance in the provision of medical care for patients

PAL 6.14 Develop and apply strategies for self-care, personal support and caring for family

PAL 6.15 Teach and clinically supervise health students, junior doctors and other health professionals

PAL 6.16 Engage in continuous learning and professional development

PAL 6.17 Critically appraise and apply relevant research
Domain 7: Practise medicine in the rural and remote context

Themes: Resourcefulness, Flexibility, teamwork and technology, Responsiveness to context

Abilities

PAL 7.1 Demonstrate resourcefulness, independence and self-reliance while working effectively in geographic, social and professional isolation

PAL 7.2 Provide effective clinical care when away from ready access to specialist medical, diagnostic and allied health services

PAL 7.3 Arrange referral to distant services in concert with the patient and/or carer considering the balance of potential benefits, harms and costs

PAL 7.4 Provide direct and distant clinical supervision and support for other rural and remote health care personnel

PAL 7.5 Use information and communication technology to provide medical care or facilitate access to specialised care for patients

PAL 7.6 Use information and communication technology to network and exchange information with distant colleagues

PAL 7.7 Respect local community norms and values in own life and work practices

PAL 7.8 Identify and acquire extended knowledge and skills as may be required to meet health care needs of the local population

Definition of terms

<table>
<thead>
<tr>
<th>Assessment of pain includes</th>
<th>Site of pain, quality of pain, exacerbating and relieving factors, its temporal onset, its exact onset, the associated symptoms and signs, interference with activities of daily living, impact on psychological state, response to previous and current analgesic therapies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common recurrent conditions include</td>
<td>Gastrointestinal tract problems include:</td>
</tr>
<tr>
<td></td>
<td>Oesophageal problems, dyspepsia, ascites, nausea and vomiting, constipation, bowel obstruction, diarrhoea, stomas, rectal discharge, squashed stomach syndrome, oral candidiasis, dry mouth, stomatitis, dysphagia and cachexia, faecal incontinence, hepatic encephalopathy</td>
</tr>
<tr>
<td></td>
<td>Respiratory problems include:</td>
</tr>
<tr>
<td></td>
<td>Cough, dyspnoea, superior vena cava obstruction, death rattles, choking, tracheostomy and hiccough, haemoptysis, epistaxis</td>
</tr>
<tr>
<td></td>
<td>Genitourinary problems include:</td>
</tr>
<tr>
<td></td>
<td>Dysuria, haematuria, urinary tract infection, incontinence, fistulae, uraemia, contraception, decreased urine output, vaginal bleeding and discharge, bladder innervation, urinary frequency and urgency and bladder spasms</td>
</tr>
<tr>
<td></td>
<td>Neurological disturbances include:</td>
</tr>
<tr>
<td></td>
<td>Convulsions, spinal cord compression, twitching, confusion, delirium and hypercalcaemia</td>
</tr>
<tr>
<td></td>
<td>Musculoskeletal and skin problems include:</td>
</tr>
<tr>
<td></td>
<td>Deep vein thrombosis, pathological fractures, wounds and pressure areas, pressure areas, pruritus, dry skin and lymphoedema</td>
</tr>
</tbody>
</table>
Psychological disturbances include:
Anxiety/panic attacks, insomnia, depression, suicide risk and terminal restlessness, anger

**Pharmacological treatment options include**
Non opioid analgesics, opioids, adjuvants: NSAIDS – antidepressants - local anaesthetic agents - corticosteroids - antispasmodics - anticonvulsants - antiarrhythmics - anxiolytics, palliative intent specific medical therapy e.g. hormonal agents, palliative intent chemotherapy, targeted therapies, monoclonal antibodies, radiopharmaceuticals

**Non-pharmacological treatment options include**
Radiotherapy, nerve blocking procedures, epidural/spinal injections, ventriculostomy, other neurological techniques, transcutaneous electrical nerve stimulators (TENS), physiotherapy, occupational therapy and complementary medicine/therapy

**Patients Advanced Care Directive**
This is a written statement intended to apply to future periods of impaired decision making capacity. The directive provides a legal means for a competent adult to instruct a substitute decision maker and/or record preferences for future health and personal care

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**Knowledge and Skills**

**Essential knowledge required**

- Understand and apply the aims of palliative medicine
- Know the natural history, markers of progression and range of treatments available at each stage of both malignant and non-malignant conditions
- Describe the definitions, physiology and concepts of pain and pain management
- Understand emotional issues involved in pain management

**Essential skills required**

- Undertake a pain assessment including types of pain (nociceptive, non-nociceptive, acute, chronic)
- Apply opioid conversion guidelines when changing opioid drug therapy
- Perform basic procedural skills relevant to palliative care: wound care; nasogastric tube feeding; suprapubic urinary catheterisation; urethral catheterisation; therapeutic paracentesis abdominis; pleurocentesis
- Provide grief and bereavement counselling

**Learning resources**

**Recommended texts and other resources**

- RRMEO module on Palliative Care
- Palliative Care Curriculum for Undergraduate (PCC4U) - [http://www.pcc4u.org/](http://www.pcc4u.org/)
• The Australian & New Zealand Society of Palliative Medicine (October 2010) Clinical Indicators for End of Life Care and Palliative Care -
• Department of Health: Palliative Care resources - http://www.health.gov.au/palliativecare
6.15 Radiology

Domain 1: Provide medical care in the ambulatory and community setting

Themes: Patient-centred clinical assessment, Clinical reasoning, Clinical management

Abilities

RAD 1.1 Establish a doctor-patient relationship and use a patient-centred approach to care
RAD 1.2 Obtain a clinical history that reflects contextual issues including: presenting problems, epidemiology, culture and geographic location
RAD 1.3 Perform a problem-focused physical examination relevant to clinical history and risks, epidemiology and cultural context
RAD 1.4 Apply an understanding of imaging techniques when requesting investigations for the purpose of diagnosis, monitoring and treatment
RAD 1.5 Identify normal features on skull, spinal, abdominal, skeletal and chest radiology in adults and children
RAD 1.6 Use a systematic approach for detecting findings on all medical imaging modalities
RAD 1.7 Detect any radiological technical faults that may affect film quality and mimic disease
RAD 1.8 Detect common fractures, common bony abnormalities, and prosthetic appearances on radiograph
RAD 1.9 Recognise important features of any fracture, dislocation, subluxation or epiphyseal injury and joint conditions on radiograph
RAD 1.10 Interpret and report on imaging modalities of the chest, abdomen, head / face, spine and renal system including common pathologies
RAD 1.11 Apply diagnostic reasoning to arrive at one or more provisional diagnoses, considering uncommon but clinically important differential diagnoses
RAD 1.12 Communicate findings of clinical assessment effectively and sensitively to the patient and/or carer
RAD 1.13 Formulate a management plan in concert with the patient and/or carer, judiciously applying best evidence and the advice of expert colleagues
RAD 1.14 Manage uncertainty and the need to evaluate the risks versus the benefits of clinical decisions
RAD 1.15 Refer, facilitate and coordinate access to specialised medical and diagnostic and other health and social support services
RAD 1.16 Provide and/or arrange follow-up and continuing medical care
Domain 2: Provide care in the hospital setting

Themes: Medical care of admitted patients, Medical leadership in a hospital team, Health care quality and safety

Abilities

RAD 2.1 Manage admission of patients to hospital in accordance with institutional policies and imaging guidelines
RAD 2.2 Apply relevant checklists and clinical management pathways
RAD 2.3 Monitor clinical progress, regularly re-evaluate the problem list and modify management accordingly
RAD 2.4 Request when appropriate more sophisticated Diagnostic Imaging Modalities in clinical practice including Computed Tomography (CT), Magnetic Resonance Imaging (MRI), Radio-Isotope Studies, Mammography, Image Intensifier Services
RAD 2.5 Request contrast studies when appropriate and accurately interpret any findings
RAD 2.6 Maintain timely and accurate patient documentation in hospital records including drug prescription and administration
RAD 2.7 Communicate effectively with the health care team, patient and/or carer including effective clinical handover
RAD 2.8 Recognise and respond early to the deteriorating patient
RAD 2.9 Anticipate and judiciously arrange safe patient transfer to other facilities, considering clinical indications, service capabilities, patient preferences, transportation and geography
RAD 2.10 Undertake early, planned and multi-disciplinary discharge planning
RAD 2.11 Contribute medical expertise and leadership in a hospital team
RAD 2.12 Provide direct and remote clinical supervision and support to nurses, junior medical staff and students
RAD 2.13 Recognise, document and manage adverse events and near misses
RAD 2.14 Participate in institutional quality and safety improvement and risk-management activities

Domain 3: Respond to medical emergencies

Themes: Initial assessment and triage, Emergency medical intervention, Communication and planning

Abilities

RAD 3.1 Undertake initial assessment and triage of patients with acute or life-threatening conditions including severe contrast reaction
RAD 3.2 Order and interpret trauma radiology
RAD 3.3 Recognise limitations in the clinical application of skull radiography in the investigation of suspected head trauma
RAD 3.4 Stabilise critically ill patients and provide primary and secondary care
RAD 3.5 Treat an acute allergic reactions with adrenaline, steroids, anti-histamines and IV fluid resuscitation
RAD 3.6 Provide definitive emergency resuscitation and management across the lifespan in keeping with clinical need, own capabilities and local context and resources

RAD 3.7 Perform required emergency procedures

RAD 3.8 Arrange and/or perform emergency patient transport or evacuation when needed

RAD 3.9 Demonstrate resourcefulness in knowing how to access and use available resources

RAD 3.10 Communicate effectively at a distance with consulting or receiving clinical personnel

RAD 3.11 Be aware of risks and direct staff to wear appropriate protective equipment when accompanying patients during X ray imaging

RAD 3.12 Participate in disaster planning and implementation of disaster plans, and post-incident analysis and debriefing

RAD 3.13 Provide inter-professional team leadership in emergency care that includes quality assurance and risk management assessment

Domain 4: Apply a population health approach

Themes: Community health assessment, Population-level health intervention, Evaluation of health care, Collaboration with agencies

Abilities

RAD 4.1 Analyse the social, environmental, economic and occupational determinants of health that affect the community burden of disease and access to health-related services

RAD 4.2 Apply a population health approach that is relevant to the clinical practice profile

RAD 4.3 Integrate evidence-based prevention, early detection and health maintenance activities into practice at a systems level

RAD 4.4 Provide continuity and coordination of care for own practice population

RAD 4.5 Evaluate quality of health care for practice populations

RAD 4.6 Fulfil reporting requirements in relation to statutory notification of health conditions

RAD 4.7 Access and collaborate with agencies responsible for key population health functions including public health services, employer groups and local government

RAD 4.8 Participate as a medical advocate in the design, implementation and evaluation of interventions that address determinants of population health

Domain 5: Address the health care needs of culturally diverse and disadvantaged groups

Themes: Differing epidemiology, Cultural safety and respect, Working with groups to improve health outcomes

Abilities

RAD 5.1 Apply knowledge of the differing profile of disease and health risks among culturally diverse and disadvantaged groups

RAD 5.2 Communicate effectively and in a culturally safe manner, using interpreters, key community contacts and networks as appropriate
RAD 5.3 Reflect on own assumptions, cultural beliefs and emotional reactions in providing culturally safe care
RAD 5.4 Apply principles of partnership, community ownership, consultation, capacity building, reciprocity and respect to health care delivery, health surveillance and research
RAD 5.5 Harness the resources available in the health care team, the local community and family to improve outcomes of care
RAD 5.6 Work with culturally diverse and disadvantaged groups to address barriers in access to health services and improve the determinants of health

Domain 6: Practise medicine within an ethical, intellectual and professional framework

*Themes: Ethical practice, Professional obligations, Intellectual engagement including teaching and research*

Abilities

RAD 6.1 Ensure safety, privacy and confidentiality in patient care
RAD 6.2 Maintain appropriate professional boundaries
RAD 6.3 Be aware of duty of care issues arising from providing health care to self, family, colleagues, patients and the community
RAD 6.4 Recognise unprofessional behaviour and signs of the practitioner in difficulty among colleagues and respond according to ethical guidelines and statutory requirements
RAD 6.5 Keep clinical documentation in accordance with legal and professional standards
RAD 6.6 Demonstrate commitment to teamwork and collaboration, with specialist teams and coordination and continuity of care
RAD 6.7 Work within relevant national and state legislation and professional and ethical guidelines
RAD 6.8 Balance the risks and benefits of each investigation and explain these to the patient as necessary to enable informed consent
RAD 6.9 Manage, appraise and assess own performance in the provision of medical care for patients
RAD 6.10 Develop and apply strategies for self-care, personal support and caring for family
RAD 6.11 Teach and clinically supervise health students, junior doctors and other health professionals
RAD 6.12 Engage in continuous learning and professional development
RAD 6.13 Critically appraise and apply relevant research
Domain 7: Practise medicine in the rural and remote context

Themes: Resourcefulness, Flexibility, teamwork and technology, Responsiveness to context

Abilities

RAD 7.1 Demonstrate resourcefulness, independence and self-reliance while working effectively in geographic, social and professional isolation

RAD 7.2 Adapts selection of imaging techniques to factors such as distance, clinical urgency, transport costs, staff and equipment availability

RAD 7.3 Arrange referral to distant services in concert with the patient and/or carer considering the balance of potential benefits, harms and costs

RAD 7.4 Provide direct and distant clinical supervision and support for other rural and remote health care personnel

RAD 7.5 Use information and communication technology to provide medical care or facilitate access to specialised care for patients

RAD 7.6 Use information and communication technology to network and exchange information with distant colleagues

RAD 7.7 Respect local community norms and values in own life and work practices

RAD 7.8 Identify and acquire extended knowledge and radiology skills as may be required to meet health care needs of the local population

Definition of terms

<table>
<thead>
<tr>
<th>Medical imaging modalities include</th>
<th>X ray, ultrasound, echocardiography, CT, MRI, PET scanning and radio isotope studies, including the use of contrast agents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radiological technical faults include</td>
<td>Defects in developer - fixer, recognition of poor film quality due to under or over exposure or bodily habitus such as extreme obesity, interpret normal heart borders on X ray</td>
</tr>
<tr>
<td>Common bony abnormalities include</td>
<td>Infection (osteomyelitis), inflammation, degenerative disease (osteoarthritis), metabolic disease, inherited abnormalities - osteogenesis - imperfect - dwarfism, benign lesions, neoplasia (multiple myeloma, primary bone tumours, bony metastases etc) injury, Paget’s disease osteomalacia/rickets, bone cysts</td>
</tr>
<tr>
<td>Prosthetic appearances include</td>
<td>Hip, knee replacements and spinal fusions</td>
</tr>
<tr>
<td>Fracture/dislocation/subluxation or epiphyseal injuries include</td>
<td>Displaced/non-displaced, simple/comminuted, presence of foreign bodies, associated soft tissue injury - localised oedema - surgical emphysema - gas gangrene, joint or growth plate involvement, special risks or complications, precautions (particularly “readily missed”), slipped femoral epiphysis</td>
</tr>
<tr>
<td>Joint conditions include</td>
<td>Osteoarthritis, rheumatoid arthritis, gout, ankylosing spondylitis, Perthes’ disease, arthritis (see Richardson’s rules of arthritis - in online textbook)</td>
</tr>
<tr>
<td>Pathological conditions detected on chest radiology include</td>
<td>Pain in chest - acute chest trauma, closed chest injuries - penetrating chest injuries, inhaled foreign body, pleural effusions - loculated effusion, pneumothorax - hydropneumothorax, pulmonary collapse/atelectasis, widened mediastinum (aortic aneurysm appearance, mediastinal pathology or tumours e.g. thymoma), densities in the lungs, emphysema, bronchitis - asthma - COPD - pulmonary contusion, pneumonia (inflammatory consolidation), staphylococcal pneumonia, bacterial pulmonary (lung) abscess - amoebic lung abscess, acute tuberculous cavitation, pulmonary tuberculosis with cavity formation, enlarged lymph nodes (abnormal hilar patterns such as sarcoidosis, bronchial carcinoma etc.), hydatid cysts, primary lung cancer - secondary (metastatic) lung cancer, mycetoma (fungus ball), diffuse increase in lung pattern, pneumoconiosis (industrial disease), pulmonary embolism/infarction, cardiac failure such as: Kerley “B” lines - bat’s wing shadowing - left ventricular hypertrophy - atrial enlargement - obliteration of costophrenic angles - altered upper/lower lobe perfusion, enlarged heart, pericardial effusion and cardiomyopathy, pulmonary oedema</td>
</tr>
<tr>
<td>Common abdominal pathologies include</td>
<td>Intestinal obstruction - small bowel - large bowel, ileus, normal bowel patterns, faecal loading, pseudo obstruction, perforation of the gut, foreign bodies, abdominal calcifications - search pattern and differential diagnosis, cholelithiasis, renal calculi, ureteric calculi, bladder calculi, lymph node calcification, phleboliths, pelvis (uterine fibroids, dermoid cysts), calculi in the prostate, vascular calcification</td>
</tr>
<tr>
<td>Common skull and facial bone pathologies include</td>
<td>Depressed head fracture, penetrating head injury, facial trauma, lytic defects in skull, dense areas in skull, salivary calculus, orbit injury</td>
</tr>
<tr>
<td>Spinal system including common pathologies</td>
<td>Ageing, kyphoscoliosis, joint conditions as above, fractures, dislocations and subluxations, spinal trauma, changes in vertebral density and outline without injury, pathological fractures, fractured pelvis recognition, metastatic lesions</td>
</tr>
<tr>
<td>Imaging modalities and common pathologies for the renal system include</td>
<td>KUB (Kidneys, ureters and bladder) intravenous pyelography, retrograde cystography, retrograde urethrography, retrograde micturating urethrography, missing kidney, variations in anatomy, calyceal patterns, large kidney - small kidney - ureters - bladder, prostatic calculi</td>
</tr>
</tbody>
</table>
Knowledge and Skills

Essential knowledge required

- Understand basic physics principles for each modality: X ray, ultrasound, CT, MRI, PET scanning and radio isotope studies, including the use of contrast
- Explain the indications, contraindications and limitations for each medical imaging modality
- Interpret normal radiographic features of bone, chest, heart, kidneys and ureters, skull and spine
- Explain differences between adult and child chest radiograph
- Know the variable appearance of paediatric radiographs including normal variants
- Read, interpret and report radiographs in children including identification of technical faults (ie poor inspiration, thymus)
- Use means of confirming such normal variants e.g. x-ray other side, refer to reference text on normal variants, interval x-ray
- Apply advantages and disadvantages of different x-ray views of the chest, including portable films, being aware of:
  - different appearance of AP versus PA projections
  - limitations and altered appearance of portable films
  - use of expiratory films to diagnose pneumothorax and foreign bodies
- Know radiological characteristics of:
  - normal cervical spine
  - normal thoracic spine
  - normal lumbosacral
  - normal coccyx
- Be aware of the limitations and medico-legal dangers of performing and reporting imaging as a generalist, particularly in pregnancy
- Know the comparative radiation doses of imaging modalities
- Use correct shielding techniques, particularly for children

Note: GPs who wish to perform ultrasonography and X-rays need to complete an accredited course in this specialty.

Essential skills required

- Order appropriate imagining techniques
- Read and interpret films according to experience, training and institutional policy
- Perform obstetric ultrasound (desirable)
- Use FAST scanning (desirable)
- Use ultrasound to guide procedures, e.g. aspiration of collection, administration of nerve block (desirable)
- Interpret CT head (desirable)
Learning resources

Recommended texts and other resources

- Radiographers Reporting Website - http://www.radiographersreporting.com/
6.16 Rehabilitation

Domain 1: Provide medical care in the ambulatory and community setting

Themes: Patient-centred clinical assessment, Clinical reasoning, Clinical management

Abilities

REH 1.1 Establish a doctor-patient relationship and use a patient-centred approach to care

REH 1.2 Obtain a clinical history that reflects the presenting problems and demonstrates competence determining the functional capacities and rehabilitative needs of patients

REH 1.3 Perform a clinical evaluation of pain, cognition and functional limitations

REH 1.4 Use specialised clinical equipment as required for further assessment and interpret findings

REH 1.5 Order and/or perform diagnostic tests where required to confirm a diagnosis, monitor medical care and/or exclude treatable or serious conditions

REH 1.6 Apply diagnostic reasoning to arrive at one or more provisional diagnoses, considering uncommon but clinically important differential diagnoses

REH 1.7 Communicate findings of clinical assessment effectively and sensitively to the patient and/or carer

REH 1.8 Formulate a comprehensive treatment and rehabilitation management plan for common conditions requiring rehabilitation in concert with the patient and/or carer, judiciously applying best evidence and the advice of expert colleagues

REH 1.9 Apply the principles of rehabilitation to patient care

REH 1.10 Institute a therapeutic process designed to: restore with minimum delay optimum physical, psychological, social and vocational function of the patient; prevent secondary complications of disability

REH 1.11 Identify factors relating to the therapist, the patient and his or her environment liable to impede recovery

REH 1.12 Identify and manage co-morbidities in the patient and effectively communicate these to the patient/carer

REH 1.13 Ensure safe and appropriate prescribing of medications and treatment options in the clinical context

REH 1.14 Manage uncertainty and the need to evaluate the risks versus the benefits of clinical decisions

REH 1.15 Refer, facilitate and coordinate access to specialised medical and diagnostic and other health, social support and community services

REH 1.16 Provide support and counselling for patients with physical or mental disability or disfigurement

REH 1.17 Demonstrate skills in the education of patients and significant others about the disease and the short and longer term goals

REH 1.18 Work in close collaboration with other health professionals and community resources

REH 1.19 Provide and/or arrange follow-up and continuing medical care
Domain 2: Provide care in the hospital setting

Themes: Medical care of admitted patients, Medical leadership in a hospital team, Health care quality and safety

Abilities

REH 2.1 Manage admission of patients to hospital in accordance with institutional policies
REH 2.2 Develop, implement and maintain a management plan for hospitalised patients in concert with the patient and/or carer
REH 2.3 Apply relevant checklists and clinical management pathways
REH 2.4 Monitor clinical progress, regularly re-evaluate the problem list and modify management accordingly
REH 2.5 Order and perform a range of diagnostic and therapeutic procedures
REH 2.6 Maintain timely and accurate patient documentation in hospital records including drug prescription and administration
REH 2.7 Communicate effectively with the health care team, patient and/or carer including effective clinical handover
REH 2.8 Recognise and respond early to the deteriorating patient
REH 2.9 Anticipate and judiciously arrange safe patient transfer to other facilities, considering clinical indications, service capabilities, patient preferences, transportation and geography
REH 2.10 Undertake early, planned and multi-disciplinary discharge planning
REH 2.11 Contribute medical expertise and leadership in a hospital team
REH 2.12 Provide direct and remote clinical supervision and support to nurses, junior medical staff and students
REH 2.13 Recognise, document and manage adverse events and near misses
REH 2.14 Participate in institutional quality and safety improvement and risk management activities

Domain 3: Respond to medical emergencies

Themes: Initial assessment and triage, Emergency medical intervention, Communication and planning

Abilities

REH 3.1 Undertake initial assessment and triage of patients with acute or life threatening conditions
REH 3.2 Diagnose and manage medical emergencies associated with spinal injury such as autonomic dysreflexia, acute cauda equina compression
REH 3.3 Stabilise critically-ill patients and provide primary and secondary care
REH 3.4 Provide definitive emergency resuscitation and management across the lifespan in keeping with clinical need, own capabilities and local context and resources
REH 3.5 Perform required emergency procedures
REH 3.6 Arrange and/or perform emergency patient transport or evacuation when needed
REH 3.7 Demonstrate resourcefulness in knowing how to access and use available resources
REH 3.8 Communicate effectively at a distance with consulting or receiving clinical personnel
REH 3.9  Participate in disaster planning and implementation of disaster plans, and post-incident analysis and debriefing
REH 3.10  Provide inter-professional team leadership in emergency care that includes quality assurance and risk management assessment

Domain 4: Apply a population health approach

Themes: Community health assessment, Population-level health intervention, Evaluation of health care, Collaboration with agencies

Abilities

REH 4.1  Analyse the social, environmental, economic and occupational determinants of health that affect the community burden of disease and access to health-related services
REH 4.2  Apply a population health approach that is relevant to the clinical practice profile
REH 4.3  Integrate evidence-based prevention, early detection and health maintenance activities into practice at a systems level for conditions that lead to disability
REH 4.4  Provide continuity and coordination of care for own practice population
REH 4.5  Work with geriatricians and allied health members in relation to rehabilitation management
REH 4.6  Evaluate quality of health care for practice populations
REH 4.7  Fulfil reporting requirements in relation to statutory notification of health conditions
REH 4.8  Access and collaborate with agencies responsible for key population health functions including public health services, employer groups and local government
REH 4.9  Participate as a medical advocate in the design, implementation and evaluation of interventions that address determinants of population health

Domain 5: Address the health care needs of culturally diverse and disadvantaged groups

Themes: Differing epidemiology, Cultural safety and respect, working with groups to improve health outcomes

Abilities

REH 5.1  Apply knowledge of the differing profile of disease and health risks among culturally diverse and disadvantaged groups
REH 5.2  Communicate effectively and in a culturally safe manner, using interpreters, key community contacts and networks as appropriate
REH 5.3  Reflect on own assumptions, cultural beliefs and emotional reactions in providing culturally safe care
REH 5.4  Apply principles of partnership, community ownership, consultation, capacity building, reciprocity and respect to health care delivery, health surveillance and research
REH 5.5  Harness the resources available in the health care team, the local community and family to improve outcomes of care
REH 5.6  Work with culturally diverse and disadvantaged groups to address barriers in access to health services and improve the determinants of health
Domain 6: Practise medicine within an ethical, intellectual and professional framework

**Themes:** Ethical practice, Professional obligations, Intellectual engagement including teaching and research

**Abilities**

REH 6.1 Ensure safety, privacy and confidentiality in patient care
REH 6.2 Maintain appropriate professional boundaries
REH 6.3 Be aware of duty of care issues arising from providing health care to self, family, colleagues, patients and the community
REH 6.4 Recognise unprofessional behaviour and signs of the practitioner in difficulty among colleagues and respond according to ethical guidelines and statutory requirements
REH 6.5 Keep clinical documentation in accordance with legal and professional standards
REH 6.6 Demonstrate an ability to work in close collaboration with other health professionals, community based organisations and support groups in rehabilitating a patient
REH 6.7 Interpret and apply legislative, regulatory and medico-legal aspects of rehabilitative medicine including: Palliative Care Act; enduring medical power of attorney; vehicle licence regulations; workcover; insurance providers
REH 6.8 Provide accurate and ethical certification when required for sickness, employment, social benefits and other purposes
REH 6.9 Manage, appraise and assess own performance in the provision of medical care for patients
REH 6.10 Develop and apply strategies for self-care, personal support and caring for family
REH 6.11 Teach and clinically supervise health students, junior doctors and other health professionals
REH 6.12 Engage in continuous learning and professional development
REH 6.13 Critically appraise and apply relevant research

Domain 7: Practise medicine in the rural and remote context

**Themes:** Resourcefulness, Flexibility, teamwork and technology, Responsiveness to context

**Abilities**

REH 7.1 Demonstrate resourcefulness, independence and self-reliance while working effectively in geographic, social and professional isolation
REH 7.2 Demonstrate appropriate knowledge, skills and attitudes to provide comprehensive medical care in the rural setting to patients with long term disabilities due to trauma, disease, congenital and degenerative conditions and pain, in ongoing collaboration with relevant units and providers
REH 7.3 Provide effective clinical care when away from ready access to specialist medical, diagnostic and allied health services
REH 7.4 Arrange referral to distant services in concert with the patient and/or carer considering the balance of potential benefits, harms and costs
REH 7.5  Provide direct and distant clinical supervision and support for other rural and remote health care personnel

REH 7.6  Use information and communication technology to provide medical care or facilitate access to specialised care for rehabilitation patients

REH 7.7  Use information and communication technology to network and exchange information with distant colleagues

REH 7.8  Respect local community norms and values in own life and work practices

REH 7.9  Identify and acquire extended knowledge and skills as may be required to meet health care needs of the local population

**Definition of terms**

| Assessment of functional capacities and rehabilitative needs of patients includes | Assess ‘activities of daily living’ (ADLs), level of functioning, assistance required and limiting factors
| | Elicit a patient history including: chief complaint, present illness, functional history, aids used; past medical history, review of systems, psychological profile, social and cultural aspects, carers involved, agencies involved, education, training, work and finance history |
| **Evaluation of pain includes** | Site of pain, quality of pain, exacerbating and relieving factors, its temporal onset, its exact onset, the associated symptoms and signs, interference with activities of daily living, impact on psychological state, response to previous and current analgesic therapies |
| **Evaluation of cognition includes** | Language and speech, reading ability, listening comprehension, communication capability, memory, concentration, emotional state |
| **Common conditions requiring rehabilitation include** | Stroke, traumatic brain injury (TBI), spinal injuries, amputations, osteoarthritis, osteoporosis, cardiac disease, chronic pain, arthritis and other common conditions, neurogenic bladder and bowel conditions |
| **Principles of rehabilitation include** | Rehabilitation: encompasses physical, psychological, social, relational, vocational, recreational and educational issues and needs to be culturally sensitive spans primary, secondary and tertiary health care; involves the use of a health care team at local, regional and state levels, which may involve/require multi-skilling of some staff in remote areas |
| **Evidence-based prevention, early detection and health maintenance activities into practice at a systems level for conditions that lead to disability include** | Nutrition; social interaction; monitor alarms; fall prevention, poly-pharmacy, diabetes, safety belts, fatigue management, drug and alcohol abuse, smoking |
Knowledge and Skills

Essential knowledge required

- Describe relevant anatomy, physiology, the causation and epidemiology of common conditions requiring rehabilitation
- Analyse the causes of pathological gait including: structural; joint and soft tissue issues; neurological disorders
- Possess a general knowledge of commonly used evidence-based, mainstream and alternative rehabilitation treatments including:
  - patient conducted techniques e.g. general exercise; aerobic; anaerobic; cardiovascular and respiratory fitness
  - nutrition: understanding of cultural variables, access, affordability, availability etc
  - specific exercises and stretches, post isometric exercises, allied to breathing techniques
  - correct posture
  - application of cold and heat
  - relaxation and meditation techniques
  - relevant lifestyle interventions including weight loss, stress reduction, recreational substance reduction and sleep improvement
  - orthotics and prosthetics and aids to assist differing gaits
  - therapist conducted techniques including: thermal therapy; hydrotherapy; massage; biofeedback; joint mobilisation; joint manipulation
  - continence management and aids
  - pharmacological and non-pharmacological methods as appropriate for neurogenic bladder and bowel conditions
- Explain the relative efficacy, uses, side effects, poly-pharmacology and potential abuses of pharmaceutical agents commonly used in rehabilitation
- Have knowledge of:
  - the classification of types of stroke and their potential outcomes within the context of low to high level rehabilitation intervention
  - the types of spinal cord injury and associated injuries/medical conditions
  - the risk factors for amputation
- Promote measures aimed at reducing falls and their impact for injury
- Know mobility aids and home modifications available

Pain

- Distinguish pain concepts and terms used to describe these
- Know how to distinguish between acute and chronic pain; musculoskeletal and malignancy associated pain
- Apply relevant investigations to assess symptoms using pain assessment units’ scales
- Apply modes of pain treatment effectively including the advantages and disadvantages of opioid analgesics
- Describe the role of pharmacology in treating acute pain: the place or otherwise of narcotics and other medications
Sexuality

• Know how to counsel and advise patients experiencing sexual problems and dysfunction and identify available community support services
• Know drugs that affect sexual function
• Understand sexual issues relating to cultural and religious beliefs
• Understand cultural justice practices involving punishment causing wounds

Complications

• Understand social issues that may be faced by patients with a spinal cord injury
• Describe the potential effects of traumatic brain injury on awareness, cognition, emotion, physical state and behaviour
• Recognise abnormal illness behaviour
• Describe factors involved in causation of skin conditions including pressure, trauma, burns or scalds, scars, keloids
• Explain the rehabilitation of patients with neurogenic bowel and bladder conditions
• Apply effective management to prevent and treat pressure areas

Essential skills required

• Provide management plan for prosthesis and stump care
• Write a medico-legal report

Learning resources

Recommended texts and other resources

6.17 Research and Teaching

Domain 1: Provide medical care in the ambulatory and community setting

Themes: Patient-centred clinical assessment, Clinical reasoning, Clinical management

Abilities

R&T 1.1 Apply knowledge of the epidemiology of disease and findings from clinical assessment to estimate prior probability of relevant differential diagnoses and to inform the choice of further clinical tests

R&T 1.2 Discuss the utility of elements of clinical history, physical examination and clinical investigation in the formulation of provisional, differential and definitive diagnoses for a presenting clinical problem

R&T 1.3 Appraise the performance of a range of screening and diagnostic tests that may be used to screen for or confirm a diagnosis, monitor medical care and/or exclude treatable or serious conditions

R&T 1.4 Explain the scientific basis of the diagnostic reasoning used to arrive at one or more provisional diagnoses, considering uncommon but clinically important differential diagnoses

R&T 1.5 Communicate the scientific basis of clinical assessment and a proposed plan management to patients and/or carers effectively and sensitively

R&T 1.6 Source, appraise and apply scientific evidence in response to clinically generated questions

Domain 2: Provide care in the hospital setting

Themes: Medical care of admitted patients, Medical leadership in a hospital team, Health care quality and safety

Abilities

R&T 2.1 Critically appraise relevant checklists and clinical management pathways for use in the local hospital context

R&T 2.2 Communicate effectively the results of relevant research to peers and colleagues

R&T 2.3 Undertake a critical scientific review of a clinical topic and present findings to colleagues

R&T 2.4 Contribute scientific knowledge to institutional quality and safety improvement activities
Domain 3: Respond to Medical Emergencies

Themes: Initial assessment and triage, Emergency medical intervention, Communication and planning

Abilities

R&T 3.1 Source current evidence-based guidelines for emergency management rapidly
R&T 3.2 Describe the processes involved in and the expected outcomes of a critical incident review
R&T 3.3 Participate in disaster planning and implementation of disaster plans, and post-incident analysis and debriefing
R&T 3.4 Provide inter-professional team leadership in emergency care that includes quality assurance and risk management assessment

Domain 4: Apply a population health approach

Themes: Community health assessment, Population-level health intervention, Evaluation of health care, Collaboration with agencies

Abilities

R&T 4.1 Analyse the social, environmental, economic and occupational determinants of health that affect the community burden of disease and access to health-related services
R&T 4.2 Apply a population health approach that is relevant to the clinical practice profile
R&T 4.3 Integrate evidence-based prevention, early detection and health maintenance activities into practice at a systems level
R&T 4.4 Conduct evaluations of the quality of health care for practice
R&T 4.5 Access and collaborate with agencies responsible for key population health functions including public health services, employer groups and local government
R&T 4.6 Participate as a medical advocate in the design, implementation and evaluation of interventions that address determinants of population health

Domain 5: Address the health care needs of culturally diverse and disadvantaged groups

Themes: Differing epidemiology, Cultural safety and respect, Working with groups to improve health outcomes

Abilities

R&T 5.1 Apply knowledge of the differing profile of disease and health risks among culturally diverse and disadvantaged groups
R&T 5.2 Apply principles of partnership, community ownership, consultation, capacity building, reciprocity and respect to research and training
R&T 5.3 Work with culturally diverse and disadvantaged groups to address barriers in access to health services and improve the determinants of health
R&T 5.4 Demonstrate the principles of respectful engagement of disadvantaged and culturally diverse groups in setting research priorities
R&T 5.5 Demonstrate respect for self-determination through the development of meaningful research partnerships and active contribution of community to the development of health intervention models through participatory research models

R&T 5.6 Apply teaching methods that take into account the current knowledge level of the learner, their health needs, their motivation, and capacity to learn, and their social, cultural and economic background

Domain 6: Practise medicine within an ethical, intellectual and professional framework

Themes: Ethical practice, Professional obligations, Intellectual engagement including teaching and research

Abilities

R&T 6.1 Ensure safety, privacy and confidentiality of participants in clinical audit and clinical research activities

R&T 6.2 Adhere to human research ethics guidelines in conduct of clinical audit and research

R&T 6.3 Teach and clinically supervise health students, junior doctors and other health professionals

R&T 6.4 Access, interpret and critically evaluate information pertaining to own learning needs from relevant professional associations, specialty colleagues, scientific literature, reference books, meetings and electronic resources

R&T 6.5 Engage in continuous learning and professional development to maintain currency of knowledge of the scientific basis of medicine

R&T 6.6 Develop own mentoring strategy, including setting aside time for mentoring

R&T 6.7 Provide advice and guidance to others with respect to issues such as short term learning, vocational training and long term career goals

R&T 6.8 Demonstrate ability to undertake relevant research to inform practice

Domain 7: Practise medicine in the rural and remote context

Themes: Resourcefulness, Flexibility, Teamwork and technology, Responsiveness to context

Abilities

R&T 7.1 Provide direct and distant clinical supervision and support for other rural and remote health care personnel

R&T 7.2 Use information and communication technology to access medical and scientific resources

R&T 7.3 Use information and communication technology to network and exchange information with distant colleagues

R&T 7.4 Provide direct and distance clinical supervision and support for other rural and remote health care personnel

R&T 7.5 Identify and acquire extended knowledge and skills as may be required to meet health care needs of the local population
# Definition of terms

<table>
<thead>
<tr>
<th><strong>Evaluation quality of care includes:</strong></th>
<th>Conduct of clinical audit including case finding, collecting data in an ethical manner, statistical analysis of data, identifying and implementing change, and monitoring progress</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adherence to human research ethics requirements includes:</strong></td>
<td>Adherence to information privacy principles, research ethics guidelines and institutional policy in use of clinical information</td>
</tr>
</tbody>
</table>
| **Teach and clinically supervise includes:** | Using ‘active’ educational methods that include intellectually active and ‘hands-on’ engagement and which challenge learners
Providing handouts to accompany presentations for learners (students, peers, other staff, and patients) that are clear, factually correct, up-to-date, relevant, and at a level appropriate for the learners
Using a structured approach to teaching a skill or procedure to a learner, that includes explanation, demonstration, observation of performance and feedback
Developing plans for learners’ clinical attachments that include an orientation, scheduled learning opportunities and sessions, and involvement in supervised patient care
Reliable assessment of learners when required, by effective implementation of assigned assessment tools, observing performance, and recording honest and fair judgements of their performance
Clarifying how supervision will occur and allow medical students and junior colleagues input into the supervision process
Providing feedback that identifies strengths and areas for improvement, relates to expected learning, is timely, specific, descriptive, detailed and honest, and includes guidance for improvement
Challenging learners to develop the predisposition and skill of self-assessing their own performance as a basis for defining their learning needs, and for identifying opportunities inherent in everyday clinical practice through questioning and role modelling
Analysing learners’ errors (near misses or adverse events) using root cause analyses, and ensure learning from an event through discussion in a non-punitive environment |
Knowledge and Skills

Essential knowledge

- Epidemiological concepts including: incidence; prevalence; rate ratio; relative risk; attributable risk; adult, infant, perinatal and maternal-mortality rates; age standardisation
- Statistical concepts including: sensitivity and specificity; positive and negative predictive value; Bayes theorem; odds ratios; Chi-squared tests; student t-tests; p-values; study power; normal distribution; number-needed-to-treat; statistical versus clinical significance
- Research design including randomised controlled trials, case-control studies and cohort studies
- Scientific reviews methodologies including: literature review, systematic reviews and other forms of meta-analysis, clinical guidelines
- Sources of scientific information including Medline, Cochrane Reviews, specialty associations, research journals, reference books, meetings and electronic databases
- Ethical and legal principles governing collection, storage, access to and use of patient data
- Key (milestone) research undertaken on rural and remote medicine and rural health issues
- The structure and function of rural health services and impact on clinical outcomes in comparative studies of urban versus rural/remote health issues

Essential skills

- Ability to communicate scientific information effectively with patients and colleagues
- Ability to access, interpret and critically evaluate scientific information

Learning resources

Recommended texts and other resources

6.18 Surgery

Domain 1: Provide medical care in the ambulatory and community setting

Themes: Patient-centred clinical assessment, Clinical reasoning, Clinical management

Abilities

SURG 1.1 Establish a doctor-patient relationship and use a patient-centred approach to surgical care
SURG 1.2 Obtain a clinical history that reflects contextual issues including: presenting problems, epidemiology, culture and geographic location
SURG 1.3 Perform a problem-focused physical examination relevant to clinical history and risks, epidemiology and cultural context
SURG 1.4 Use specialised clinical equipment as required for further assessment and interpret findings
SURG 1.5 Order and/or perform diagnostic tests where required to confirm a surgical diagnosis, monitor medical care and/or exclude treatable or serious conditions
SURG 1.6 Apply diagnostic reasoning to arrive at one or more provisional diagnoses, considering uncommon but clinically important differential diagnoses
SURG 1.7 Diagnose and provide initial management for common and important conditions that require surgical treatment
SURG 1.8 Communicate findings of clinical assessment effectively and sensitively to the patient and/or carer
SURG 1.9 Formulate a surgical management plan in concert with the patient and/or carer, judiciously applying best evidence and the advice of expert colleagues
SURG 1.10 Demonstrate the skills to competently perform a range of common minor surgical procedures under minimal or distant supervision
SURG 1.11 Manage uncertainty and the need to evaluate the risks versus the benefits of clinical decisions
SURG 1.12 Refer, facilitate and coordinate access to specialised medical and diagnostic and other health and social support services
SURG 1.13 Offer timely and safe analgesia for painful surgical conditions
SURG 1.14 Early to recognise and promptly stabilise critically ill surgical patients and arrange timely transfer to the appropriate facility
SURG 1.15 Provide comprehensive post-operative care for patients after hospital discharge
Domain 2: Provide care in the hospital setting

Themes: Medical care of admitted patients, Medical leadership in a hospital team, Health care quality and safety

Abilities

SURG 2.1 Manage admission of patients to hospital in accordance with institutional policies
SURG 2.2 Develop, implement and maintain a management plan for hospitalised patients with surgical conditions in concert with the patient and/or carer
SURG 2.3 Apply relevant pre-anaesthetic, pre- and post-operative checklists and clinical management pathways
SURG 2.4 Monitor clinical progress, regularly re-evaluate the problem list and modify management accordingly
SURG 2.5 Maintain a clinically relevant plan of fluid, electrolyte, nutrition and blood product use with relevant pathology testing and pain management
SURG 2.6 Order and perform a range of diagnostic and therapeutic procedures
SURG 2.7 Maintain timely and accurate patient documentation in hospital records including drug prescription and administration
SURG 2.8 Communicate effectively with the health care team, patient and/or carer including effective clinical handover
SURG 2.9 Recognise and contribute to the management post-operative complications
SURG 2.10 Anticipate and judiciously arrange safe patient transfer to other facilities, considering clinical indications, service capabilities, patient preferences, transportation and geography
SURG 2.11 Undertake early, planned and multi-disciplinary discharge planning
SURG 2.12 Contribute medical expertise and leadership in a hospital team
SURG 2.13 Provide direct and remote clinical supervision and support to nurses, junior medical staff and students
SURG 2.14 Recognise, document and manage adverse events and near misses
SURG 2.15 Participate in institutional quality and safety improvement and risk management activities
Domain 3: Respond to medical emergencies

Themes: Initial assessment and triage, Emergency medical intervention, Communication and planning

Abilities

SURG 3.1 Recognises medical emergencies and involves appropriate consultation early
SURG 3.2 Undertake initial assessment and triage of patients with acute or life threatening conditions and seeking team assistance
SURG 3.3 Stabilise critically-ill patients and provide primary and secondary care
SURG 3.4 Provide definitive emergency resuscitation and management across the lifespan in keeping with clinical need, own capabilities and local context and resources
SURG 3.5 Perform required emergency procedures
SURG 3.6 Arrange and/or perform emergency patient transport or evacuation when needed
SURG 3.7 Demonstrate resourcefulness in knowing how to access and use available resources
SURG 3.8 Communicate effectively at a distance with consulting or receiving clinical personnel
SURG 3.9 Participate in disaster planning and implementation of disaster plans, and post-incident analysis and debriefing
SURG 3.10 Provide inter-professional team leadership in emergency care that includes quality assurance and risk management assessment

Domain 4: Apply a population health approach

Themes: Community health assessment, Population-level health intervention, Evaluation of health care, Collaboration with agencies

Abilities

SURG 4.1 Analyse the social, environmental, economic and occupational determinants of health that affect the community burden of disease and access to health-related services
SURG 4.2 Apply a population health approach that is relevant to the clinical practice profile
SURG 4.3 Integrate evidence-based prevention, early detection and health maintenance activities into practice at a systems level
SURG 4.4 Provide continuity and coordination of care for own practice population
SURG 4.5 Evaluate quality of health care for practice populations
SURG 4.6 Fulfil reporting requirements in relation to statutory notification of health conditions
SURG 4.7 Access and collaborate with agencies responsible for key population health functions including public health services, employer groups and local government
SURG 4.8 Participate as a medical advocate in the design, implementation and evaluation of interventions that address determinants of population health
Domain 5: Address the health care needs of culturally diverse and disadvantaged groups

Themes: Differing epidemiology, Cultural safety and respect, Working with groups to improve health outcomes

Abilities

SURG 5.1 Apply knowledge of the differing profile of disease and health risks among culturally diverse and disadvantaged groups
SURG 5.2 Communicate effectively and in a culturally safe manner, using interpreters, key community contacts and networks as appropriate
SURG 5.3 Reflect on own assumptions, cultural beliefs and emotional reactions in providing culturally safe care
SURG 5.4 Apply principles of partnership, community ownership, consultation, capacity building, reciprocity and respect to health care delivery, health surveillance and research
SURG 5.5 Harness the resources available in the health care team, the local community and family to improve outcomes of care
SURG 5.6 Work with culturally diverse and disadvantaged groups to address barriers in access to health services and improve the determinants of health

Domain 6: Practise medicine within an ethical, intellectual and professional framework

Themes: Ethical practice, Professional obligations, Intellectual engagement including teaching and research

Abilities

SURG 6.1 Ensure safety, privacy and confidentiality in patient care
SURG 6.2 Support the patient to come to an informed decision to agree to the surgery offered
SURG 6.3 Understand the medico-legal implications of performing surgical procedures on a patient
SURG 6.4 Maintain appropriate professional boundaries
SURG 6.5 Be aware of duty of care issues arising from providing health care to self, family, colleagues, patients and the community
SURG 6.6 Recognise unprofessional behaviour and signs of the practitioner in difficulty among colleagues and respond according to ethical guidelines and statutory requirements
SURG 6.7 Keep clinical documentation in accordance with legal and professional standards
SURG 6.8 Demonstrate commitment to teamwork, collaboration, coordination and continuity of care
SURG 6.9 Contribute to the management of human and financial resources within a health service
SURG 6.10 Work within relevant national and state legislation and professional and ethical guidelines
SURG 6.11 Provide accurate and ethical certification when required for sickness, employment, social benefits and other purposes
SURG 6.12  Manage, appraise and assess own performance in the provision of medical care for patients
SURG 6.13  Develop and apply strategies for self-care, personal support and caring for family
SURG 6.14  Teach and clinically supervise health students, junior doctors and other health professionals
SURG 6.15  Engage in continuous learning and professional development
SURG 6.16  Critically appraise and apply relevant research

Domain 7: Practise medicine in the rural and remote context

Themes: Resourcefulness, Flexibility, teamwork and technology, Responsiveness to context

Abilities

SURG 7.1  Demonstrate resourcefulness, independence and self-reliance while working effectively in geographic, social and professional isolation whilst maintaining own personal safety
SURG 7.2  Provide effective surgical care within own limitations when away from ready access to specialist medical, diagnostic and allied health services
SURG 7.3  Arrange referral to distant services in concert with the patient and/or carer considering the balance of potential benefits, harms and costs
SURG 7.4  Provide direct and distant clinical supervision and support for other rural and remote health care personnel
SURG 7.5  Use information and communication technology to provide medical care or facilitate access to specialised care for patients
SURG 7.6  Use information and communication technology to network and exchange information with distant colleagues
SURG 7.7  Respect local community norms and values in own life and work practices
SURG 7.8  Identify and acquire extended knowledge and skills to competently undertake appropriate investigations and formulate diagnosis of surgical conditions in rural and remote practice
SURG 7.9  Demonstrate a commitment to self-directed learning, continuing education and the conduct of quality assurance activities in the provision of surgical services in rural and remote practice
**Definition of terms**

<table>
<thead>
<tr>
<th>Common and important conditions that require surgical treatment include</th>
<th></th>
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<tbody>
<tr>
<td>Benign and malignant skin lesions</td>
<td></td>
</tr>
<tr>
<td>Skin infections (impetigo, cellulitis, abscesses, boils, haematoma)</td>
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<tr>
<td>Acute abdomen (appendicitis, biliary colic, cholelithiasis cholangitis, pancreatitis, oesophagitis / G.U./D.U., inflammatory bowel disease, renal causes, aortic/vascular aneurysm disease, diverticulitis / ischaemic colitis, acute infectious diarrhoeal illness, perforate viscus, strangulated herniae, visceral perforation and peritonitis</td>
<td></td>
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<tr>
<td>Tumours of the colon</td>
<td></td>
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<tr>
<td>Acute urinary retention</td>
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<tr>
<td>Non-surgical causes of abdominal pain</td>
<td></td>
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<tr>
<td>Pneumothorax, upper and lower airway obstruction, pleural effusion and haemorrhax, pericardial effusion, perforated oesophagus/Boerhaave’s syndrome, rib fractures</td>
<td></td>
</tr>
<tr>
<td>Renal tract tumour, renal tract calculus, renal trauma, urinary tract infections, torsion of testis</td>
<td></td>
</tr>
<tr>
<td>Anorectal disorders: perianal haematoma, perianal abscess</td>
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<tr>
<td>Neurosurgical conditions understanding the importance of localised/generalised signs (closed head injury, acute and chronic subdural haematoma, tumours of the CNS, vascular disasters of the CN, berry aneurysm, AVM, trauma to the spinal cord and peripheral nerves, intracranial haemorrhage)</td>
<td></td>
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<tr>
<td>Ophthalmological surgical conditions: sudden loss of vision, non-penetrating ocular trauma, corneal foreign bodies, corneal abrasion, hyphaema, lens dislocation, retinal detachment, penetrating eye wounds, eyelid and skin tumours, trauma and infections</td>
<td></td>
</tr>
<tr>
<td>Vascular surgical conditions: acute peripheral vascular occlusive disease/threatened limb, DVT, varicose veins, abdominal aortic aneurysm, venous ulceration and deep venous incompetence</td>
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</tr>
<tr>
<td>ENT surgical conditions: tympanic perforation, aural foreign bodies, otitis externa, tumours of the ear, nasal foreign bodies, nasal polyps and tumours, sinusitis, maxillary, and other sinuses, medical nasal conditions, throat and pharynx conditions, uvular oedema, tonsillitis/quinty, glottic and pharyngeal foreign bodies, epiglottitis, acute and chronic sinusitis</td>
<td></td>
</tr>
<tr>
<td>Emergency treatment for fractures: (Skull, cervical spine, orbit, zygoma, face, jaw, thoracic and lumbar spine, clavicle, ribs, pelvis, neck of humerus, supracondylar humerus, head of radius, mid forearm, distal forearm including Colles’ Smith’s, metacarpals especially scaphoid, digits, femur, tibia, Potts fracture, calcaneus, metatarsals</td>
<td></td>
</tr>
<tr>
<td>Crush injuries: systemic complications (fat embolism), compartment syndrome</td>
<td></td>
</tr>
<tr>
<td>Dislocations: jaw (temporomandibular joint), shoulder - anterior/posterior, patella, interphalangeal joints, lunate, femur, ankle</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Surgical management plans include</th>
<th>Arrange for referral and transfer if appropriate; outline indications for referral to specialised care; implement local management or local management with consultation; further investigations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common minor surgical procedures include</td>
<td>See essential skills below</td>
</tr>
</tbody>
</table>
Knowledge and Skills

Essential knowledge required

- Have basic knowledge of the normal embryology, anatomy, and pathology
- Possess the knowledge and clinical skills to competently undertake appropriate investigations and formulate diagnosis of surgical conditions
- Can explain common surgical procedures to patients
- Know appropriate sterilisation procedure for surgical instruments
- Understand concepts of angioplasty and bypass surgical techniques
- Describe and use triage principles for surgical conditions

Essential skills required

- Perform a physical examination: systemic signs and observations, inspection, percussion, abdominal palpation, rectal examination, pelvic examination and auscultation
- Perform cannulation, intravenous cutdown, fluid replacement, electrolyte balance assessment and replacement; blood gas analysis, transurethral catheterisation, suprapubic catheterization, nasogastric drainage
- Prescribe appropriate analgesia
- Excise benign and malignant skin lesions including: lipoma/sebaceous cysts; subcutaneous foreign bodies
- Perform cryotherapy of skin lesions
- Resect nail bed for chronic ingrown toenails,
- Perform local anaesthesia and tourniquet procedures
- Aspirate a subungual haematoma
- Drain thrombosed peri-anal haematoma
- Drain peri-anal abscess
- Examine the nares with a nasal speculum
- Differentiate between anterior and posterior bleeding for epistaxis
- Treat epistaxis including Simpsons balloon, perform nasal packing, including chemical, electrocautery
- Examine ear canals and recognise common and serious ear disease e.g. cholesteatoma, round window rupture
- Undertake hearing assessment including the interpretation of audiometry and tympanometry
- Syringe the external auditory canal and perform an aural toilet
- Insert ‘wicks’ into the ear canal
- Remove foreign bodies from the ear, nose and throat
- Perform indirect laryngoscopy, and identify laryngeal conditions (desirable)
Learning resources

Recommended texts and other resources

Appendix 1: Training

ACRRM Training Standards

ACRRM aims to support doctors through its vocational preparation program to ensure they learn the knowledge and skills they will need to work safely, competently, independently and confidently, as general practitioners anywhere in Australia. Particular focus is placed on preparation for work in the diverse range of rural and remote general practice settings.

ACRRM's training standards define the content, context, implementation and assessment of training.

These standards include the ACRRM:

- Primary Curriculum
- Advanced Specialised Training Curricula
- Standards for Accreditation of Supervisors and Teaching Posts for each stage of training and each Advanced Specialised Training Curricula
- Standards for Accreditation of Training Providers.

The ACRRM training standards ensure that registrars receive the highest quality training across a range of rural and remote general practice settings. To facilitate delivery of training in keeping with these standards, the College has developed a range of educational resources, and mechanisms for tracking, recording and certifying the achievement of training goals and assessment requirements. These resources are available to registrars who seek to train towards ACRRM Fellowship and to the training providers who are accredited to deliver this training.

ACRRM Training Pathways

ACRRM offers three different pathways by which registrars may train to meet the requirements for Fellowship of ACRRM (FACRRM). All pathways have the same training and assessment requirements.

Vocational Preparation Pathway

The Vocational Preparation Pathway (VPP) is the predominant pathway for training towards FACRRM and is ideal for new graduates. In this pathway, training is delivered by Regional Training Providers (RTPs) in the Australian General Practice Training program (AGPT). This pathway is funded by the Australian Government and auspiced by General Practice Education and Training Limited (GPET).

Registrars who wish to undertake training via this pathway must successfully gain a training place in the AGPT and enrol with ACRRM. Further information regarding AGPT enrolment is available at www.agpt.com.au.

Remote Vocational Training Scheme

The Remote Vocational Training Scheme (RVTS) was established in 1999 as a joint training initiative of ACRRM and the RACGP. It is now managed by the Remote Vocational Training Scheme Limited, and is funded by the Australian Government. This pathway provides vocational training for isolated rural general practitioners who otherwise could not undertake training except
by leaving their communities. The RVTS delivers a structured training program to these doctors mainly by distance education.

Registrars who wish to undertake their FACRRM training via this pathway must gain a training place with RVTS and enrol with ACRRM. Further information regarding RVTS enrolment is available at www.rvts.com.au.

**Independent Pathway**

The Independent Pathway (IP) is administered directly through ACRRM. The IP is pathway suited to practitioners who have broader and more extensive range of work experience than those who might elect to pursue training through the VPP or RVTS. Registrars on the IP must undertake a significant amount of self-directed learning. The pathway includes a structured education program. The pathway is a full fee paying pathway and is not subsidised or funded the Australian government.

Registrars who wish to undertake training via this pathway must successfully apply for training position with ACRRM. Further information regarding the IP is found at www.acrrm.org.au.

**Duration of Training**

FACRRM registrars are required to complete a minimum of 48 months full-time or equivalent part-time training in posts accredited by ACRRM. This has been determined as the minimum time required to achieve competence in the skills required for safe, independent general practice across a full and diverse range of healthcare settings across Australia, including rural and remote settings.

Training is comprised of:

- **12 months Core Clinical Training** in an accredited metropolitan, regional or rural hospitals
- **24 months Primary Rural and Remote Training** in accredited posts including general practices, hospitals, Aboriginal Medical Services, small rural hospitals and/or community-based facilities. Training must include experience in primary and community care, hospital and emergency care and living and practising in rural or remote locations.
- **12 months Advanced Specialised Training** in accredited advanced posts. Approved training areas for advanced posts include: Aboriginal and Torres Strait Islander Health, Academic Practice, Adult Internal Medicine Anaesthetics, Emergency Medicine, Mental Health, Obstetrics and Gynaecology, Paediatrics, Population Health, Remote Medicine and Surgery.
Teaching and Learning Methods

ACRRM accredited training providers are encouraged to use a variety of different teaching and learning methods in the delivery of the curriculum content. All teaching and learning methods should:

- be easily accessible and well designed
- be interactive and problem-based
- require critical thinking
- require application to the realities of rural and remote general practice, and
- challenge the learner to choose, judge and manipulate ideas and be resourceful.

Registrar learning experiences should include:

Supervised Structured Clinical Experience

- Opportunistic learning - learning and practising clinical skills in supervised environments
- Formative assessment - registrars are provided with feedback and guidance about their progress from their supervisor, external clinical educators and patients through two formative assessment tools: multi source feedback (MSF) and the mini clinical evaluation exercise (miniCEX)

Structured Learning Activities

- Learning plan development, documentation and review
- Workshops and courses - these may be undertaken in the registrar’s region, or in conjunction with a conference or other event, and can be used to teach specific clinical skills or problem-based approaches
- ACRRM accredited emergency medicine courses - e.g. EMST, APLS, ALSO, or REST
- Small group teaching - through seminars and tutorials, problem-based learning to encourage collaborative practice, problem solving, and knowledge and skill development
- Guided reflection on practice
- Regular education sessions with supervisor
- Online tutorials, discussion forums, satellite broadcasts, interactive videoconferencing and teleconferencing
- Problem based learning - learning based around specific clinical problems, which are solved through research, analysis and problem-solving, and presented back to a small group
- Videos, CD-ROMS and other audio visual resources
- Demonstration of particular skills - especially advanced clinical skills practice
- Teleconferencing - to provide a peer group support to discuss the various issues and case studies
- Small project work, case audits and research activities, and
- Application to practice - teaching and learning methods that are designed to apply evidence and theory to the practical realities of contemporary rural and remote general practice. This could include issues-based activities, critical thinking, decision-making exercises, leadership and management activities that include planning, implementation and evaluation; cross cultural issues and organisational skills development.
Self-Directed Learning Activities

- Peer group discussion – registrars may work in a tutorless group, which may include structured activities, projects, journal article review, problem solving and be used for collaborative research skills development
- Interactive computer based learning activities
- Undertaking research and projects, and
- Reflective journals – the use of reflective journals to record and monitor: attitudinal change, developing capability, clinical reasoning skills, insight and skills development; and to assist registrars to reflect upon their practice.

Teachers' Roles

A network of accredited training providers delivers ACRRM vocational training. They must provide registrars with vocational preparation programs that comply with ACRRM Standards. The following describes the main roles.

- **Supervisor** – each registrar must be linked to an ACRRM accredited supervisor who provides supervision, clinical skills training, monitoring, guidance and feedback on professional and educational development.
- **Clinical teachers** – a variety of teachers including general practitioners, experts in particular content areas, and specialists will contribute to various activities and workshops throughout the training time.
- **Cultural teachers** – community leaders and other experts will be involved in teaching the registrar about Aboriginal and Torres Strait Islander culture and health.
- **Medical educator** – The medical educator is a senior clinician, with experience in teaching and medical education, who works for a training provider. The medical educator:
  - provides information to the registrar cohort regarding opportunities to train towards Fellowship of ACRRM
  - provides advice to administrators, supervisors and registrars regarding the key components of the pathway
  - facilities the development of a training plan to ensure training requirements are met
  - participates in the development of learning plans for ACRRM registrars
  - monitors the registrar’s achievement of their broad goals through learning plans
  - participates in, and advises on, placement allocation for ACRRM registrars, including the Advanced Specialised Training year, and
  - facilitates and encourages ACRRM accreditation of posts, including Advanced Specialised Training posts.

Essential Resources

There are a number of essential resources that registrars will need to access throughout their training time. These can be found electronically on the ACRRM website [www.acrrm.org.au](http://www.acrrm.org.au).

The core educational resources include:

- ACRRM Primary Curriculum
- Advanced Specialised Training Curricula
- ACRRM Standards for Accreditation of Supervisors and Teaching Posts for Core Clinical Training, Primary Rural and Remote Training and Advanced Specialised Training
- Handbook for Fellowship Assessment
- Procedural skills logbooks
- Training Policies
- ACRRM online training modules.
Appendix 2: Assessment

Assessment Principles

The ACRRM assessment program is based on the following principles:

- **Integration** – assessment is integrated across the full duration of learning, taking place at regular intervals throughout the entire training program
- **Validity, reliability, fairness** – the assessment program is based on best practice evidence, international perspectives and proven valid, reliable, clinically relevant and fair methods that are adapted to the rural and remote context
- **Academic rigour and educational impact** – the assessment program is academically rigorous and is designed to have a positive educational impact that drives learning favourably
- **Flexibility** – the assessment program has multiple pathways, flexible timing and options for registrars, that are practice-based or modular, depending upon their learning style and progress
- **Performance focus** – where possible the assessment program is performance-based, which enables a smooth transition into ACRRM’s ongoing Professional Development Program
- **Practice orientation and acceptability** – some of the assessment tools, are designed to take place in the doctor’s own workplace, to ensure relevance and acceptability by the profession
- **Outcomes focus** – the Primary Curriculum abilities are organised under the seven domains of rural and remote general practice these form the basis for the assessment blueprint. The abilities, are then applied to the content listed in the 18 curriculum statements
- **Feasibility** – assessment is designed to be feasible with regards to cost, timeframe and the geographical location of registrars
- **Legal defensibility** – assessment covers the core areas of competence required for general practice vocational registration anywhere in Australia, plus the extended skills required of a general practitioner working in rural or remote settings
- **Accessibility, flexibility** – the assessment tools are designed specifically to meet the needs of rural and remote contexts, including distance learning modes, flexible delivery, and interactive information technology approaches, and
- **Adherence to values and standards** – The assessment components reflect the values of ACRRM in process, content and the nature of rural and remote general practice, and are based on professional standards and criteria for assessment and certification.

Assessment Framework

The structure of assessment is based on an adaptation of *Miller’s Pyramid* 23 shown below (Figure 1). This Pyramid represents a behavioural approach to assessment with four progressive hierarchical phases of competence. The first being that the registrar ‘knows’, the second that they

---

‘know how’, the third that they can ‘show how’, and finally, what the registrar actually ‘does’ in the workplace. 24

Figure 1: Miller’s Pyramid

Figure 1 above, illustrates the well-established principle that assessment of knowledge, while important, is not sufficient to predict the application of this knowledge to practice. 25 Therefore registrars are assessed using a range of formative and summative assessment methods, which cover the four stages of Miller’s Pyramid. When combined together, these assessment methods form a rigorous, defensible formative and summative assessment program with positive educational impact.

Formative Assessment

The assessment program includes formative processes that provide opportunities for the registrar to receive feedback and gauge their own performance throughout the course of training. These include:

1. Regular supervisor feedback – timely and ongoing feedback on performance in practice
2. Practice Multiple Choice Question (MCQ) Examination
3. Multiple direct observations of performance – this includes formative Mini Clinical Evaluation Exercises (miniCEX) and other direct observation and

4. **StAMPS Study groups and coaching workshops**

**Summative Assessment**

There are five summative assessments that all registrars must complete successfully in order to be awarded the FACRRM. The summative assessment methods were chosen for their combined reliability, validity, feasibility, acceptability and educational impact.\(^{26}\)

They have been mapped against the assessment blueprint, to ensure that each learning outcome is assessed using the most appropriate method.

The five summative assessment methods are:

1. **Multiple Choice Question (MCQ) Examination**
2. **Structured Assessment using Multiple Patient Scenarios (StAMPS) Examination**
4. **Multi-Source Feedback (MSF)**, and
5. **Mini-clinical evaluation exercises (MiniCEX)** – to assess clinical and interpersonal skills.

**Description of Assessment Methods**

**MCQ Examination**

The MCQ examination is a highly reliable method for testing knowledge and clinical reasoning. It is used to test the registrars’ applied clinical knowledge, recall and reasoning across the curriculum content areas. The examination consists of 125 multiple-choice questions undertaken online in examination conditions over a three-hour period. It can be undertaken anytime from the beginning of the second year of training, though it is strongly recommended that registrars undertake it at a later stage in their training to ensure they have reasonable experience in rural and remote practice.

**StAMPS Examination**

Structured Assessment using Multiple Patient Scenarios (StAMPS) is an innovative assessment modality in which a combined OSCE / VIVA styles of examination is undertaken via videoconference or face-to-face. It is similar to an OSCE in that clinical scenarios are presented within specific “stations”. It also has some similarities to the “admission OSCE” or “multiple mini-interview” used by some medical schools to assist in admission into their medical program.\(^{27}\) In an OSCE, the registrars rotate around a series of stations. The key difference with StAMPS is that the registrars remain in one place (at a videoconference facility in, or close to, their own community) or in a room at an exam centre and the examiners rotate around the registrars.

The StAMPS examination was developed specifically to provide FACRRM registrars in rural and remote locations with a reliable, affordable, flexible, acceptable and contextually relevant method for assessment of clinical reasoning and problem solving skills. It measures each registrar’s ability to discuss, within a realistic period of time, the implications arising from several common and important clinical scenarios seen in rural and remote contexts. It has been delivered twice a year since 2008.


Procedural Skills Log Book

The procedural skills logbook enables registrars to record achievement of the essential psychomotor skills required for competent independent general practice. These skills have been derived from the curriculum statements in the ACRRM Primary Curriculum. As the clinical skills are competently achieved, the registrar records them in the logbook and the supervisor/clinical teacher provides ‘sign off’. This is an ongoing process throughout the entire course of the training program.

Multi Source Feedback

Multi Source Feedback (MSF) is a 360-degree practice-based assessment of the registrars’ interpersonal and professional attributes. It is not designed to assess clinical knowledge or skills.

The registrar undertakes a process of gaining structured written feedback from those people that they interact with on a daily basis:

1. Health professionals – supervisors, practice managers, practice nurses, specialists, hospital staff, Indigenous Health Workers, allied health professionals, others, and
2. Community-Patients – families and carers who have consulted with the registrar.

MiniCEX

The Mini Clinical Evaluation Exercise (miniCEX) is a practice-based method for simultaneously observing and assessing registrars and offering them feedback on their performance.

The miniCEX assesses history taking, physical examination, professionalism, clinical judgment, communication skills, organisation skills, efficiency and overall clinical competence. It is used both formatively and summatively. Formative miniCEX enables registrars to identify their strengths and weaknesses through immediate feedback.

The miniCEX provides a valid, reliable and realistic clinical assessment which examines clinical skills in the registrar’s own clinical setting. In particular, it has been found to have high face validity.

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ACRRM eHealth Data Report

15 November 2013
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1. **ACRRM E-HEALTH WEBSITE STATISTICS**

The first section of this report presents the key monitoring statistics for the ACRRM eHealth website since the resource was published on the internet in September 2011 to 31 October 2013.

Table 1 displays the ACRRM eHealth website statistics by month. During October 2013, there were a total of 4539 visits to the website and 11,022 page views. Approximately 74% of traffic was by new visitors to the site.

**Table 1 eHealth website statistics by month**

<table>
<thead>
<tr>
<th>eHealth website statistics</th>
<th>Visits</th>
<th>Unique visitors</th>
<th>Page views</th>
<th>Pages/visit</th>
<th>Bounce rate</th>
<th>Avg. time on site</th>
<th>New visits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep 2011</td>
<td>378</td>
<td>208</td>
<td>2168</td>
<td>5.74</td>
<td>36%</td>
<td>7m12s</td>
<td>53.4%</td>
</tr>
<tr>
<td>Oct 2011</td>
<td>730</td>
<td>471</td>
<td>3291</td>
<td>4.51</td>
<td>38.2%</td>
<td>5m01s</td>
<td>58.3%</td>
</tr>
<tr>
<td>Nov 2011</td>
<td>629</td>
<td>357</td>
<td>3287</td>
<td>5.23</td>
<td>30%</td>
<td>6m35s</td>
<td>43.7%</td>
</tr>
<tr>
<td>Dec 2011</td>
<td>479</td>
<td>319</td>
<td>2577</td>
<td>5.38</td>
<td>33%</td>
<td>6m44s</td>
<td>48.0%</td>
</tr>
<tr>
<td>Jan 2012</td>
<td>687</td>
<td>423</td>
<td>2863</td>
<td>5.62</td>
<td>36.39%</td>
<td>6m34s</td>
<td>46.1%</td>
</tr>
<tr>
<td>Feb 2012</td>
<td>877</td>
<td>573</td>
<td>4535</td>
<td>4.96</td>
<td>39.91%</td>
<td>4m59s</td>
<td>52.0%</td>
</tr>
<tr>
<td>March 2012</td>
<td>1238</td>
<td>731</td>
<td>6054</td>
<td>4.89</td>
<td>36.03%</td>
<td>5m59s</td>
<td>48.71%</td>
</tr>
<tr>
<td>April 2012</td>
<td>1261</td>
<td>824</td>
<td>6266</td>
<td>4.97</td>
<td>37.27%</td>
<td>5m54s</td>
<td>51.94%</td>
</tr>
<tr>
<td>May 2012</td>
<td>1704</td>
<td>1069</td>
<td>8406</td>
<td>4.93</td>
<td>36.80%</td>
<td>6m15s</td>
<td>52.23%</td>
</tr>
<tr>
<td>June 2012</td>
<td>1892</td>
<td>1053</td>
<td>9460</td>
<td>5.00</td>
<td>37.21%</td>
<td>6m15s</td>
<td>42.71%</td>
</tr>
<tr>
<td>July 2012</td>
<td>1605</td>
<td>814</td>
<td>9654</td>
<td>6.01</td>
<td>33.02%</td>
<td>8m20s</td>
<td>38.19%</td>
</tr>
<tr>
<td>Aug 2012</td>
<td>2181</td>
<td>975</td>
<td>13,545</td>
<td>6.21</td>
<td>30.72%</td>
<td>8m30s</td>
<td>34.11%</td>
</tr>
<tr>
<td>Sept 2012</td>
<td>2855</td>
<td>1127</td>
<td>20,668</td>
<td>7.24</td>
<td>29.70%</td>
<td>10m49s</td>
<td>29.49%</td>
</tr>
<tr>
<td>Oct 2012</td>
<td>3274</td>
<td>1292</td>
<td>21,254</td>
<td>6.49</td>
<td>31.98%</td>
<td>9m13s</td>
<td>29.35%</td>
</tr>
<tr>
<td>Nov 2012</td>
<td>2638</td>
<td>1094</td>
<td>15,646</td>
<td>5.93</td>
<td>37.41%</td>
<td>7m24s</td>
<td>31.39%</td>
</tr>
<tr>
<td>Dec 2012</td>
<td>1817</td>
<td>944</td>
<td>9592</td>
<td>5.28</td>
<td>39.30%</td>
<td>6m34s</td>
<td>39.30%</td>
</tr>
<tr>
<td>Jan 2013</td>
<td>2127</td>
<td>1012</td>
<td>10,630</td>
<td>5.00</td>
<td>38.60%</td>
<td>6m26s</td>
<td>35.59%</td>
</tr>
<tr>
<td>Feb 2013</td>
<td>2425</td>
<td>1156</td>
<td>11,620</td>
<td>4.79</td>
<td>37.98%</td>
<td>6m18s</td>
<td>35.75%</td>
</tr>
<tr>
<td>March 2013</td>
<td>3005</td>
<td>1785</td>
<td>12,681</td>
<td>4.22</td>
<td>48.12%</td>
<td>5m00s</td>
<td>47.52%</td>
</tr>
<tr>
<td>April 2013</td>
<td>3640</td>
<td>2578</td>
<td>12,390</td>
<td>3.40</td>
<td>60.52%</td>
<td>3m33s</td>
<td>63.54%</td>
</tr>
<tr>
<td>May 2013</td>
<td>4501</td>
<td>3295</td>
<td>14,627</td>
<td>3.25</td>
<td>60.50%</td>
<td>2m48s</td>
<td>64.94%</td>
</tr>
<tr>
<td>June 2013</td>
<td>3710</td>
<td>2962</td>
<td>9933</td>
<td>2.68</td>
<td>67.98%</td>
<td>2m03s</td>
<td>71.86%</td>
</tr>
<tr>
<td>July 2013</td>
<td>4121</td>
<td>3382</td>
<td>9500</td>
<td>2.31</td>
<td>67.44%</td>
<td>1m46s</td>
<td>74.50%</td>
</tr>
<tr>
<td>Aug 2013</td>
<td>4006</td>
<td>3393</td>
<td>9641</td>
<td>2.41</td>
<td>69.27%</td>
<td>1m37s</td>
<td>76.88%</td>
</tr>
<tr>
<td>Sep 2013</td>
<td>4449</td>
<td>3564</td>
<td>10,754</td>
<td>2.42</td>
<td>68.02%</td>
<td>1m44s</td>
<td>71.63%</td>
</tr>
<tr>
<td>Oct 2013</td>
<td>4539</td>
<td>3774</td>
<td>11,022</td>
<td>2.43</td>
<td>68.08%</td>
<td>1m53s</td>
<td>74.20%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60,768</strong></td>
<td><strong>39,175</strong></td>
<td><strong>252,882</strong></td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>
Figure 1 shows the number of visits (including unique visits) to the ACRRM eHealth website. During October 2013, there were 4539 visitors and 3774 unique visitors to the website.

Figure 1 Visits/Unique visits
Figure 2 presents the percentage of new visits to the ACRRM eHealth website by month. During October 2013, 74% of traffic to the ACRRM e-Health website consisted of new visitors.
Figure 3 displays the total number of ACRRM eHealth web page views by month. During October 2013, 11,022 pages were viewed.
Figure 4 shows the number of pages visited by users of the ACRRM eHealth website by month. On average, 2.43 pages were viewed per visit during October 2013.

<table>
<thead>
<tr>
<th>Month</th>
<th>Pages visited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep-13</td>
<td>2.42</td>
</tr>
<tr>
<td>Aug-13</td>
<td>2.41</td>
</tr>
<tr>
<td>Jul-13</td>
<td>2.31</td>
</tr>
<tr>
<td>Jun-13</td>
<td>2.68</td>
</tr>
<tr>
<td>May-13</td>
<td>3.25</td>
</tr>
<tr>
<td>Apr-13</td>
<td>3.4</td>
</tr>
<tr>
<td>Mar-13</td>
<td>4.22</td>
</tr>
<tr>
<td>Feb-13</td>
<td>4.79</td>
</tr>
<tr>
<td>Jan-13</td>
<td>5.00</td>
</tr>
<tr>
<td>Dec-12</td>
<td>5.28</td>
</tr>
<tr>
<td>Nov-12</td>
<td>5.93</td>
</tr>
<tr>
<td>Oct-12</td>
<td>6.49</td>
</tr>
<tr>
<td>Sep-12</td>
<td>7.24</td>
</tr>
<tr>
<td>Aug-12</td>
<td>6.21</td>
</tr>
<tr>
<td>Jul-12</td>
<td>6.01</td>
</tr>
<tr>
<td>Jun-12</td>
<td>5.00</td>
</tr>
<tr>
<td>May-12</td>
<td>4.93</td>
</tr>
<tr>
<td>Apr-12</td>
<td>4.97</td>
</tr>
<tr>
<td>Mar-12</td>
<td>4.89</td>
</tr>
<tr>
<td>Feb-12</td>
<td>4.96</td>
</tr>
<tr>
<td>Jan-12</td>
<td>5.62</td>
</tr>
<tr>
<td>Dec-11</td>
<td>5.38</td>
</tr>
<tr>
<td>Nov-11</td>
<td>5.23</td>
</tr>
<tr>
<td>Oct-11</td>
<td>4.51</td>
</tr>
<tr>
<td>Sep-11</td>
<td>5.74</td>
</tr>
</tbody>
</table>
Figure 5 presents the average time users have spent on the ACRRM eHealth website by month. On average, visitors spent 1 minute and 53 seconds on the site during October 2013.
Table 2 shows the top 10 most viewed web pages on the ACRRM eHealth website during October 2013. In addition to the home page, the most frequently viewed web pages related to the site’s Provider Directory, ACRRM and NEHTA questionnaire, and Forum.

Table 2 Top 10 most viewed eHealth website pages

<table>
<thead>
<tr>
<th>Web page</th>
<th>Page views</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>/home</td>
<td>997</td>
<td>1</td>
</tr>
<tr>
<td>/provider-directory</td>
<td>246</td>
<td>2</td>
</tr>
<tr>
<td>/acrrm-and-nehta-questionnaire</td>
<td>244</td>
<td>3</td>
</tr>
<tr>
<td>/forum</td>
<td>244</td>
<td>3</td>
</tr>
<tr>
<td>/403.html?page=/forum/general-ehealth-discussion/getting-ready-ehealth&amp;from=</td>
<td>139</td>
<td>4</td>
</tr>
<tr>
<td>/telehealth-standards</td>
<td>125</td>
<td>5</td>
</tr>
<tr>
<td>/user/login?destination=acrrm-ehealth-front</td>
<td>114</td>
<td>6</td>
</tr>
<tr>
<td>/forum/general-ehealth-discussion/getting-ready-ehealth</td>
<td>105</td>
<td>7</td>
</tr>
<tr>
<td>/technology-directory</td>
<td>102</td>
<td>8</td>
</tr>
<tr>
<td>/provider-directory?term=&amp;type[consultant]=consultant</td>
<td>101</td>
<td>9</td>
</tr>
<tr>
<td>/provider/geraldton-regional-aboriginal-medical-service</td>
<td>82</td>
<td>10</td>
</tr>
</tbody>
</table>
2. REGISTRANT DATA

The following section of this report presents key demographical information about the registered users of the ACRRM eHealth website as at 15 November 2013. As at the current reporting period, 2103 users have registered on the website.

Table 3 displays the number of registered users on the ACRRM eHealth website by their state and Australian Standard Geographical Classification – Remoteness Areas (ASGC-RA) location. As can be seen in the table and Figure 6, approximately 75% of registered users are located in one of three states: New South Wales (28%), Queensland (26%), or Victoria (22%).

Table 3 Registered users by State & ASGC-RA

<table>
<thead>
<tr>
<th>State</th>
<th>RA 1</th>
<th>RA 2</th>
<th>RA 3</th>
<th>RA 4</th>
<th>RA 5</th>
<th>Overseas</th>
<th>Unknown</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT</td>
<td>54</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>70</td>
</tr>
<tr>
<td>QLD</td>
<td>227</td>
<td>121</td>
<td>149</td>
<td>26</td>
<td>16</td>
<td>0</td>
<td>3</td>
<td>542</td>
</tr>
<tr>
<td>NSW</td>
<td>235</td>
<td>228</td>
<td>104</td>
<td>11</td>
<td>4</td>
<td>0</td>
<td>9</td>
<td>591</td>
</tr>
<tr>
<td>VIC</td>
<td>280</td>
<td>123</td>
<td>39</td>
<td>5</td>
<td>4</td>
<td>0</td>
<td>7</td>
<td>458</td>
</tr>
<tr>
<td>TAS</td>
<td>3</td>
<td>20</td>
<td>12</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>45</td>
</tr>
<tr>
<td>SA</td>
<td>97</td>
<td>21</td>
<td>31</td>
<td>13</td>
<td>6</td>
<td>0</td>
<td>2</td>
<td>170</td>
</tr>
<tr>
<td>WA</td>
<td>67</td>
<td>15</td>
<td>27</td>
<td>13</td>
<td>13</td>
<td>0</td>
<td>2</td>
<td>137</td>
</tr>
<tr>
<td>NT</td>
<td>0</td>
<td>0</td>
<td>23</td>
<td>16</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>48</td>
</tr>
<tr>
<td>Overseas</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>28</td>
<td>3</td>
<td>32</td>
</tr>
<tr>
<td>Unknown</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>14</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>966</td>
<td>533</td>
<td>387</td>
<td>87</td>
<td>53</td>
<td>28</td>
<td>49</td>
<td>2103</td>
</tr>
</tbody>
</table>

Figure 6 Registrants by state
Figure 7 shows registrant distribution by ASGC-RA classification. Most registrants are located in ASGC-RA 1 (46%), followed by ASGC-RA 2 (25%) and ASGC-RA 3 (18%). A minority 7% of registrants are located in ASGC-RA 4 or 5.

**Figure 7 Registrants by ASGC-RA**

<table>
<thead>
<tr>
<th>RA 1</th>
<th>RA 2</th>
<th>RA 3</th>
<th>RA 4</th>
<th>RA 5</th>
<th>Unknown</th>
<th>Overseas</th>
</tr>
</thead>
<tbody>
<tr>
<td>46%</td>
<td>25%</td>
<td>18%</td>
<td>4%</td>
<td>3%</td>
<td>2%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Figure 8 displays the percentage of registrants according to their self-reported TeleHealth roles. Of the registrants who provided this information, over half are medical specialists (30.9%) or GPs/rural generalist doctors (21.8%).

**Figure 8 Registered users by TeleHealth Role**

<table>
<thead>
<tr>
<th>Role</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialist</td>
<td>30.9%</td>
</tr>
<tr>
<td>GP/Rural generalist doctor</td>
<td>21.8%</td>
</tr>
<tr>
<td>Medicare Local staff</td>
<td>13.1%</td>
</tr>
<tr>
<td>Health service administrator</td>
<td>10.0%</td>
</tr>
<tr>
<td>Telehealth technology industry</td>
<td>6.9%</td>
</tr>
<tr>
<td>Nurse</td>
<td>5.9%</td>
</tr>
<tr>
<td>TeleHealth Support Officer</td>
<td>4.2%</td>
</tr>
<tr>
<td>Allied health professionals</td>
<td>3.4%</td>
</tr>
<tr>
<td>Govt bureaucrat</td>
<td>2.4%</td>
</tr>
<tr>
<td>Aboriginal Health Worker</td>
<td>1.3%</td>
</tr>
<tr>
<td>ATHAC</td>
<td>0.1%</td>
</tr>
</tbody>
</table>
The disciplines of specialists registered on the ACRRM eHealth website are displayed in Table 4. There are 43 different disciplines listed, with the most represented specialities being psychiatry (13.8%) and geriatrics (6.6%).

**Table 4 Registered users by Specialty**

<table>
<thead>
<tr>
<th>Specialty</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychiatry</td>
<td>54</td>
<td>13.8%</td>
</tr>
<tr>
<td>Geriatrics</td>
<td>26</td>
<td>6.6%</td>
</tr>
<tr>
<td>Addiction medicine</td>
<td>20</td>
<td>5.1%</td>
</tr>
<tr>
<td>Cardiology</td>
<td>20</td>
<td>5.1%</td>
</tr>
<tr>
<td>Orthopaedic Surgery</td>
<td>20</td>
<td>5.1%</td>
</tr>
<tr>
<td>Urologist</td>
<td>20</td>
<td>5.1%</td>
</tr>
<tr>
<td>General surgery</td>
<td>19</td>
<td>4.9%</td>
</tr>
<tr>
<td>Endocrinology</td>
<td>18</td>
<td>4.6%</td>
</tr>
<tr>
<td>General paediatrics</td>
<td>15</td>
<td>3.8%</td>
</tr>
<tr>
<td>General medicine</td>
<td>15</td>
<td>3.8%</td>
</tr>
<tr>
<td>Gastroenterology and Hepatology</td>
<td>13</td>
<td>3.3%</td>
</tr>
<tr>
<td>Occupational and environmental medicine</td>
<td>11</td>
<td>2.8%</td>
</tr>
<tr>
<td>Plastic and Reconstructive Surgery</td>
<td>11</td>
<td>2.8%</td>
</tr>
<tr>
<td>Rheumatology</td>
<td>11</td>
<td>2.8%</td>
</tr>
<tr>
<td>Palliative medicine</td>
<td>10</td>
<td>2.6%</td>
</tr>
<tr>
<td>Respiratory and Sleep</td>
<td>10</td>
<td>2.6%</td>
</tr>
<tr>
<td>Neurologist</td>
<td>9</td>
<td>2.3%</td>
</tr>
<tr>
<td>Ophthalmologist</td>
<td>7</td>
<td>1.8%</td>
</tr>
<tr>
<td>Nephrology</td>
<td>6</td>
<td>1.5%</td>
</tr>
<tr>
<td>Rehabilitation medicine</td>
<td>6</td>
<td>1.5%</td>
</tr>
<tr>
<td>Anaesthetian</td>
<td>5</td>
<td>1.3%</td>
</tr>
<tr>
<td>Dermatologist</td>
<td>5</td>
<td>1.3%</td>
</tr>
<tr>
<td>Emergency medicine</td>
<td>5</td>
<td>1.3%</td>
</tr>
<tr>
<td>General practice</td>
<td>5</td>
<td>1.3%</td>
</tr>
<tr>
<td>Haematology</td>
<td>5</td>
<td>1.3%</td>
</tr>
<tr>
<td>Neurosurgery</td>
<td>5</td>
<td>1.3%</td>
</tr>
<tr>
<td>Immunology</td>
<td>4</td>
<td>1.0%</td>
</tr>
<tr>
<td>Paediatric Surgery</td>
<td>4</td>
<td>1.0%</td>
</tr>
<tr>
<td>Vascular Surgery</td>
<td>4</td>
<td>1.0%</td>
</tr>
<tr>
<td>Infectious Diseases</td>
<td>3</td>
<td>0.8%</td>
</tr>
<tr>
<td>Obstetrics and gynaecological ultrasound</td>
<td>3</td>
<td>0.8%</td>
</tr>
<tr>
<td>Otolaryngology - head and neck surgery</td>
<td>3</td>
<td>0.8%</td>
</tr>
<tr>
<td>Radiation oncology</td>
<td>3</td>
<td>0.8%</td>
</tr>
<tr>
<td>Reproductive Endocrinology and Infertility</td>
<td>3</td>
<td>0.8%</td>
</tr>
<tr>
<td>Gynaecological oncology</td>
<td>2</td>
<td>0.5%</td>
</tr>
<tr>
<td>Intensive Care</td>
<td>2</td>
<td>0.5%</td>
</tr>
<tr>
<td>Public health medicine</td>
<td>2</td>
<td>0.5%</td>
</tr>
<tr>
<td>Sexual health medicine</td>
<td>2</td>
<td>0.5%</td>
</tr>
<tr>
<td>Cardio-thoracic Surgery</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>Clinical pharmacology</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>Community child health</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>Oral and Maxillofacial</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>Paediatric emergency medicine</td>
<td>1</td>
<td>0.3%</td>
</tr>
</tbody>
</table>
As shown in Figure 9, one-third of the nurses registered on the ACRRM eHealth website are practice nurses.

**Figure 9 Registered nurses by type**

<table>
<thead>
<tr>
<th>Role</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice Nurse</td>
<td>29%</td>
</tr>
<tr>
<td>Other</td>
<td>23%</td>
</tr>
<tr>
<td>General Nurse</td>
<td>21%</td>
</tr>
<tr>
<td>Midwife</td>
<td>18%</td>
</tr>
<tr>
<td>Nurse Practitioner</td>
<td>9%</td>
</tr>
</tbody>
</table>

As shown in Figure 10, almost half of the health service administrators registered on the ACRRM eHealth website are practice managers.

**Figure 10 Registered health service administrators by type**

<table>
<thead>
<tr>
<th>Role</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice Manager</td>
<td>47%</td>
</tr>
<tr>
<td>Other</td>
<td>20%</td>
</tr>
<tr>
<td>CEO</td>
<td>14%</td>
</tr>
<tr>
<td>Project officer</td>
<td>11%</td>
</tr>
<tr>
<td>Coordinator</td>
<td>6%</td>
</tr>
<tr>
<td>IT officer</td>
<td>2%</td>
</tr>
</tbody>
</table>

As shown in Figure 11, most TeleHealth support officers registered on the ACRRM eHealth website are associated with a Medicare Local (59%), a College (18%) or the National Aboriginal Community Controlled Health Organisation (NACCHO) (16%).
The distribution of registrants by their affiliation with a Medicare Local is displayed in Table 5.

**Table 5 Registered users by Medicare Local**

<table>
<thead>
<tr>
<th>Medicare Local</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>New England</td>
<td>112</td>
<td>6.3%</td>
</tr>
<tr>
<td>Metro North Brisbane</td>
<td>99</td>
<td>5.6%</td>
</tr>
<tr>
<td>Australian Capital Territory</td>
<td>98</td>
<td>5.5%</td>
</tr>
<tr>
<td>Inner North West Melbourne</td>
<td>76</td>
<td>4.3%</td>
</tr>
<tr>
<td>Townsville - Mackay</td>
<td>69</td>
<td>3.9%</td>
</tr>
<tr>
<td>Central Adelaide and Hills</td>
<td>67</td>
<td>3.8%</td>
</tr>
<tr>
<td>North Coast NSW</td>
<td>66</td>
<td>3.7%</td>
</tr>
<tr>
<td>Darling Downs - South West Queensland</td>
<td>59</td>
<td>3.3%</td>
</tr>
<tr>
<td>Greater Metro South Brisbane</td>
<td>53</td>
<td>3.0%</td>
</tr>
<tr>
<td>Loddon - Mallee - Murray</td>
<td>51</td>
<td>2.9%</td>
</tr>
<tr>
<td>Eastern Sydney</td>
<td>49</td>
<td>2.8%</td>
</tr>
<tr>
<td>Gold Coast</td>
<td>49</td>
<td>2.8%</td>
</tr>
<tr>
<td>Far North Queensland</td>
<td>45</td>
<td>2.5%</td>
</tr>
<tr>
<td>Country North SA</td>
<td>40</td>
<td>2.2%</td>
</tr>
<tr>
<td>Western NSW</td>
<td>38</td>
<td>2.1%</td>
</tr>
<tr>
<td>Inner East Melbourne</td>
<td>38</td>
<td>2.1%</td>
</tr>
<tr>
<td>Central Queensland</td>
<td>35</td>
<td>2.0%</td>
</tr>
<tr>
<td>Hume</td>
<td>33</td>
<td>1.9%</td>
</tr>
<tr>
<td>Perth Central and East Metro</td>
<td>31</td>
<td>1.7%</td>
</tr>
<tr>
<td>South Eastern Melbourne</td>
<td>30</td>
<td>1.7%</td>
</tr>
<tr>
<td>Northern Territory</td>
<td>30</td>
<td>1.7%</td>
</tr>
<tr>
<td>Tasmania</td>
<td>28</td>
<td>1.6%</td>
</tr>
<tr>
<td>Southern NSW</td>
<td>26</td>
<td>1.5%</td>
</tr>
<tr>
<td>Location</td>
<td>Cases</td>
<td>Percentage</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-------</td>
<td>------------</td>
</tr>
<tr>
<td>Bayside</td>
<td>26</td>
<td>1.5%</td>
</tr>
<tr>
<td>Inner West Sydney</td>
<td>24</td>
<td>1.3%</td>
</tr>
<tr>
<td>Western Sydney</td>
<td>24</td>
<td>1.3%</td>
</tr>
<tr>
<td>Murrumbidgee</td>
<td>24</td>
<td>1.3%</td>
</tr>
<tr>
<td>Illawarra - Shoalhaven</td>
<td>23</td>
<td>1.3%</td>
</tr>
<tr>
<td>Gippsland</td>
<td>22</td>
<td>1.2%</td>
</tr>
<tr>
<td>Goldfields - Midwest</td>
<td>22</td>
<td>1.2%</td>
</tr>
<tr>
<td>Northern Sydney</td>
<td>21</td>
<td>1.2%</td>
</tr>
<tr>
<td>Grampians</td>
<td>21</td>
<td>1.2%</td>
</tr>
<tr>
<td>South West WA</td>
<td>21</td>
<td>1.2%</td>
</tr>
<tr>
<td>Macedon Ranges and North Western Melbourne</td>
<td>20</td>
<td>1.1%</td>
</tr>
<tr>
<td>Northern Melbourne</td>
<td>20</td>
<td>1.1%</td>
</tr>
<tr>
<td>Eastern Melbourne</td>
<td>18</td>
<td>1.0%</td>
</tr>
<tr>
<td>Wide Bay</td>
<td>17</td>
<td>1.0%</td>
</tr>
<tr>
<td>Nepean - Blue Mountains</td>
<td>16</td>
<td>0.9%</td>
</tr>
<tr>
<td>Great South Coast</td>
<td>15</td>
<td>0.8%</td>
</tr>
<tr>
<td>Sunshine Coast</td>
<td>15</td>
<td>0.8%</td>
</tr>
<tr>
<td>South Eastern Sydney</td>
<td>14</td>
<td>0.8%</td>
</tr>
<tr>
<td>Central Coast NSW</td>
<td>14</td>
<td>0.8%</td>
</tr>
<tr>
<td>Southern Adelaide - Fleurieu - Kangaroo Island</td>
<td>14</td>
<td>0.8%</td>
</tr>
<tr>
<td>Hunter Urban</td>
<td>13</td>
<td>0.7%</td>
</tr>
<tr>
<td>Barwon</td>
<td>13</td>
<td>0.7%</td>
</tr>
<tr>
<td>Central and North West Queensland</td>
<td>13</td>
<td>0.7%</td>
</tr>
<tr>
<td>Country South SA</td>
<td>11</td>
<td>0.6%</td>
</tr>
<tr>
<td>Kimberley - Pilbara</td>
<td>11</td>
<td>0.6%</td>
</tr>
<tr>
<td>Sydney North Shore and Beaches</td>
<td>10</td>
<td>0.6%</td>
</tr>
<tr>
<td>West Moreton - Oxley</td>
<td>10</td>
<td>0.6%</td>
</tr>
<tr>
<td>South Western Sydney</td>
<td>10</td>
<td>0.6%</td>
</tr>
<tr>
<td>Northern Adelaide</td>
<td>9</td>
<td>0.5%</td>
</tr>
<tr>
<td>Perth South Coastal</td>
<td>9</td>
<td>0.5%</td>
</tr>
<tr>
<td>Goulburn Valley</td>
<td>8</td>
<td>0.4%</td>
</tr>
<tr>
<td>Hunter Rural</td>
<td>7</td>
<td>0.4%</td>
</tr>
<tr>
<td>Frankston - Mornington Peninsula</td>
<td>7</td>
<td>0.4%</td>
</tr>
<tr>
<td>Lower Murray</td>
<td>7</td>
<td>0.4%</td>
</tr>
<tr>
<td>Far West NSW</td>
<td>6</td>
<td>0.3%</td>
</tr>
<tr>
<td>Perth North Metro</td>
<td>6</td>
<td>0.3%</td>
</tr>
<tr>
<td>Fremantle</td>
<td>6</td>
<td>0.3%</td>
</tr>
<tr>
<td>Bentley - Armadale</td>
<td>6</td>
<td>0.3%</td>
</tr>
<tr>
<td>South Western Melbourne</td>
<td>3</td>
<td>0.2%</td>
</tr>
<tr>
<td>Rockingham-Kwinana-Peel</td>
<td>2</td>
<td>0.1%</td>
</tr>
</tbody>
</table>
3. REQUIREMENTS ANALYSIS DATA

The following section details the type of assistance that users of the ACRRM eHealth website have requested either at the time of their initial registration, or later, via the electronic ‘TeleHealth Support form’.

As at 15 November 2013, approximately one-third of users (n = 655) requested specific types of assistance from ACRRM eHealth staff at the time of registration. The frequency of these assistance requests, broken down by type, is presented in Figure 12. Please note that users were permitted to select multiple assistance requests.

As shown below, approximately half of these users requested assistance to set up a TeleHealth service for their patients and/or to contact specialists who offer a TeleHealth service. Advice regarding the purchase of suitable TeleHealth equipment was the third most requested type of assistance at the time of registration (44%), followed by requests to evaluate existing TeleHealth equipment or solutions (38%).

**Figure 12 Type of assistance requested during registration**

![Bar chart showing types of assistance requested during registration]

In addition to the request for ACRRM assistance during the registration process, registered users can also complete an online ‘TeleHealth Support form’. This form provides opportunity for users to make a more in-depth request for assistance from ACRRM. As at 15 November 2013, 197 users have requested further assistance using this form.

Figure 13 displays the type and frequency of requested assistance generated through the TeleHealth Support form since the launch of the ACRRM eHealth website. Please note that registrants were able to select multiple assistance requests.
Of the registrants who indicated that they would like assistance to contact specialists offering a TeleHealth service, most registrants indicated an interest in contacting a psychiatrist (31%), dermatologist (17%), and/or a geriatrician (14%).
Also on the ‘TeleHealth Support form’, registrants are asked to indicate the setting in which they expect to conduct TeleHealth consultations. Please note that registrants were able to select multiple consultation settings. As shown in Figure 15, most registrants (85%) expect to conduct TeleHealth consultations within their practice.

**Figure 15 Assistance requested by Teleconsultation site**

<table>
<thead>
<tr>
<th>Setting</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice/Surgery</td>
<td>85%</td>
</tr>
<tr>
<td>Aged care</td>
<td>17%</td>
</tr>
<tr>
<td>Outreach clinic</td>
<td>16%</td>
</tr>
<tr>
<td>Dedicated conference room</td>
<td>15%</td>
</tr>
<tr>
<td>Home visit</td>
<td>12%</td>
</tr>
<tr>
<td>Other</td>
<td>7%</td>
</tr>
</tbody>
</table>

In terms of the kinds of consultations users expect to conduct via TeleHealth, most registrants anticipate using it for assessment purposes (85%), to manage their patients’ progress (81%) and provide ongoing care (80%).

**Figure 16 Expected use of TeleHealth by Consultation type**

<table>
<thead>
<tr>
<th>Consultation Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment</td>
<td>85%</td>
</tr>
<tr>
<td>Management</td>
<td>81%</td>
</tr>
<tr>
<td>Ongoing care</td>
<td>80%</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>75%</td>
</tr>
<tr>
<td>Monitoring</td>
<td>70%</td>
</tr>
<tr>
<td>Treatment</td>
<td>68%</td>
</tr>
</tbody>
</table>
Specific information regarding registered users’ TeleHealth equipment and download / upload speed is presented in Figure 17 and Table 5. Please note that registrants were able to select multiple TeleHealth consultation equipment. Most registrants expect to use their desktop computer (64%) and/or laptop (41%) to conduct TeleHealth sessions.

**Figure 17 TeleHealth consultation equipment**

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer</td>
<td>64%</td>
</tr>
<tr>
<td>Notebook/laptop</td>
<td>41%</td>
</tr>
<tr>
<td>Unsure</td>
<td>20%</td>
</tr>
<tr>
<td>Tablet</td>
<td>17%</td>
</tr>
<tr>
<td>Room-based teleconference system</td>
<td>14%</td>
</tr>
<tr>
<td>Dedicated service</td>
<td>7%</td>
</tr>
<tr>
<td>Application-based solution</td>
<td>6%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
</tr>
</tbody>
</table>

Registered users’ self-reported download and upload speeds are presented in Table 5 according to their ASGC-RA location. Data collected as at 15 November 2013 indicate that registrants’ average download and upload speeds are somewhat similar throughout ASGC-RA 1 - 5 locations. However the sample of registrants who reported this particular information is admittedly small (n = 95), therefore these results should be interpreted with caution. As more data is collected from new registrants, a more accurate picture of users’ average download and upload speeds should develop.

**Table 6 Registered users’ average, minimum and maximum download / upload speeds by ASGC-RA**

<table>
<thead>
<tr>
<th>ASGC-RA</th>
<th>Mean Download speed (mbps)</th>
<th>Mean Upload speed (mbps)</th>
<th>Min Download speed (mbps)</th>
<th>Max Download speed (mbps)</th>
<th>Min Upload speed (mbps)</th>
<th>Max Upload speed (mbps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RA 1</td>
<td>6.17</td>
<td>0.85</td>
<td>0.12</td>
<td>16.34</td>
<td>0.13</td>
<td>3.68</td>
</tr>
<tr>
<td>RA 2</td>
<td>8.01</td>
<td>0.78</td>
<td>0.09</td>
<td>18.54</td>
<td>0.08</td>
<td>3.36</td>
</tr>
<tr>
<td>RA 3</td>
<td>8.27</td>
<td>0.68</td>
<td>1.30</td>
<td>17.47</td>
<td>0.09</td>
<td>3.00</td>
</tr>
<tr>
<td>RA 4</td>
<td>1.67</td>
<td>0.38</td>
<td>0.15</td>
<td>3.18</td>
<td>0.15</td>
<td>0.61</td>
</tr>
<tr>
<td>RA 5</td>
<td>6.90</td>
<td>0.62</td>
<td>2.67</td>
<td>12.06</td>
<td>0.41</td>
<td>0.78</td>
</tr>
</tbody>
</table>
4. PROVIDER DATA

The final section of this report presents key information about the health professionals who have registered on the ‘Provider Directory’ included on the ACRRM eHealth website. As at 15 November 2013, a total of 1089 registrants (Clinical Services) have indicated that they are current providers of TeleHealth services: 56% of whom are patient-end practitioners and 44% are specialist-end practitioners.

Figure 18 Providers by TeleHealth role

As shown in Figure 19, most providers (80%) are located in one of three states: Queensland (31%), Victoria (26%), or New South Wales (23%).

Figure 19 Providers by State
As shown in Figure 20, approximately three-quarters of providers are located in ASGC-RA 1 (44\%) or ASGC-RA 2 (33\%).

**Figure 20 Providers by ASGC-RA**

As shown in Table 7, most providers indicated that they offer TeleHealth services in general practice \((n = 550)\), surgery \((n = 103)\), or psychiatry \((n = 71)\).

**Table 7 Providers by Discipline**

<table>
<thead>
<tr>
<th>Discipline</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>General practice</td>
<td>550</td>
<td>54.0%</td>
</tr>
<tr>
<td>Surgery</td>
<td>103</td>
<td>10.1%</td>
</tr>
</tbody>
</table>
The distribution of providers by their affiliation with a Medicare Local is displayed in Table 8.

**Table 8 Registered providers by Medicare Local**

<table>
<thead>
<tr>
<th>Medicare Local</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Macedon Ranges and North Western Melbourne</td>
<td>55</td>
<td>5.2%</td>
</tr>
<tr>
<td>Metro North Brisbane</td>
<td>51</td>
<td>4.8%</td>
</tr>
<tr>
<td>Darling Downs - South West Queensland</td>
<td>50</td>
<td>4.7%</td>
</tr>
<tr>
<td>Northern Melbourne</td>
<td>48</td>
<td>4.5%</td>
</tr>
<tr>
<td>New England</td>
<td>44</td>
<td>4.1%</td>
</tr>
<tr>
<td>Gold Coast</td>
<td>42</td>
<td>3.9%</td>
</tr>
<tr>
<td>Townsville - Mackay</td>
<td>40</td>
<td>3.8%</td>
</tr>
<tr>
<td>Sunshine Coast</td>
<td>39</td>
<td>3.7%</td>
</tr>
<tr>
<td>Region</td>
<td>Value</td>
<td>Percentage</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>-------</td>
<td>------------</td>
</tr>
<tr>
<td>Inner North West Melbourne</td>
<td>38</td>
<td>3.6%</td>
</tr>
<tr>
<td>North Coast NSW</td>
<td>37</td>
<td>3.5%</td>
</tr>
<tr>
<td>Greater Metro South Brisbane</td>
<td>35</td>
<td>3.3%</td>
</tr>
<tr>
<td>Central Adelaide and Hills</td>
<td>35</td>
<td>3.3%</td>
</tr>
<tr>
<td>Northern Territory</td>
<td>28</td>
<td>2.6%</td>
</tr>
<tr>
<td>Western Sydney</td>
<td>25</td>
<td>2.3%</td>
</tr>
<tr>
<td>Murrumbidgee</td>
<td>25</td>
<td>2.3%</td>
</tr>
<tr>
<td>Hume</td>
<td>25</td>
<td>2.3%</td>
</tr>
<tr>
<td>Country South SA</td>
<td>25</td>
<td>2.3%</td>
</tr>
<tr>
<td>Country North SA</td>
<td>25</td>
<td>2.3%</td>
</tr>
<tr>
<td>Goldfields - Midwest</td>
<td>24</td>
<td>2.3%</td>
</tr>
<tr>
<td>Grampians</td>
<td>23</td>
<td>2.2%</td>
</tr>
<tr>
<td>Far North Queensland</td>
<td>23</td>
<td>2.2%</td>
</tr>
<tr>
<td>Inner East Melbourne</td>
<td>22</td>
<td>2.1%</td>
</tr>
<tr>
<td>South Eastern Melbourne</td>
<td>21</td>
<td>2.0%</td>
</tr>
<tr>
<td>Illawarra - Shoalhaven</td>
<td>20</td>
<td>1.9%</td>
</tr>
<tr>
<td>Loddon - Mallee - Murray</td>
<td>19</td>
<td>1.8%</td>
</tr>
<tr>
<td>Tasmania</td>
<td>19</td>
<td>1.8%</td>
</tr>
<tr>
<td>Central Queensland</td>
<td>17</td>
<td>1.6%</td>
</tr>
<tr>
<td>Eastern Sydney</td>
<td>16</td>
<td>1.5%</td>
</tr>
<tr>
<td>Australian Capital Territory</td>
<td>16</td>
<td>1.5%</td>
</tr>
<tr>
<td>Hunter Urban</td>
<td>14</td>
<td>1.3%</td>
</tr>
<tr>
<td>Western NSW</td>
<td>13</td>
<td>1.2%</td>
</tr>
<tr>
<td>Central Coast NSW</td>
<td>12</td>
<td>1.1%</td>
</tr>
<tr>
<td>Northern Adelaide</td>
<td>11</td>
<td>1.0%</td>
</tr>
<tr>
<td>Perth Central and East Metro</td>
<td>11</td>
<td>1.0%</td>
</tr>
<tr>
<td>Bayside</td>
<td>10</td>
<td>0.9%</td>
</tr>
<tr>
<td>Eastern Melbourne</td>
<td>10</td>
<td>0.9%</td>
</tr>
<tr>
<td>Wide Bay</td>
<td>9</td>
<td>0.8%</td>
</tr>
<tr>
<td>Perth North Metro</td>
<td>9</td>
<td>0.8%</td>
</tr>
<tr>
<td>Hunter Rural</td>
<td>8</td>
<td>0.8%</td>
</tr>
<tr>
<td>Northern Sydney</td>
<td>7</td>
<td>0.7%</td>
</tr>
<tr>
<td>Gippsland</td>
<td>7</td>
<td>0.7%</td>
</tr>
<tr>
<td>Central and North West Queensland</td>
<td>7</td>
<td>0.7%</td>
</tr>
<tr>
<td>Inner West Sydney</td>
<td>6</td>
<td>0.6%</td>
</tr>
<tr>
<td>South Eastern Sydney</td>
<td>6</td>
<td>0.6%</td>
</tr>
<tr>
<td>Lower Murray</td>
<td>6</td>
<td>0.6%</td>
</tr>
<tr>
<td>Goulburn Valley</td>
<td>5</td>
<td>0.5%</td>
</tr>
<tr>
<td>Great South Coast</td>
<td>4</td>
<td>0.4%</td>
</tr>
<tr>
<td>Frankston - Mornington Peninsula</td>
<td>3</td>
<td>0.3%</td>
</tr>
<tr>
<td>West Moreton - Oxley</td>
<td>3</td>
<td>0.3%</td>
</tr>
<tr>
<td>South West WA</td>
<td>3</td>
<td>0.3%</td>
</tr>
<tr>
<td>Nepean - Blue Mountains</td>
<td>2</td>
<td>0.2%</td>
</tr>
<tr>
<td>Sydney North Shore and Beaches</td>
<td>2</td>
<td>0.2%</td>
</tr>
<tr>
<td>Barwon</td>
<td>2</td>
<td>0.2%</td>
</tr>
<tr>
<td>Southern Adelaide - Fleurieu - Kangaroo Island</td>
<td>2</td>
<td>0.2%</td>
</tr>
<tr>
<td>Kimberley - Pilbara</td>
<td>2</td>
<td>0.2%</td>
</tr>
</tbody>
</table>
Figure 2 shows the type of technologies that providers report using to conduct TeleHealth consultations. The vast majority of providers are using Skype (89%).

Providers were also asked to indicate whether they currently use various TeleHealth solutions/directories to facilitate TeleHealth consultations. As displayed in Figure 22, most providers who offered this information indicated that they are using Attend Anywhere (46%), TeleHealth Solutions (40%), GP2U and/or Telemedicine Australia (each = 34%).
Figure 21 Providers' technology

- Skype: 89.3%
- Vidyo: 5.8%
- GoToMeeting: 5.0%
- Jabber: 4.8%
- ConsultDirect: 3.2%
- FaceTime: 2.5%
- Polycom RealPresence Desktop: 2.1%
- Webex: 1.6%
- LifeSize Passport: 1.6%
- ooVoo: 1.2%
- Microsoft Messenger for Mac: 1.2%
- Scopia desktop: 1.1%
- Anywhere Healthcare: 0.9%
- iChat: 0.7%
- Tandberg Movi: 0.5%
- Redback: 0.5%
- Cisco 1300: 0.5%
- Live! Cam Socialize HD 1080: 0.3%
- HD Pro Webcam: 0.3%
- Conference HD Camera: 0.3%
- Cisco 1100: 0.3%
- Windows Live Messenger: 0.1%
- Webcam C905 (Laptop): 0.1%
- Vyew: 0.1%
- Clevasoft Teleconsult System: 0.1%
- Cisco 500: 0.1%
- AUSTM Cart: 0.1%

0.0% 20.0% 40.0% 60.0% 80.0% 100.0%

Figure 22 TeleHealth Directories

- Attend Anywhere: 46%
- TeleHealth solutions: 40%
- GP2U: 34%
- Telemedicine Australia: 34%
- Consult Direct: 25%
- Health Bank Consult: 12%
- Other Directory: 10%
- Australian Telehealth Network: 9%
ACRRM TeleHealth Advisory Committee (ATHAC)

Our advisory committee membership includes:

- Australasian College of Dermatology
- Australasian Telehealth Society
- Australia and New Zealand College of Anaesthetists
- Australian College of Nurse Practitioners
- Australian Medicare Local Alliance
- Australian Nursing Federation
- Australian Practice Managers Association
- Australian Practice Nurses Association
- Australian College of Midwives
- Australian College of Rural and Remote Medicine
- CRANA Plus
- Department of Health & Ageing
- Department of Human Services
- Health Consumers for Rural and Remote Australia
- National Aboriginal Community Controlled Health Organisation
- National Rural Health Alliance
- Royal Australasian College of Physicians
- Royal Australasian College of Surgeons
- Royal Australian and New Zealand College of Obstetricians and Gynaecologists
- Royal Australian and New Zealand College of Ophthalmologists
- Royal Australian and New Zealand College of Psychiatrists
- Royal Flying Doctor Service
- Rural Doctors Association of Australia
- Rural Health Workforce Australia
- Standards Australia