

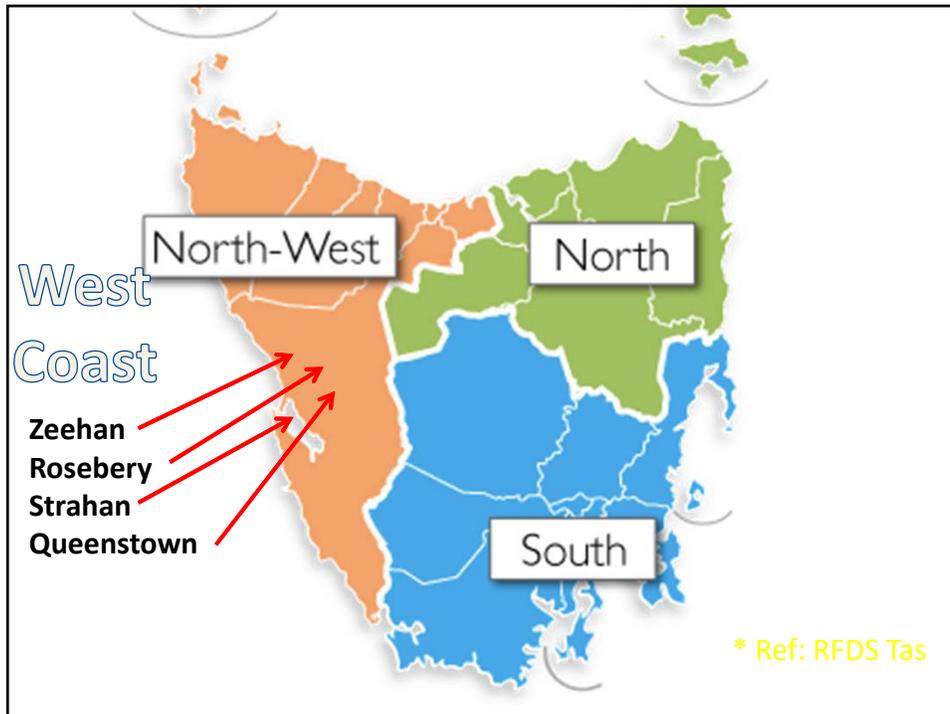
# Quality and Safety in Rural Health

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Australian College of  
Rural & Remote Medicine  
WORLD LEADERS IN RURAL PRACTICE



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## Aim

To outline the approach that ACRRM's Quality and Safety Council is taking in establishing a framework for Q&S in rural and remote practice.

It is based upon ACRRM's strategic approach and purpose to deliver Evidence based safe and high quality health care to the rural and remote communities in Australia

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## Strategic Roadmap 2018-2021

### OUR VISION

- The right doctors, in the right places, with the right skills, providing rural and remote people with excellent health care

### OUR MISSION

- To be a vibrant professional home for members that delivers inspiration, collegiality, value and social accountability

### OUR PURPOSE

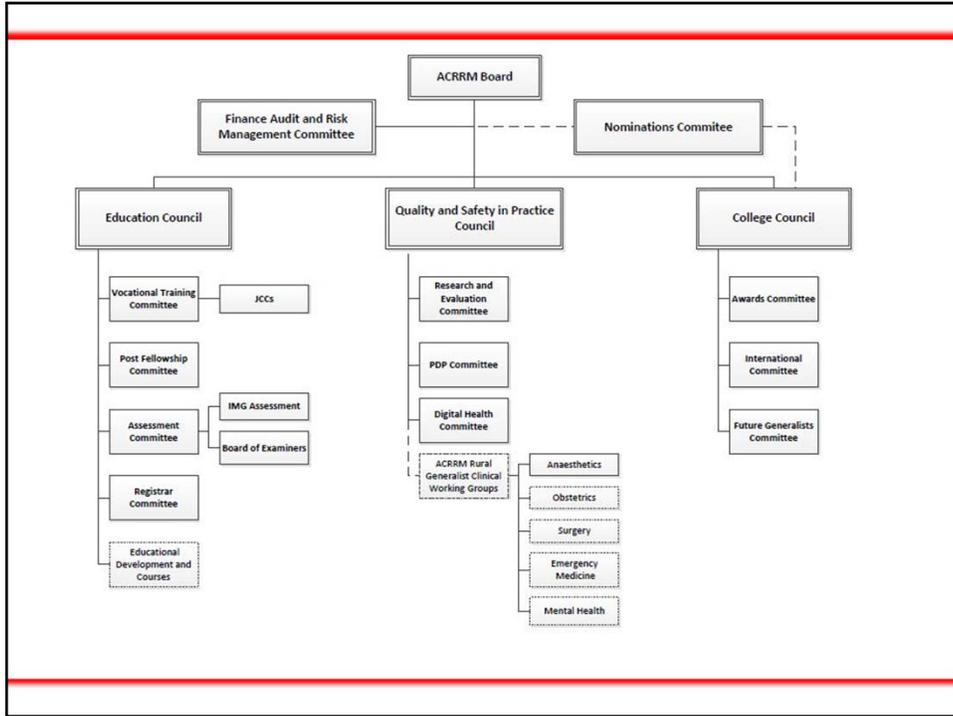
- **To improve the quality and safety of care for rural and remote communities by setting professional standards for practice, delivering lifelong education, support and advocacy**

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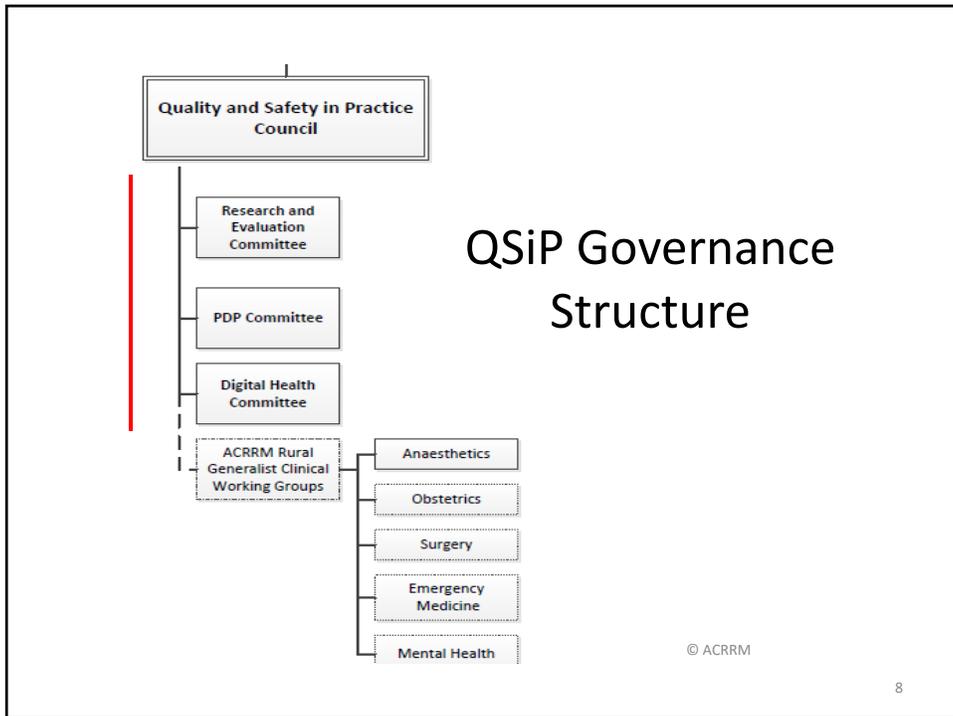
## Q&S Council's place in ACRRM Structure



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# ACRRM Functional Structure

## Board of Directors

College Council - Quality and Safety Council - Education Council

## 3 Committees/Domains

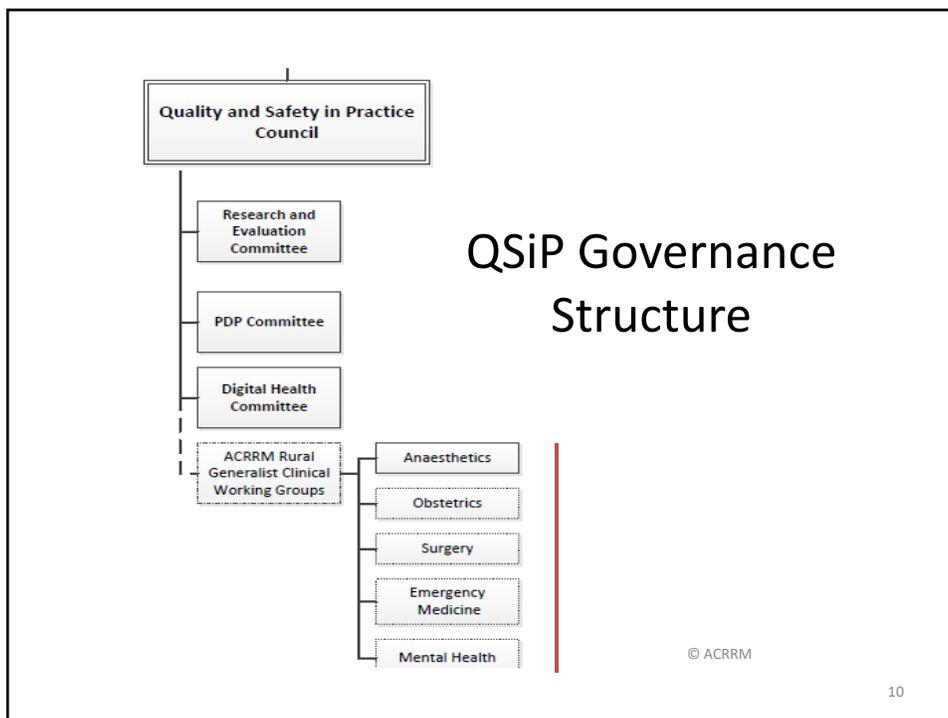
Professional Development

Digital Health

Research and Evaluation

5 ACRRM Rural Generalist Clinical Working Groups

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## ACRRM Functional Structure

### Board of Directors

College Council- **Quality and Safety Council**- Education Council

3 Committees

### 5 ACRRM Rural Generalist Clinical Working Groups

Anaesthetics

Surgery

Mental Health

Emergency Medicine

Obstetrics and Gynaecology

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Working Group/Committee-Domain	PDP/Ed&Tx	Research & Evaluation
<b>Currently in place</b>		
Anaesthetics	ASP in Tx/PDP	Monitor and audit
O&G	Dip Obs/ PDP	Monitor and audit
Surgery	Surgical skills training/ PDP	Monitor and audit
EM	ASP in Tx, GEM/PDP Standards for rural hospitals emergency services and departments	Monitor and audit
Mental Health	ASP in Tx/PDP	Monitor and audit
Digital health	Online modules and Telehealth Standards Framework for all disciplines ( endorsed by RACS, RACP NACCHO)	
<b>Proposed New</b>		
<b>Educational Devt</b>		
-Clinical Pathways -Practice Stds -Models of Care		
Vocational Tx		
Assessment		

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## Focus of Q&S Council

Progress the development of education and standards to improve the quality and safety of health services delivered in rural and remote Australia via

- *intrinsic college mechanisms ( Curricula, Vocational training standards, Professional Development Program requirements*
- *Influencing extrinsic drivers for Q &S, (e.g. ACQSHC\*, Medicines Safety Council, emerging AMC revalidation arrangements, National financing arrangements for health services ( MBS and PIP) and standards for accreditation of health services,*
- *Influence policy and standards/ guidelines and regulatory arrangements relevant to Q&S in rural regions*

to establish an ACRRM led approach to quality and safety in rural practice



\*Australian Council for Quality and Safety in Health Care

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## Focus of Q&S Council

- Promote, support and build the evidence base for Quality & Safety in Rural Generalist practice.
- Build the Value of PDP for members and ensure it remains a flexible, comprehensive, fit for purpose revalidation tool for the MBA's PPF.
- Contribute to the Digital Health Agenda and ensure members needs and views are considered in the standards and guidelines and that members are well supported to incorporate change within their practice and business models.



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## Scope of the council

Quality and Safety has been identified as a driver for development of standards and **educational development** including: -

- Clinical Pathways-PHNs and Rural Health Facilities
- Q&S in Practice Standards
- Models of Care
- ACQSHC framework for primary care, focusing on rural and remote health
- Revalidation- strengthened CPD for RG
- Digital health strategy

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## Quality and Safety to date

- Identified current issues and current work
  - **Standards**
    - Rural Emergency Department Standards.
    - Standards for Rural Anaesthetics
      - Supporting and Advocating the role of Rural Doctors in the Diploma of Anaesthetics through JCCA
      - Emerging paediatric anaesthetics standards
    - Standards framework for Telehealth (adopted by RACS, RACP NACCHO, etc)
      - Digital Health and Telehealth tools and education

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## Quality and Safety to date

- Identified current issues and current work
  - **Clinical Guidelines** – a national approach to “rural friendly” clinical pathways for management of health problems e.g. STEMIs/NSTEMI, Diabetes, Chronic Disease Management.
  - **Medication Safety**
  - **ARTs Framework**

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## Quality and Safety to date

### 1. Identified current issues and current work

#### - **Medication Safety**

- Medicines Safety Committee, National Digital Health Agency
- WHO Global Safety Challenge

#### - **ARTs Framework**

- *The ARTS of Risk Management in Rural and Remote Medicine*
- *McConnell et al – Can Journal Rural Medicine 2007.*

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## Quality and Safety to date

2. Local and Regional Audit, Morbidity and Mortality Meetings, Quality Improvement Cycle, GP Collaboratives.

3. Increased medical and staff education as a baseline framework for developing a skilled workforce. Integration of ACRRM principles into local Q&S activities.

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## Q&S Tools

- Enhanced recognition (**via PDP**) and support (educational development) for Q&S approaches at local levels
  - Audit (outcomes, topics and clinical Mx tools)
  - Clinical Meetings (M&M, Clinical Governance etc)
  - Medication Safety Approaches
  - Peer review

Supported by a National Strategic approach from the Q&S Council (ACQSHC)

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## Audit

**The use of audit tools to improve the safety of rural community services.**

These can include:-

- Chart and medication audits;
- Identification of common problems and common best practice managements of these conditions;
- Topic orientated discussion groups including new developments in disease management and visiting specialist discussions.
- Journal Clubs, Balint Groups
- **Link to PDP.**

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## Clinical Meetings

Morbidity and Mortality meetings –

- Implementation and their role in improving patient safety.
- Identified successes and failures in management of individual de-identified cases.
- A multidisciplinary and inter-facility discussion identifying service issues that have caused problems, distress, unforeseeable outcomes, and service delivery failures and identifying solutions to prevent further occurrences.
- [Link to PDP](#)

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## Q&S – so far

- Internal organisational and governance review- a more systematic approach to addressing quality and safety considerations
- Quality and Safety considerations identified as driver for development of standards and educational development
  - EEMCC- a quality improvement approach
  - Digital Health and telehealth tools and education
  - Standards for emergency equipment and facilities in rural hospitals
  - Standards for sedation
  - Standards framework for Telehealth (adopted by Professional Colleges, [RACS, RACP NACCHO])
  - Emerging paediatric anaesthetics standards
  - Clinical Guidelines – clinical notes

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## Q&S – so far

- Review of PDP requirements for the new triennium to enhance recognition of quality improvement focussed activity-emphasis on quality and safety
  - emerging revalidation arrangements
- ACRRM curricula requirements call out
- ACRRM submissions positions in National Policy consultation:
  - Establish a role for ACRRM to be a/the voice in Q&S in National Rural Health Policy development including the RG Programs

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## Quality Improvement measures

### –Medication safety for dummies!

- “non-brand prescribing”,
- deprescribing to reduce medication errors and unnecessary medication events,
- Home and Residential Medication Reviews.
- Pain Management in chronic disease (GP responsibility)
- Audit, Morbidity and Mortality Meetings
- Increased medical and staff **Education** as a baseline framework for developing a skilled workforce

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## Medication Safety

- Incorporation of medication safety in rural and remote practice.
  - Some 250,000 medication errors were identified in hospital admissions in 2016 by the Patient Safety Council.
  - Errors at admission and discharge
  - Inpatient management – encourage processes to redress some of these errors.
  - Utilised within general practice
    - GP Prescribing – drug names not brands –software facilitates.
    - Home Medication Reviews with Community Pharmacists
    - Facility Medication Review in Nursing Homes and Aged Care.
  - Medicines Insight Programs from NPS
  - [Link to PDP](#)

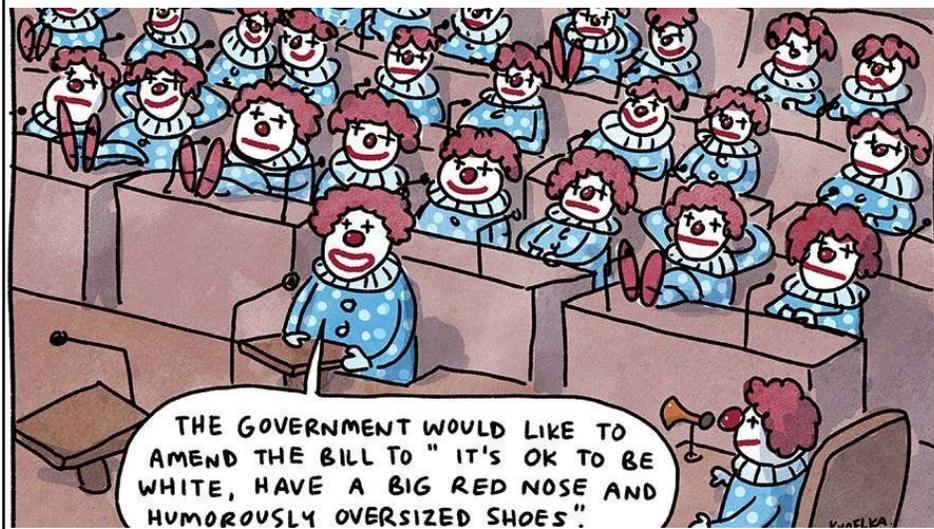
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## Supporting Documents

- 01\_ACQSHC – “Patient safety and quality improvement in primary care”
- 02\_ “The ARTs of Rural and Remote Medicine”
- 03\_ “College Standards for Rural and Remote Emergency Medicine Departments”
- 04\_ Notes – Medication Safety
- 05\_ “Differences in rates of switchbacks after switching from branded to authorized generic and branded to generic drug products: cohort study”
- 06\_ COLLEGE POSITION STATEMENT ON DEFINING SAFE AND QUALITY PROCEDURAL AND ADVANCED CARE IN RURAL AND REMOTE LOCATIONS

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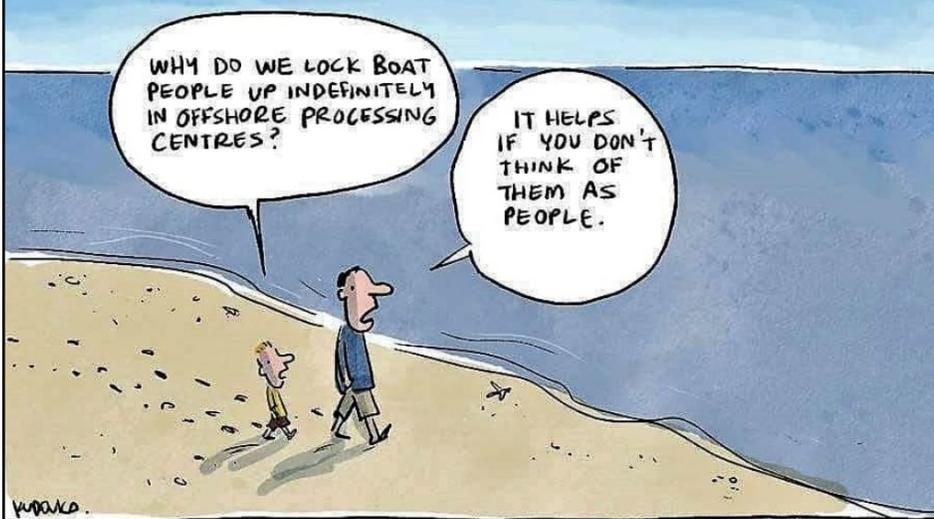
### Meeting of Australian Govt Policy Makers!



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### DEALING WITH DIFFICULT QUESTIONS FOR PARENTS

#### LESSON ONE : REFUGEE POLICY



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## Discussion.



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**AUSTRALIAN COMMISSION  
ON SAFETY AND QUALITY IN HEALTH CARE**

TRIM: D16-30005

October 2017

**Patient safety and quality  
improvement in primary care**

**Consultation paper**

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# Summary

This consultation paper has been prepared as the first phase of a program of work to develop a national approach to support improvements in patient safety and quality in primary care. This paper provides an overview of the current patient safety and quality improvement environment in primary care. It describes the role of the Australian Commission on Safety and Quality in Health Care (the Commission) to lead and coordinate improvements in the safety and quality of care provided by Australian health services, and outlines planned improvement strategies to be undertaken by the Commission to support patient safety improvements in the primary care sector. The paper also seeks feedback from primary care sector stakeholders on what other national improvement strategies could be implemented.

For the majority of Australians primary care is the first point of contact within the health system, and provides a range of services for the prevention and management of acute and chronic conditions.<sup>1</sup> Australia's primary care sector consists of a myriad of public, private and non-government organisations; many of these have their own complex mix of funding arrangements, and many can best be described as small businesses in health.<sup>2</sup>

The current primary care system performs well and most health care is associated with good clinical outcomes. However, some people do not receive all the care that is recommended to them; there is considerable variation in access to and outcomes of health care across geographic areas, and preventable adverse events continue to occur across the Australian healthcare system.<sup>1, 3, 4</sup>

There are a number of programs developed and implemented by governments, professional membership associations and a range of other stakeholder organisations in the primary care sector that aim to reduce risks to patients and improve the quality of care. However, these programs can be disparate, sometimes duplicative, and unevenly distributed, and are often not linked to long-term processes that ensure their sustainability. At present there is no nationally consistent or coordinated approach to driving patient safety and quality improvement in primary care.

Furthermore, to date there has been limited evaluation of the effectiveness of existing safety and quality strategies and programs implemented in Australian primary care settings. There is also limited evidence available internationally about effective and sustainable patient safety solutions in primary care. This has led to a global call for action on patient safety and quality improvement in primary care settings to better understand the nature and magnitude of adverse patient outcomes and how they can be addressed in these settings.<sup>5</sup>

The Commission's role is to lead and coordinate national improvements in the safety and quality of health care. The Commission works in partnership with the Australian Government, state and territory governments and the private and primary care sectors to achieve a safe and high-quality, sustainable health system. In doing so, the Commission also works closely with patients, carers, clinicians, managers, policymakers and healthcare organisations.<sup>6</sup> The Commission's remit includes all areas of health care, including primary and acute care sectors as well as public and private health service organisations. The Commission, together with primary care partners and consumers, plans to develop a series of nationally consistent strategies, tools and resources to support improvements in the safety and quality of care provided by primary care services. A systems focus, which involves making changes at an organisational level within services and reorganising care delivery systems, will help support improvements in the quality of primary care and ensure it is sustainable, efficient and effective.<sup>7</sup>

There are many possible strategies to support patient safety and quality improvement in primary care. Some of these fall within the remit of the Commission, while others are the domain of professional bodies, quality improvement organisations and individuals. It is not intended that the work of this program, to develop a nationally consistent approach to patient safety and quality improvement in primary care, would replace existing safety and quality programs that are developed and maintained by professional groups and health departments, or which are required by legislation. It is anticipated that any outputs from this program would be developed in collaboration with primary care stakeholders to enhance and add value to existing programs; address identified patient safety and quality improvement gaps; work in areas that require a national focus, and not duplicate existing safety and quality initiatives.

The Commission has planned two improvement strategies to commence immediately. The first is the development of nationally consistent safety and quality health service standards for use by primary care services where a safety and quality framework does not currently exist. The second strategy involves a review of the Commission's practice-level indicators for primary care to support service improvement through performance monitoring and benchmarking. The Commission is seeking feedback from primary care stakeholders on these proposed strategies to support patient safety and quality improvement in primary care.

Primary care stakeholders may also identify additional strategies that could be implemented to support patient safety and quality improvement in the sector. The Commission is seeking feedback from primary care stakeholders about other patient safety and quality improvements strategies, tools or resources that may be implemented.

This consultation paper has been developed to assist stakeholders to provide feedback on patient safety and quality improvement strategies for primary care. Section 7 of this consultation paper outlines questions for primary care stakeholders and consumers to consider when providing feedback. These questions relate to:

- The scope of primary care services that may use and benefit from nationally consistent safety and quality strategies, tools and resources
- The safety and quality issues currently experienced in primary care services and how these are being addressed
- Future development and implementation of nationally consistent safety and quality health service standards and indicators for primary care services, including identifying any barriers and enablers, and organisations involved in or providing support to primary care services
- Other safety and quality strategies, tools and resources that could be developed to support primary care services and factors that might influence the development and implementation of these
- Consumer perceptions of safety and quality in primary care and the issues that are most important to them.

# 1. Introduction

Primary care is typically where individuals have their first contact with the health system. Primary health care covers health promotion, prevention, early intervention, treatment of acute conditions, management of chronic conditions and end-of-life care.<sup>8</sup> Primary care is delivered by a diverse range of health practitioners, including Aboriginal and Torres Strait Islander health practitioners, allied health professionals, community and practice nurses, dentists, general practitioners, midwives, nurse practitioners and pharmacists.<sup>1,2</sup> These services can be delivered in the home, general or other private practice, community health services and local or non-government services. Primary care services represent a significant proportion of all health care provided in Australia. In 2014–15, 335 million out-of-hospital services were claimed through Medicare.<sup>9</sup>

Primary care services are funded by multiple sources. This funding includes Australian Government programs such as Medicare, the Pharmaceutical Benefits Scheme (PBS), Aboriginal and Torres Strait Islander-specific services, Department of Veterans' Affairs home and health care programs, targeted health prevention and promotion programs, and other flexible funding arrangements that provide benefits to patients to access services.<sup>8,10</sup> Primary care services may also be funded by state and territory government programs, including targeted primary and community health services, local government programs, non-government organisations, fees directly charged to patients or clients, private health and worker's compensation insurers, and other non-government funding from private charities focused on specific issues.<sup>8</sup>

Funding, regulatory and policy oversight for much of primary care in Australia is predominately the responsibility of the Australian Government. In April 2013, the Australian Government Department of Health released the *National Primary Health Care Strategic Framework*<sup>2</sup>, which outlines an agreed approach for supporting and improving the Australian primary care system. State and territory governments are responsible for developing state-specific bilateral plans to implement the framework.

The framework focuses on four strategic outcomes:

1. Reorienting the primary care system to ensure it is consumer focused
2. Improving access and equity of primary care services
3. Increasing the focus on preventative care, screening and early intervention
4. Improving the quality and safety performance of primary care services.

There are a range of stakeholder organisations and professional associations and colleges that also have responsibilities for supporting and improving the Australian primary care system, and who partner with the Australian, state and territory governments and agencies to deliver improvements to the primary care sector.

Many primary care services can best be described as small businesses. Primary care services are frequently small; often have few dedicated resources available to support patient safety and quality improvement initiatives; and mostly rely on busy clinicians and clerical staff to implement improvement strategies in addition to their existing roles. In the primary care sector a patient may receive care from a number of different health professionals in separate locations over a period of time. Sometimes care may be planned or coordinated by a single provider, such as a general practitioner; however, in many cases it is un-referred and patient driven.

Although most health care in Australia is associated with good clinical outcomes, some people do not receive the care that is recommended to them or they are inadvertently harmed by the care they receive. Unsafe or ineffective primary care can increase mortality

and morbidity from preventable adverse events.<sup>11</sup> A well-functioning primary care sector improves the overall health of the population and reduces acute hospitalisations.<sup>12</sup>

The evidence about the nature or magnitude of patient harm in primary care settings is scarce but growing.<sup>5</sup> To date, the majority of work on patient safety and quality improvement has focused on the acute hospital sector; however, a better understanding of the nature of harm to patients in primary care settings is important given that a significant proportion of care is provided in these settings.<sup>13</sup>

In all healthcare settings, the safety and quality of care an individual receives relies on the skills and performance of specific clinicians and available resources, as well as the effectiveness of the clinical governance and management processes of health service organisations. Health service organisations, including primary care services, have a responsibility to provide safe, high-quality care to patients.<sup>14</sup> However, implementing safety systems and improvement strategies to achieve this can be challenging.<sup>15</sup> Improvements in the care provided by primary care services will require changes at both the local level, within primary care services; and at a systems level, within the organisations and institutions that support primary care services.<sup>5</sup>

This paper has been developed to:

- Provide an overview of what is known about patient safety in primary care and describe some of the safety and quality initiatives currently in place for primary care
- Outline key drivers for change in primary care safety and quality
- Provide an overview of the national approach to safety and quality improvement in health care, the role of the Commission in supporting improvements in safety and quality in health care, and outline some of the strategies that the Commission has implemented to improve safety and quality in health care
- Describe safety and quality strategies that the Commission will be undertaking to build on existing strategies and improve safety and quality in primary care
- Seek feedback and information from primary care sector stakeholders on the proposed strategies and other safety and quality strategies that are needed or could be put in place.

Questions for primary care stakeholders and consumers are outlined in section 7 of this consultation paper.

## 2. Safety and quality in primary care: the current environment

This section describes the available evidence on patient safety risks and quality in primary care. The following sections provide an overview of some of the current initiatives seeking to address these risks and some of the key drivers for change.

### Safety and quality risks in primary care

Little is known about the frequency, causes and consequences of errors and adverse events in the primary care sector because there is little available information that describes the safety and quality risks.<sup>16,17</sup> A majority of the patient safety research in primary care is concentrated in general practice settings. The research on patient safety risks in general practice is more advanced and has shifted in recent years from describing the different types of patient safety risks to further investigating detection methods and links with patient safety culture.<sup>18</sup> Research on the patient safety risks in other primary care settings, however, is at an earlier stage and focuses on developing an understanding of what the patient safety risks are for these services.

The information that does exist about patient safety incidents and risks in primary care has led to a global call for action to better understand the nature and magnitude of harm in the primary care sector.<sup>5</sup> The evidence of preventable harm in primary care is growing. Recent research into the characteristics of patient safety incidents has been conducted in a range of primary services, including midwifery, home care services, dentistry, chiropractic and occupational therapy.<sup>18</sup>

Despite the lack of systematic research in this area, researchers have attempted to collate the available evidence to estimate the frequency of harm and understand the causes of patient harm in primary care. One review of published literature found that patient safety incidents in primary care, mostly general practice settings, occurred between 5 and 80 times per 100,000 consultations.<sup>19-21</sup> Another review that looked at both published and unpublished literature on patient safety incidents in primary care over a 30-year period from 1980 found reports of between <1 and 24 patient safety incidents per 100 consultations.<sup>17</sup> However, the study population again consisted mostly of patients treated within general practice settings.

When looking at the level of patient harm as a result of patient safety incidents in primary care, it is estimated that overall, harm is considered mild to moderate rather than severe.<sup>13</sup> Approximately 4% of patient safety incidents in primary care result in patient harm that is severe, leading to a significant or long-term impact on a patient's physical or psychological well-being.<sup>17</sup> Incidents that result in severe harm are related predominately to errors with prescribing and misdiagnosis or delayed diagnosis. In the UK, where they have a nationally mandated incident reporting system, data from reported incidents shows 2–3% of all primary care encounters, usually general practice services, result in a patient safety incident, and one in 25 of these incidents will cause serious harm to the patient.<sup>22</sup>

The Threats to Australian Patient Safety (TAPS) Study was one of the first studies to estimate the incidence of errors in Australian primary care settings.<sup>23</sup> Researchers used an anonymous reporting system for general practitioners over a 12-month period to collect reports of errors in general practice settings. They found that for every 1,000 Medicare items billed by general practitioners, at least one error was reported, and two errors were reported for every 1,000 individual patients seen per year.<sup>23</sup> Analysis of over 400 errors found that

nearly 70% could be attributed to failures in systems or processes for care and only 30% related to human factors or the skills of practitioners.<sup>24</sup> The sample for this study was small and the results may not be generalisable beyond general practice settings. There are currently no reliable estimates about the frequency of patient safety incidents or preventable harm from other types of primary care services in Australia.

A systematic review of internationally published and unpublished studies conducted by the World Health Organization (WHO) in 2014 sought to identify the most common categories of patient safety incidents in primary care.<sup>17</sup> These were:

- Administrative and communication incidents, including incomplete, unavailable or incorrect documentation, inappropriate monitoring of pathology testing and insufficient communication between practitioners or between practitioners and patients
- Diagnostic incidents including misdiagnosis or missed diagnoses
- Prescribing and medication management incidents including prescribing or dispensing incidents.

These categories are consistent with contributory factors identified by the WHO Safer Primary Care Expert Working Group at their inaugural meeting in 2012. The working group, which includes representation from Australia, identified six key factors as contributing to patient safety incidents.<sup>13</sup> These include:

- Communication between healthcare professionals and patients
- Teamwork within the care team
- Laboratory and diagnostic imaging investigations
- Issues relating to data management
- Transitions between different levels of care
- Patient record completeness.

Analysis in the UK of reported patient safety incidents in primary care and general practice and the factors that contributed to these incidents further supports the findings from the WHO.<sup>25</sup> The combination of human factors and system weaknesses are commonly identified as contributing to patient safety incidents in primary care services rather than patient-related factors.<sup>22</sup>

The interface between the acute sector and primary care services can also be problematic.<sup>26</sup> Delays in providing accurate and timely information on patient care and differences in processes such as handover create additional preventable risks for patients.<sup>27</sup> An analysis of patient safety incident reports relating to older people's care by primary care and general practice services in the UK found communication-related incidents accounted for 25% of all reports.<sup>22</sup> It has been identified that a significant proportion of safety incidents that are captured by the acute sector may have originated in the primary care sector or were preceded by a communication-related incident prior to hospitalisation.<sup>13, 22</sup> Yao et al estimated that one-third of adverse events could be prevented by implementing improved clinical handover practices.<sup>18</sup>

Improvements in care cannot be implemented until the level of harm and the reasons for it are better understood by service providers.<sup>28</sup> In primary care services, systems to identify and report patient safety incidents have been available since the mid-1990s; however, their use is limited, particularly in Australia.<sup>18, 29</sup> Large volumes of clinical and non-clinical information are collected daily by primary care services but this information is rarely used to support improvements in service quality.<sup>25</sup>

The use of incident reporting systems is more advanced in general practice settings, where the focus now is on improving processes to enhance reporting and learning lessons from

incidents. Standards for general practice accreditation in Australia require practices to implement clinical risk management systems to capture near misses and mistakes in clinical care.<sup>30</sup> The approach to these systems is varied and information about incidents and their analysis may not be shared beyond the practice.

The use of incident reporting systems in other primary care services is not well known and there is currently no national integrated incident reporting and learning system for all primary care services in Australia.<sup>18</sup> The NHS National Reporting and Learning system in the UK is the only compulsory national incident reporting system that enables primary care services to record patient safety incidents at a local level, and for these to be analysed and shared to support improvements in patient safety within services and at a national level. Despite increasing calls to embed patient safety incident reporting in primary care services, a lack of clear governance, infrastructure and patient safety leadership has so far significantly limited the use of incident reporting by primary care services generally.<sup>31</sup>

Clinical governance is an integrated component of corporate governance of health service organisations. Clinical governance is the set of relationships and responsibilities established by a health service organisation or providers to ensure good clinical outcomes. It ensures that everyone – from members of governing bodies such as boards, frontline clinicians and managers – is accountable to patients and the community for assuring the delivery of safe, effective, and high-quality services. Clinical governance systems provide confidence to the community and the health service organisation that the systems are in place to deliver safe and high-quality health care. In primary care services, one or a small number of people may hold many of these organisational roles. Clinical governance in an organisation of any size supports the anticipation and mitigation of risks of harm for patients and consumers and establishes a learning environment focused on creating safe, effective and responsive services.<sup>32</sup>

The need for a robust clinical governance framework for primary care services to support improvements in patient safety and quality of care in the sector has been identified in a number of reports and policy frameworks developed over the last decade.<sup>24</sup> However, the diversity and independence of primary care services, the lack of systematic communication and collaboration within and between primary care services, and varying management structures, have hindered attempts to establish a clinical governance framework for Australian primary care services.

The paucity of evidence on effective patient safety initiatives for primary care may contribute to a lack of awareness among primary care practitioners about risks to patient safety and create barriers to investment in strategies for improvement.<sup>29, 33</sup> A number of safety and quality strategies, tools and resources to support improvements in primary care are slowly becoming available, particularly those developed by professional organisations and special interest groups.<sup>18</sup> However, very few high-quality studies have examined their effectiveness in addressing patient safety risks in primary care. More rigorous evaluation is required to support improvements in the sector.

### 3. Registration and accreditation for primary care services

In recent years a number of professional associations and other stakeholders have worked to establish safety and quality initiatives to support primary care services. Primary care practitioners may be subject to multiple and overlapping registration and accreditation programs. The settings in which primary care practitioners work may also be subject to accreditation or formal review processes in addition to registration or accreditation of individual practitioners.

Registration commonly refers to processes that apply to individual practitioners to confirm they have the relevant education and training to provide healthcare services and creates an obligation to maintain their clinical skills and knowledge and abide by codes of conduct that are consistent with community expectations of health practitioners.

Accreditation commonly refers to processes of independent assessment and verification that standards have been implemented in settings, such as practices, clinics or services where care is provided. The process is the same irrespective of the number, mix or registration of the workforce. Accreditation seeks to ensure that the primary care service has systems and processes in place to support primary care practitioners to deliver safe, high-quality care.

The following sections provide a brief overview of some of the registration and accreditation programs that apply to healthcare practitioners and primary care services. This list is not exhaustive but provides examples of programs that exist. However, there are likely to be projects under way that are not documented.

#### The National Registration and Accreditation Scheme

In 2008, the Council of Australian Governments (COAG) agreed to establish a single national registration scheme for registered health practitioners.<sup>34</sup> On 1 July 2010, 10 health professions became regulated under the national scheme, with a further four professions joining them in 2012.<sup>34</sup> Paramedics are expected to join the national scheme in the second half of 2018 following agreement from health ministers in 2015.

The national scheme aims to support safety and quality of care by protecting practitioner titles without restricting competition or limiting access to care.<sup>35</sup> The national registration scheme has six objectives, which are to:

1. Protect public safety
2. Facilitate workforce mobility across states and territories
3. Facilitate high-quality education and training of health practitioners
4. Facilitate assessment of overseas-trained health practitioners
5. Promote access to health services
6. Develop a flexible, responsive and sustainable health workforce.<sup>34, 35</sup>

The Australian Health Practitioner Registration Agency (AHPRA) was established to support implementation of the national registration scheme and provides support to the national boards of each profession in the scheme. The scheme requires each profession's national board to set registration standards, including codes of conduct and practice guidelines, that practitioners must meet.<sup>34</sup> Once registered, practitioners must continue to meet these standards and renew their registration annually.<sup>34</sup>

An independent review of the national scheme was conducted in 2014–15. Following recommendations from this review report, the Australian Health Ministers' Advisory Council (AHMAC) commissioned an independent review of accreditation systems.<sup>36</sup> This review is focused on the costs of the accreditation functions and identifying opportunities for streamlining arrangements; the accreditation standards and their links with the development and delivery of education programs; and alignment of the national scheme with governance and reporting objectives.<sup>36</sup> The final report is expected to be released by the end of 2017.

## National Code of Conduct for healthcare workers

Primary care practitioners who are outside the scope of the national registration scheme are required to comply with the National Code of Conduct for healthcare workers (the national code). The national code aims to protect the public by setting minimum standards of conduct and practice for all unregistered practitioners that provide healthcare services.<sup>37</sup> The national code sets standards against which disciplinary action can be taken, or prohibition orders issued, in the event a practitioner's actions present a serious risk to public health and safety.<sup>37</sup> Each state and territory has responsibility for progressing and monitoring implementation of the national code.

For some primary care practitioners, their profession may be self-regulated. The National Alliance of Self Regulating Health Professions (NASRHP) is an independent body that supports peak allied health professional bodies that fall outside the current scope of the national registration scheme.<sup>38</sup> The NASRHP provides benchmark standards for regulation and accreditation of practitioners of unregulated professions in line with national requirements outlined in the National Code of Conduct for healthcare workers.

## National General Practice Accreditation Scheme

Accreditation of general practices has been in place since the late 1990s. General practice accreditation is a key entry criterion for access to the Practice Incentives Program (PIP) administered by the Australian Government Department of Health (the Department). The PIP is a flexible funding arrangement for accredited general practices that aims to support activities that encourage continual improvements in the delivery of quality care and ensure capacity, access and good health outcomes for patients.<sup>39</sup>

In 2011, the Australian National Audit Office (ANAO) reviewed the Department's management of the PIP. It made three recommendations to support improvements to the management of the program. The third recommendation related to general practice accreditation, and recommended that the Department of Health better inform itself of the quality of general practice accreditation.<sup>40</sup>

In June 2013, the Department engaged the Commission to undertake a project in collaboration with the Royal Australian College of General Practitioners (RACGP) to develop a governance and reporting framework for general practice accreditation to address Recommendation 3 of the ANAO's review of the PIP.

In May 2016, the Australian Government Minister for Health endorsed implementation of the National General Practice Accreditation Scheme. The scheme commenced on 1 January 2017 to support the consistent assessment of Australian general practices to the RACGP *Standards for general practices*. The scheme includes:

- An industry-based stakeholder committee to provide governance and oversight of the scheme

- An application and approval process for accrediting agencies assessing general practices
- A data collection and reporting framework for accrediting agencies that requires the submission of de-identified accreditation outcomes.<sup>41</sup>

## Quality Care Pharmacy Program

The Quality Care Pharmacy Program (QCPP) is a quality assurance program for community pharmacies administered by the Pharmacy Guild of Australia. The QCPP supports effective pharmacy business operations and provides guidance on professional health services.<sup>42</sup>

Accreditation of community pharmacies commenced in 1997 and more than 90% of Australian pharmacies are accredited.<sup>42</sup> Pharmacies are externally assessed once every two years by QCPP licensed assessors. In 2011, the Pharmacy Guild of Australia was accredited by Standards Australia as a Standards Development Organisation and QCPP recognised as an Australian Standard.

## Australian Psychological Society Professional Practice Management Standards

The Australian Psychological Society developed the Professional Practice Management Standards to support psychologists in private practice to implement processes for good practice and instil public and government confidence in the profession.<sup>43</sup> The 16 standards cover six areas, including: service provision; rights, responsibilities and safety; client information management; continuing education and quality improvement; business and human resource management; and the environment of the practice. Psychologists implement the standards and participate in a self-assessment exercise, which provides feedback on their performance and identifies opportunities for improvement, as well as contributing to their ongoing continuing professional development requirements.<sup>43</sup>

## Physiotherapy Association Australia Accreditation

In 2007, the Australian Physiotherapy Association (APA) developed the *APA Standards for Physiotherapy Practices*.<sup>44</sup> The standards are designed to support safe, high-quality care and continuous quality improvement in physiotherapy practices.<sup>44</sup> Physiotherapy practices can use the standards to self-assess their safety and quality performance, or undergo accreditation through an external assessment via a desktop audit, or an onsite assessment.

## Safety and quality guidelines for midwives

The new *Safety and quality guidelines for privately practising midwives* were published in February 2016 and came into effect on 1 January 2017.<sup>51</sup> The guidelines were developed by the Nursing and Midwifery Board of Australia (NMBA), which regulates the practice of nursing and midwifery in Australia, and they replace the *Safety and quality framework for privately practising midwives providing homebirth 2011*.<sup>51, 52</sup> The guidelines apply to privately practising midwives, including those that provide home birth services. They have been developed in the interest of public safety and to provide clarity and support to privately practising midwives to practise safely.<sup>52</sup> The guidelines address the following areas<sup>52</sup>:

- Informed consent, which must be obtained by all women in their care according to relevant guidelines and legislation
- Risk assessment, including a documented process for identification and evaluation of clinical risk and evidence of risk mitigation strategies to address these

- Referral pathways, which should be clearly articulated and documented in line with national midwifery guidelines
- Collaborative arrangements, in accordance with national guidance on collaborative maternity care
- Submission of reports and data, including contributions to all required national, state and territory perinatal data collections
- Clinical audit, to enable data collections in accordance with national core maternity indicators as well as peer and reflective practice
- Adverse event management, including notifying and reporting incidents and adverse events, or more serious categories of sentinel events in accordance with relevant national, state or territory health department requirements
- Professional practice review, which includes annual and regular continuing professional development.

Other elements of the guidelines include registration standards, professional codes, guidelines and legislative requirements that are required for all midwives to practise in Australia.<sup>52</sup> Privately practising midwives must participate in an audit against the guidelines on a three-yearly basis or more frequently, as determined by the Nursing and Midwifery Board of Australia.

The Australian College of Midwives is developing an accreditation program to support privately practising midwives to comply with the guidelines. The accreditation program MidSURE is based on the Midwifery Practice Scheme funded by Queensland Health in 2015–16 and aims to support safe, high-quality midwifery practice by providing access to resources, tools and education. Additional elements, such as clinical incident monitoring and clinical governance functions, are outside the scope of the initial implementation of MidSURE but may be considered in the future depending on the developing regulatory requirements. The MidSURE program will be released in the coming years.

## Home Care Common Standards

The Home Care Common Standards, formerly known as the Community Care Common Standards, are applicable to service providers as part of the Home and Community Care (HACC) Program, Commonwealth-funded packaged care programs and the National Respite Carers Program (NRCP).<sup>45</sup>

The standards are developed and managed by the Australian Aged Care Quality Agency.

The quality review process assesses whether:

- Services are safe and high quality
- Services meet the identified needs of service users
- Consumer expectations for service delivery are being met
- Funds are being used according to their specified purpose.<sup>45</sup>

The quality review process is conducted once every three years and includes onsite assessment, outcome reporting and improvement planning components.

## Safety and quality in the hearing services sector

Since late 2015, hearing service stakeholders – including consumer groups, professional bodies, industry representatives and the Australian Government Office for Hearing Services – have been working towards the development and implementation a safety and quality

framework for hearing care services.<sup>46</sup> To date there has been significant progress made by hearing services professional bodies to develop a unified set of documents that address professional practice standards, code of conduct and scope of practice for hearing care practitioners.<sup>47, 48</sup> Options are currently being considered as to whether the NSQHS Standards developed by the Commission could be applied and, if needed, adapted for use in hearing services as part of the hearing services framework.

## Continuous Quality Improvement for Aboriginal Community Controlled Health Services

Over the last decade, Australian Government and state and territory governments have been providing increasing levels of support for Aboriginal Community Controlled Health Service Organisations (ACCHOs) to implement strategies that aim to improve the efficiency and effectiveness of primary health care for Aboriginal and Torres Strait Islander people.<sup>49</sup>

In 2015, the Australian Government Department of Health commissioned the Lowitja Institute to work in partnership with key stakeholder organisations to develop the *National CQI Framework for Aboriginal and Torres Strait Islander Primary Health Care 2015–2025* (the National CQI Framework).<sup>50</sup> The purpose of the National CQI Framework is to foster commitment to, and support of, a coordinated approach to continuous quality improvement in primary care services that provide care to Aboriginal and Torres Strait Islander people. The National CQI Framework identifies the core components necessary to embed continuous quality improvement in everyday practice at the local level as well as requirements for implementation support at local, regional, state and territory and national levels.<sup>50</sup>

The National CQI Framework is still under development and is subject to ongoing consultation with the Aboriginal and Torres Strait Islander health sector.

Other quality improvement initiatives in operation in ACCHOs include:

- Continuous quality improvement models, such as One21seventy and the Australian Primary Care Collaboratives program
- Funding programs, such as the Healthy for Life program, Closing the Gap and Indigenous Chronic Care Package
- Audit tools, such as the PEN Computer Systems' Clinical Audit Tool and the Aboriginal Health Promotion and Chronic Care Partnership tool
- Accreditation programs, including the RACGP *Standards for general practices* and Accreditation for Remote Services.<sup>49</sup>

## 4. Drivers for change

Some of the existing policy reforms within the primary care sector aimed at improving care and outcomes are outlined in this section.

### Better Outcomes for People with Chronic and Complex Health Conditions

In 2015, the Australian Government established the Primary Health Care Advisory Group to consider opportunities for reform of the primary care sector to better address the needs of patients with chronic and complex conditions.<sup>53</sup> The Primary Health Care Advisory Group released a report in December 2015.

The report details the evidence for change and recommends broad adoption of a new model of care and supporting reforms to better meet the needs of Australians with chronic and complex conditions into the future. Central to the proposed reform is the formalisation of the relationship between a patient with chronic and complex conditions and their Health Care Home: a setting where they can receive enhanced access to holistic coordinated care, and wrap-around support for multiple health needs. A Health Care Home may be a general practice or an Aboriginal Community Controlled Health Service (ACCHS).<sup>54</sup>

By 31 December 2017, 200 general practices and ACCHSs across 10 regions in Australia will have commenced delivery of Health Care Home services as part of the Stage 1 trial of the new reforms. The Health Care Homes will be responsible for developing a shared care plan with eligible patients and coordinating their care across primary and acute care services as required.<sup>54</sup> Health Care Homes will be funded to perform these care coordination functions through bundled monthly payments for each patient that are linked to the complexity of their healthcare needs.<sup>55</sup>

### National Disability Insurance Scheme

The National Disability Insurance Scheme (NDIS) is being progressively rolled out from 1 July 2016.<sup>56</sup> The National Disability Insurance Agency (NDIA) has been established to oversee its implementation and manage the scheme. The NDIS will change the way care and services are provided to people under 65 who have a permanent and significant disability. Central to the reforms is the development of individualised NDIS plans that identify consumers' goals of care and the services to be accessed to achieve these goals.

Providers of disability support services are now required to register and meet specific suitability criteria.<sup>56</sup> Registered providers will also need to comply with the requirements of the Quality and Safeguards Framework. The NDIA has developed the Quality and Safeguards Framework with input from state and territory governments, to ensure there is a national approach to providing safe, high-quality services. The Quality and Safeguards Framework will be effective once the roll-out of the NDIS is completed in full.

### Primary Health Networks

In July 2015, the Australian Government established 31 Primary Health Networks (PHNs), building on the structures, operations and functions of Medicare Locals. PHNs have two key objectives: to increase the efficiency and effectiveness of medical services for patients, and to improve coordination of care.<sup>57</sup> Each PHN is required to work with their local health or hospital network, general practitioners, allied health and other primary care practitioners in

their local area to identify local population needs and service gaps. This will inform PHN planning, implementation and evaluation of innovative models of care to improve local health outcomes. One of the key roles of PHNs is to provide practice support services to general practices, including supporting general practices attaining the highest standards in safety and quality. They are also tasked with commissioning services to address local patient needs, where they have opportunities to embed requirements around safety and quality into contractual arrangements.

## Redesign of the Practice Incentives Program

The PIP has been a key driver of quality care in the general practice sector over the last two decades. As announced in the 2017–18 Federal Budget measure *Quality Improvement in General Practice*, a new PIP Quality Improvement Incentive will soon be available to general practice. Changes to the PIP have been co-designed in consultation with the PIP Advisory Group and extensive consultation with the sector in late 2016, which indicated broad support for the introduction of a new incentive focused on quality improvement. The PIP Quality Improvement Incentive will support general practices to better understand and improve their quality of care through participation in continuous quality improvement activities, and to achieve better outcomes for their patients.

## National Digital Health Strategy

Over the last decade, Australian, state and territory governments have worked with the private and not-for-profit sectors to develop infrastructure to support a nationally coordinated digital health system. The Australian Digital Health Agency was established in July 2016 to support improvements in health outcomes for Australian patients through the delivery of the national digital health strategy and digital healthcare systems.<sup>59</sup> The new agency builds on the work of the former National E-Health Transition Authority and the Personally Controlled Electronic Health Record (now called My Health Record), and is working to address early implementation issues and review the strategy and role of shared electronic health records.<sup>60</sup>

In August 2017 the COAG approved the *National Digital Health Strategy 2018–2022*.<sup>61</sup> The strategy proposes seven strategic priority outcomes to be achieved by 2022. These are:

1. Health information is available as required by healthcare providers and consumers
2. Health information can be exchanged and communicated securely between healthcare providers and consumers
3. Standards to ensure consistent collection and sharing of high-quality data are available and applied to data collections
4. Information about medicines and prescriptions is available and accessible to healthcare providers and consumers
5. Digital health technology is available to support innovative models of health care, such as the Health Care Homes trial
6. Healthcare providers are trained and proficient in the use of digital health technologies to maximise its use and benefit for consumers
7. Development of digital health tools, apps and services are supported and expanded.<sup>61</sup>

Some sections of the primary care sector have made significant progress and investment in digital health and the use of technology to deliver services. Digital health refers to more than the establishment of the My Health Record system and the Healthcare Identifiers Service; it also includes development of national standards and specifications for the implementation and use of digital technologies in health care.<sup>62</sup> The roll-out of digital health technologies across the health system provides opportunities to embed safety and quality principles in the

design of electronic systems. Quality improvement strategies within primary care services will be better supported through increased access to data and information.

## Unwarranted healthcare variation

Variation in health care refers to the different patterns of healthcare use by different populations across geographic areas. Some variation in health care may be warranted and even desirable, based on the differing needs of populations or patient preferences. However, evidence suggests a significant amount of variation is unwarranted. In this type of variation people may receive care that is inappropriate or unnecessary, or they may miss out on care that would be beneficial.<sup>63</sup> Unwarranted variation may reflect differences in clinicians' practices, the organisation of health care or people's access to care. It may also reflect the provision of poor-quality care that does not follow best-practice guidelines.

In 2015, the Commission released the first *Australian Atlas of Healthcare Variation*.<sup>63</sup> The first Atlas used data from the Medicare Benefits Schedule, Pharmaceutical Benefits Scheme and Admitted Patient Care National Minimum Data Set to explore the variation in health care across different healthcare settings and geographic locations in six specific clinical areas<sup>63</sup>:

1. Antimicrobial prescribing
2. Diagnostic interventions
3. Surgical interventions
4. Interventions for mental health and psychotropic medicines
5. Opioid medicines
6. Interventions for chronic disease.

A number of recommendations were made with the aim of reducing unwarranted variation. Some of these recommendations relate to changing the way primary care is organised, delivered and monitored, such as:

- Implementing antimicrobial stewardship programs in general practice and monitoring rates of antimicrobial prescribing by regional health networks
- Improving access to, and compliance with, relevant clinical guidelines for common diagnostic and surgical interventions
- Improving health practitioner access to, and knowledge of, clinical prescribing guidelines for antipsychotic medicines
- Addressing barriers to non-pharmacological treatments for sufferers of chronic pain and ensuring health practitioners have access to up-to-date prescribing guidelines for opioid medicines
- Implementing local collaborative, integrative screening and risk-assessment programs for chronic disease including asthma and diabetes.<sup>63</sup>

In June 2017, the Commission released the *Second Australian Atlas of Healthcare Variation*.<sup>64</sup> The second Atlas includes interventions not covered in the first Atlas, such as hospitalisations for chronic diseases and caesarean section in younger women, as well as building on the findings from the first Atlas and further examining issues relating to hysterectomy and cataract surgery.

The second Atlas focuses on the following clinical areas:

1. Potentially preventable hospitalisations from chronic disease and infection
2. Cardiovascular conditions
3. Women's health and maternity
4. Surgical interventions.

Again, a number of recommendations were made in the second Atlas that relate to primary care. These include:

- Implementation of chronic disease management programs such as those described by the Primary Health Care Advisory Group<sup>1</sup> and the National Strategic Framework for Chronic Conditions<sup>65</sup>
- The development of a clinical care standard on the management of atrial fibrillation
- In collaboration with medical and midwifery professional colleges, the development and dissemination of an agreed model of care for second-stage labour to minimise the risk of severe perineal trauma
- Development of an Australian guideline for the management of low back pain and sciatica
- Promotion of routine measurement and recording of obesity markers for all adults and children who attend primary care services.

## Private health insurance funds

Private health insurance and the services it procures are of significant value to the Australian health system. In 2015, an estimated 47% of Australians held a private health insurance policy covering hospital treatment, while 56% held a policy covering general treatment.<sup>66,67</sup> Overall, approximately 11% of all health services are paid for by private health insurers.<sup>67</sup> Insurers provide rebates to selected practitioners and health services, including primary care practitioners, for payment of fees for care or products provided to privately insured patients where there is no Medicare benefit payable.<sup>67, 68</sup>

In recent years, insurers have started to use these agreements to promote improvements in safety and quality of care by introducing conditions that reduce or withhold payments to practitioners if the care provided does not meet certain standards or results in unexpected health outcomes.<sup>68, 69</sup> Insurers have been driven by a need to ensure care provided represents value for money, and that care is clinically appropriate and in line with best practice.<sup>68</sup> Private health insurers include safety and quality components in their agreements with some primary care services. There is potential for insurers to include a broader range of safety and quality requirements in these agreements in the future.

## Consumer expectations

Healthcare consumers no longer accept passive exchanges of information when accessing health care.<sup>70</sup> Increased access to information from digital and social media has changed consumer health behaviours and led to an increase in consumers' expectations of care.<sup>70, 71</sup> More than ever, consumers are now exercising their right to make decisions about their care, and are seeking greater participation in planning their care as well as better value for money. Transparency of information about the performance of health services, such as the widely publicised failures of care delivered in public hospitals, has increased consumer scrutiny of safety and quality of health services.<sup>72</sup>

The lack of an overarching policy framework to support consumer-centred care has been identified as one of the contributing factors to gaps in the quality of consumer engagement.<sup>71</sup> There is a growing body of evidence that shows consumer-centred approaches to care can improve health care services' safety, quality and cost effectiveness, as well as consumer satisfaction.<sup>73-81</sup> The inclusion of partnering with consumers as one of the NSQHS Standards provides a framework for improved consumer engagement in acute health services. This framework could be adopted by primary care services to support greater numbers of primary care providers to work more closely with consumers.

## 5. National leadership for safety and quality improvement in health care

The Commission is a government agency that provides national leadership and coordination of strategies to improve the safety and quality of health care provided by Australian health services. This section provides an overview of the Commission's role and a few of the Commission's flagship programs, as well as outlining recent work with the primary care sector.

### The Australian Commission on Safety and Quality in Health Care

In 2006, Australian, state and territory governments established the Commission to lead and coordinate national improvements in safety and quality in health care. In 2011, the Commission was established as a permanent entity under the *National Health Reform Act 2011*.

Section 9 of the Act sets out the Commission's functions, which include:

- Promote, support and encourage the implementation of strategies related to the safety and quality of health care
- Collect, analyse, interpret and publish information about the safety and quality of health care
- Formulate standards, guidelines and indicators relating to the safety and quality of health care
- Promote, support and encourage the implementation of standards, guidelines and indicators to improve the safety and quality of health care
- Formulate, implement and manage model national accreditation schemes for health service organisations
- Consult, co-operate and advise Health Ministers, state and territory governments and other stakeholders on the safety and quality of health care.<sup>82</sup>

The vision of the Commission is to ensure and promote safety and quality of care for every person, everywhere and every time. The Commission aims to use its role as the national body for safety and quality in health care in Australia to ensure that the health system is better informed, supported and organised to deliver safe and high-quality care. The Commission works in partnership with the Australian Government, state and territory governments and the private and primary care sectors to achieve these aims.

The Commission's work focuses on four strategic priority areas:

1. Patient safety
2. Partnering with patients, consumers and communities
3. Quality, cost and value
4. Supporting healthcare practitioners to provide safe and high-quality care.

The Commission's Board is appointed by the Australian Government Minister for Health, in consultation with state and territory health ministers. Appointments to the Commission Board are based on members' experiences and knowledge in the fields of healthcare

administration, health service provision, primary health care, law and management, consumer advocacy, corporate governance and safety and quality.

The Board is supported by a number of specialised sub-committees including the:

- **Inter-Jurisdictional Committee**  
Which is made up of senior safety and quality managers from the Australian, state and territory government health departments, and which is responsible for providing advice on the process of policy development and facilitating jurisdictional engagement in the Commission's work
- **Private Hospital Sector Committee**  
Which includes representatives from the private hospital and day procedure service sector, and which is responsible for liaising with the Commission on key safety and quality issues affecting the private hospital sector, and for providing input, feedback and assistance on the development and implementation of the Commission's safety and quality strategies
- **Primary Care Committee**  
Which includes representatives from the primary care sector, and which is responsible for informing the Commission about key safety and quality issues affecting the primary care sector's performance, and for assisting with tailoring safety and quality strategies to enable their uptake in the primary care sector.

The Commission uses a collaborative and consultative approach to determine national priority areas for safety and quality in health care. Two of the Commission's foundation safety and quality programs are outlined in the following sections.

## Australian Safety and Quality Framework for Health Care

The Commission developed the *Australian Safety and Quality Framework for Health Care* in 2009. The Framework aims to promote a common understanding of the nature of safety and quality in health care, and to define the strategic direction for safety and quality improvement in the Australian health system. It was endorsed by health ministers in 2010 and describes a vision for safe and high quality care for all Australians. The Framework specifies three core principles for safe and high quality care. These principles are that care is:

1. Consumer-centred
2. Driven by information
3. Organised for safety.

The Framework was developed to apply across the whole health system, including primary care. The Framework outlines 21 areas for action that are applicable across the health system. The actions can be adapted for use in different healthcare settings to improve the safety and quality of care. These actions cover:

- Providing care that is easy for patients and consumers to access when they need it
- Ensuring that health professionals respect and respond to the choices, needs and values of patients and consumers
- Forming partnerships between patients, consumers, family members, carers and health professionals
- Using up-to-date knowledge and evidence to guide decisions about care
- Collecting and analysing safety and quality data, and using this information for improvement
- Taking action to improve the experience of patients and consumers
- Making safety and quality a central feature of how health service organisations are run, how health professionals work, and how funding is organised.

The actions within the Framework align well with the priorities and objectives in the *National Primary Health Care Strategic Framework*.<sup>2</sup> Although the principles and areas of action in the Framework apply in primary care, the heterogeneous nature of the sector and different service delivery environments of primary care services would need to be considered when determining what types of strategies are likely to be most effective in improving safety and quality, and deciding how these should be implemented. Safety and quality strategies that are driven by changes in legislation and regulation, or that apply in the same way across all primary care services, may not be appropriate or possible given the diversity of the sector. A more effective approach may be to link proposed strategies for safety and quality improvement with existing programs, policies and organisations so that they become embedded in the systems that support and enable primary care in Australia. This is the basis of the two strategies that have been identified for action by the Commission, and which are described in section six of this paper.

## The National Safety and Quality Health Service Standards

The NSQHS Standards were developed in consultation and collaboration with the states and territories, private hospitals, private sector organisations, technical experts and a wide range of stakeholders, including health practitioners and patients. The primary aim of the NSQHS Standards is to protect the public from harm and to improve the quality of care provided by Australian health services. They were endorsed by health ministers in 2011 and are mandatory for implementation in all Australian hospitals and day procedure services. The NSQHS Standards provide a nationally consistent statement about the level of care consumers can expect from health service organisations. They provide the basis for assessment of health service organisations to verify their implementation.

The NSQHS Standards provide a framework for improving the safety and quality of care that health services provide. They require the implementation of an organisational clinical governance framework and clinical risk mitigation strategies for high-prevalence adverse events, healthcare-associated infections, medication safety, patient identification and procedure matching, clinical handover, pressure injuries, acute clinical deterioration and falls. They also require a quality improvement program be implemented to support innovation and greater efficiency by health service organisations.

A review of the implementation of the NSQHS Standards in 2015 found that they have had a positive impact on the health system, including providing a focused framework for safety and quality activities and improving collaboration at different levels and across multiple health services. The time required to implement and monitor the NSQHS Standards was identified as a negative impact.

In 2015–16 the Commission reviewed and amended the NSQHS Standards. The second edition of the NSQHS Standards comprises eight standards:

1. Clinical Governance
2. Partnering with Consumers
3. Preventing and Controlling Healthcare-Associated Infection
4. Medication Safety
5. Comprehensive Care
6. Communicating for Safety
7. Blood Management
8. Recognising and Responding to Acute Deterioration.

The second edition also covers issues not covered by the first edition, including mental health and cognitive impairment, health literacy, end-of-life care and Aboriginal and Torres Strait Islander health. These areas were identified by the health sector as safety and quality gaps that should be addressed in the NSQHS Standards.

The NSQHS Standards (2<sup>nd</sup> edition) have been endorsed by health ministers and will be launched in November 2017. A copy of the latest NSQHS Standards (2<sup>nd</sup> ed.) is available from the [Commission's website](#). Implementation of and assessment to the NSQHS Standards (2<sup>nd</sup> ed.) will commence from 1 January 2019.

## The Commission and the primary care sector

The Commission has been working to support patient safety and quality improvement in primary care for a number of years. A summary of key pieces of work the Commission has conducted in relation to primary care is provided in this section.

### Public consultation on patient safety in primary care

In 2010, the Commission conducted a public consultation of primary care stakeholders about safety and quality in the sector. The Commission released *Patient Safety in Primary Health Care: A discussion paper*<sup>33</sup> to raise awareness of safety and quality issues in the primary care sector; to stimulate discussion about these issues; and to support coordinated national action to address them. A report describing feedback received during the consultation period was released in 2011.<sup>33</sup>

Feedback from stakeholders identified a range of barriers to implementing safety and quality improvement strategies, including that there was a large amount of confusion between the different roles, expectations, qualifications and levels of professional development and support available to primary care practitioners.<sup>33</sup> In the consultation, stakeholders consistently identified system-level issues that contributed to patient safety risks. These included issues regarding access to primary care services, such as the availability of services, funding arrangements and the disincentive of increasing co-payments; and issues regarding the integration and coordination of care, such as referrals and transitions between care sectors.<sup>33</sup>

Other issues that were raised by stakeholders during the consultation included the lack of systematic and coordinated collection of information about incidents of patient harm in primary care, the need for improved knowledge and understanding of the patient safety risks in primary care, improved communication between care providers and with consumers, improved consumer education, and increased access to consistent guidelines and standards for clinical care, risk management, governance and incident management.<sup>33</sup>

### Literature reviews

To better understand patient safety in primary care, the Commission contracted two literature reviews in 2009 and in 2015. Both reviews focused on the evidence of patient safety risks and incidents in primary care in Australia and internationally<sup>11,18</sup> and evidence of effective risk-minimisation strategies in this sector.<sup>14,15</sup> The reviews found very little information about patient safety risks, rate of incidents in primary care, or risk minimisation strategies.<sup>11,18</sup> Where studies did exist, they were usually limited to general practice settings and their results were not generalisable across all primary care settings.

## Shared decision making

The Commission has established a program of work focused on shared decision making and the development of resources and tools to support patient-centred care. Shared decision making refers to the integration of a patient's values, goals and concerns with the best available evidence about the benefits, risks and uncertainties of proposed treatment to support appropriate healthcare decisions.<sup>84</sup>

The Commission has produced three patient decision aids, and plans to develop others, to support health services and practitioners engage with patients as partners in their own care. Patient decision aids help patients and practitioners by providing high-quality, synthesised information about specific conditions to enable comparison of the risks and benefits of treatment options according to the patient's values and goals for treatment.<sup>85</sup> The patient decision aids developed by the Commission relate to antibiotic use for sore throat, acute bronchitis and middle-ear infection in children in primary care. Work is under way to develop new decision-support tools in the areas of osteoarthritis of the knee and heavy menstrual bleeding.

The Commission has worked in collaboration with the RACGP on the production of an online module for doctors on risk communication. The module is available to RACGP members as part of their continuing professional development program. Adapted versions of the online module are now also available for use by other specialist colleges.

## Clinical care standards

In 2013 the Commission established the Clinical Care Standards program to support clinical experts and consumers to develop standards on health conditions that would benefit from a nationally coordinated approach to reduce unwarranted variation and ensure delivery of appropriate care regardless of where a patient may be treated. This body of work has been identified as a priority area under the Commission's work plan.

A clinical care standard consists of a small number of quality statements that describe the care patients should be offered by practitioners and health services for a specific clinical condition or defined clinical pathway in line with current best evidence.<sup>86</sup> Each clinical care standard is developed with input from a topic working group made up of practitioners, researchers and consumers, and includes a public consultation process. Accompanying each clinical care standard is a series of suggested indicators to help health services monitor how well they implement the care described in the clinical care standard.

The Commission has developed seven clinical care standards since 2013, some of which are applicable to primary care. These are:

1. Antimicrobial stewardship
2. Acute coronary syndrome
3. Acute stroke
4. Delirium
5. Hip fracture care
6. Osteoarthritis of the knee
7. Heavy menstrual bleeding.

The Commission is also working on a clinical care standard focusing on venous thromboembolism prevention, which will be released in 2018.

The clinical care standards have been developed for use in a variety of healthcare settings, including hospitals, primary care services and aged care homes. Some clinical care standards may be more relevant to primary care than others. For example, antimicrobial stewardship and osteoarthritis of the knee have greater relevance to primary care services because of the central role primary care practitioners play in providing and coordinating care for patients with these conditions.

## Progress of assessment of primary care services to the National Safety and Quality Health Service (NSQHS) Standards

Since 2013 the NSQHS Standards have been implemented voluntarily in some primary care settings by private dental practices and a number of community, ambulatory care, pharmacy and transport services. The Commission has worked with organisations such as the Royal Flying Doctor Service, the Australian Dental Association and a wide variety of community health services to support primary care services to interpret and adapt the NSQHS Standards for use in their local contexts. The Commission released the *NSQHS Standards Guide for Dental Practices and Services*<sup>87</sup> in 2015 and the *Guide to the NSQHS Standards for community health services*<sup>88</sup> in 2016 to support primary care services implementing the NSQHS Standards.

At 31 July 2017, 443 community health services had been assessed to the NSQHS Standards and received accreditation. During the same period approximately 1,800 private dental practices had been assessed to the NSQHS Standards.

## 6. Strategies to support patient safety and quality improvement in primary care

Patient health outcomes are improved when comprehensive, well-coordinated and patient-focused primary care systems are in place.<sup>1,89</sup> A growing body of research has shown that while the Australian primary care system functions well, considerable improvements can still be made.<sup>1</sup> Improvement options that have been proposed include re-designing primary care systems to make them more patient-centred, easily accessible and coordinated.<sup>2, 45</sup> There are challenges to implementing nationally consistent safety and quality improvement initiatives in primary care, including: the heterogeneous nature of the sector; limited data availability on the effectiveness of safety and quality initiatives; and the existence of few clear implementation mechanisms.

Studies have shown that changes to practice and systems are more significant and effective when multiple improvement strategies are implemented together, compared to the implementation of a single strategy.<sup>90</sup> System-level interventions focused on reducing human-related factors that contribute to harm are likely to produce the greatest improvement of the safety and quality of care provided by primary care services.<sup>22</sup> To ensure that strategies to improve patient safety in primary care are coordinated and sustainable, they need to be embedded in the systems and infrastructure for primary care services, as well as in wider government and non-government programs, policies and funding arrangements. Research shows that a focus on systems helps support the effective implementation of both large and small-scale change in health care.<sup>91-95</sup>

There have been a number of performance frameworks, safety and quality frameworks and strategies proposed for primary care to support different aims.<sup>96,97</sup> However, there has been no agreement on the development, implementation or application of a single framework or approach to support patient safety and quality improvement in primary care. There is value in having a nationally consistent approach to patient safety and quality improvement across all sectors of the health system.<sup>22, 98</sup>

Safety and quality frameworks are tools that enable systematic examination and evaluation of safety initiatives and which stimulate thinking about integrated quality improvement strategies. Some of the strategies that could support patient safety and quality improvement in primary care sit within the remit of the Commission. This section describes two specific strategies that the Commission plans to implement to improve safety and quality in primary care. Other strategies identified from the literature on primary care have also been outlined in this section and feedback from stakeholders is being sought on these strategies.

### National Safety and Quality Health Service (NSQHS) Standards for primary care

The first strategy to be implemented by the Commission is the development of a set of NSQHS Standards for primary care services.

While the NSQHS Standards were developed for use by all Australian healthcare services, an increasing number of primary care services have been implementing them to support improvements in the safety and quality of care they provide. Some of these primary care services have provided feedback to the Commission that implementation of the NSQHS Standards has been challenging. This has been attributed, in part, to the differences in the language of the NSQHS Standards and how they apply to smaller, office-based settings, and to the information, communication and administrative systems used in primary care, compared with hospital-based settings.<sup>99</sup> These differences mean that additional support has been needed for primary care services to effectively implement the NSQHS Standards.

To address this issue, the Commission developed context-specific implementation guides for both dental and community health services.<sup>87, 88</sup> Implementation support for primary care services has also been provided by some primary care professional membership organisations and colleges. However, with the growth in the number of primary care services implementing the NSQHS Standards and the variations in the services they provide, the need for implementation support will also increase.

A public consultation process on the draft NSQHS Standards (2<sup>nd</sup> ed.) conducted in August 2015 included primary care stakeholders. Feedback from these stakeholders supported the continued use of the NSQHS Standards in primary care services. However, respondents also stated that the NSQHS Standards needed to be amended to make them more applicable to primary care services and to ensure they addressed relevant safety and quality issues that are unique to the sector.

In line with this feedback, the Commission is planning to develop NSQHS Standards specifically for use in primary care services that do not have access to existing sets of appropriate standards or formal accreditation programs, and which may wish to adopt the NSQHS Standards to guide patient safety and quality improvement within their service.

## Why do this work?

While a number of primary care services have implemented profession- or industry-based standards and accreditation programs, they are not always widely used or equally available across the primary care sector.

There are several issues associated with this disparate approach, including that:

- Not all primary care services or practitioners have access to standards or an accreditation program that adequately addresses their needs or the risks associated with the care they provide
- Some primary care services, such as Aboriginal Community Controlled Health Services, are assessed against multiple sets of standards, which is inefficient, costly and burdensome
- The standards for many primary care services do not always address governance, safety and quality improvement systems despite these being the goals of many programs.<sup>100</sup>

Furthermore, challenges exist when trying to harmonise safety and quality systems across the care continuum. A patient's journey through the health system often crosses organisational boundaries and different standards apply in different services and jurisdictions.<sup>99, 101</sup>

It is not intended that the NSQHS Standards for primary care services replace or duplicate existing sets of standards or accreditation programs that are used by specific professional groups, such as the RACGP's *Standards for general practices*. However, for those primary

care services or practitioners where safety and quality standards currently do not exist or where access is limited, the NSQHS Standards for primary care services would provide a framework to assist with the implementation of quality improvement activities. The Commission has been asked by stakeholders in the primary care sector, through feedback from multiple consultations and via members of the Primary Care Committee, to undertake this work.

The range of primary care services to which the NSQHS Standards for primary care services would apply has not yet been determined. For the acute sector, implementation of the NSQHS Standards is mandated by state and territory health ministers. For primary care services, however, requirements to implement standards for accreditation would depend on the governance and funding arrangements for individual primary care services. The Commission is not a regulatory body and therefore cannot mandate implementation of the standards by any primary care service. Instead, the Commission would work with relevant primary care stakeholders, such as professional associations, colleges and Primary Health Networks to support implementation of the standards by primary care services where required and where appropriate.

The development of standards alone, however, is not sufficient to support improvements, and there needs to be a mechanism for implementation and a process for verification. Arrangements would also need to be agreed with primary care stakeholders to manage situations where existing or multiple compliance regimes may apply to specific primary care services.

A set of nationally consistent safety and quality standards, such as the NSQHS Standards for primary care services, that harmonises with multiple sets of professional standards and is applicable to a wide range of primary care services, would help decrease the burden on services participating in multiple accreditation processes. It would also meet national requirements across a range of government programs, and support coordination of care between primary care services and Local Health Networks.

## National safety and quality indicators for primary care

The second strategy will be a review of the practice-level safety and quality indicators for primary care that were first released by the Commission in 2012. This review will consider updating the existing indicators with a view to developing, in partnership with primary care services, systems to support improvement through performance monitoring and benchmarking.

The *National Health Reform Act 2011* that established the Commission outlines requirements for the Commission to develop indicators and recommend national datasets to support safety and quality in health care. The Commission's existing national indicators program aims to support safety and quality improvement in health care services by improving systems and processes for the collection, use and reporting of safety and quality information.<sup>102</sup>

To date, the Commission's work on national indicators has predominately focused on measuring safety and quality in hospitals. However, in May 2012, the Commission released a set of 35 safety and quality indicators for primary care.<sup>103</sup>

The indicators cover seven domains, which are:

1. Accessibility

2. Appropriateness
3. Acceptability / patient participation
4. Effectiveness
5. Coordination of care
6. Continuity of care
7. Safety.

A full list of the practice-level safety and quality indicators for primary care can be found at the [Commission's website](#). The indicators were designed to be used voluntarily by primary care services to support quality improvement at the local practice or service level.

## Why do this work?

Safety and quality benchmarks and target patient outcomes have not been specified, measured, monitored or reported systematically for primary care at either regional, state or national levels in Australia.<sup>89</sup> The lack of appropriate data and information about the safety and quality of care provided by primary care services has been identified as a significant barrier to improvement.<sup>17, 33, 89, 104</sup>

Indicators are commonly used by health service organisations for internal evaluation and governance as well as external evaluation.<sup>100</sup> They have a central role in quality improvement by helping guide reflective practice, monitoring trends over time and identifying significant issues or variances in practice that would benefit from intervention.<sup>24, 103</sup>

The Australian Government Department of Health is working on two projects that consider how existing data collection and reporting arrangements for primary care services can be amended or streamlined. One of these projects is the Practice Incentives Program Redesign. This project aims to support general practices to improve their detection and management of chronic conditions, and to focus on issues specific to their practice population. Practices participating in the new quality improvement incentive would use data to drive continual improvements in the care provided and measure their performance over time. The second project is working towards creating a Primary Health Care National Minimum Data set. This data set would contain de-identified information and help primary care services and the department to measure and benchmark performance at a local, regional and national level to inform policy. This activity forms part of the Health Care Home trials and was announced by the Prime Minister in March 2016 as part of the *Healthier Medicare* reform package.

These two projects aim to build a national data collection and reporting framework for primary care to meet current and future information needs. The Commission's work on reviewing the practice-level safety and quality indicators for primary care may help to inform these projects. Practice-level indicators can support primary care services to review their safety and quality performance, including benchmarking performance against other services if the data is made widely available, and can help services to use information to drive safety and quality improvement in a targeted way.

## What else?

The Commission has identified two strategies for action – development of NSQHS Standards for primary care services and a review of the practice-level safety and quality indicators for primary care – to improve safety and quality in primary care. Work on these two strategies commenced in 2017. While these strategies will be important, more work will

be needed before safety and quality improvement is effectively embedded in the organisation and operation of primary care services.

The Commission is seeking feedback from primary care sector stakeholders about other safety and quality priorities and strategies that should be explored and implemented.

The *Australian Safety and Quality Framework for Health Care* and the available evidence about effective patient safety solutions may be useful to stakeholders when thinking about safety and quality strategies to be developed for primary care.

The Framework identifies a number of potential strategies under each core principle:

1. Consumer-centred care:
  - Developing and supporting models of integrated care across the primary and acute care sector
  - Using strategies such as shared decision making to engage consumers, patients, carers and families in their care
  - Designing and organising primary care services to better meet the needs of all patients and consumers, particularly those with low levels of health literacy.
2. Driven by information:
  - Using agreed clinical guidelines and standards to reduce unwarranted variation
  - Systematically collecting and reviewing information about patient outcomes, patient experience, processes of care and patient safety incidents to improve safety and quality.
3. Organised for safety:
  - Expanding the use of electronic tools including electronic records, electronic prescribing systems, alerts and decision support tools, and linking with My Health Record
  - Implementing standards for safety and quality in primary care services.

A scan of the evidence conducted by the UK's Health Foundation identified a number of patient safety improvement strategies used in primary care internationally that may be applicable in the Australian context.<sup>105</sup> These include:

- Systems for identifying, recording and analysing patient safety incidents
- Support for staff education and training in safety and quality
- Patient-centred care strategies, shared decision making models and increased access to information for patients about their care
- Use of collaborative networks to drive improvements in performance in specific areas
- Improvements to the coordination between primary, secondary and tertiary care practitioners through structured clinical handover
- Expansion of the roles for other practice team members
- Electronic tools, such as record management systems, prescribing systems, alerts and decision-support tools.

Many primary care services in Australia may already be implementing one or more of the strategies identified by the Framework or the UK Health Foundation. In addition to feedback from stakeholders on potential strategies for implementation, the Commission is keen to hear from primary care stakeholders about strategies that are already being implemented.

The Commission is seeking to understand the status of the implemented strategies and how they could potentially be systematised as part of a national approach to patient safety and quality improvement for primary care.

Details on how feedback can be provided are outlined in the next section.

## 7. Provide your feedback

To ensure the Commission's program of work to support safety and quality improvement in primary care meets the needs of the sector, the Commission is seeking your feedback.

You can contribute to this process by providing comments in writing, by letter or email. You may also call the Commission to discuss the consultation paper and provide your comments.

Submissions received may be published on the Commission's website, including the names and/or organisations making the submission. The Commission will consider requests to withhold part or all of the contents of any submission made. If requested, any submission that includes personal information identifying specific individuals may be withheld from publication or de-identified before submissions are published.

Submissions should be submitted by close of business on **22 December 2017** to be considered in the consultation process.

Submissions should include:

- Name, organisation (if relevant) and contact details
- Responses to the consultation questions
- Any general comments
- Additional information, for example, any technical, business information or research-based evidence the Commission should be made aware of.

Primary care stakeholders and consumers are invited to provide a submission. Questions have been provided to help respondents prepare their submissions. Questions 1-5 are targeted primarily at primary care service providers and organisations that provide support to them. Question 6 is targeted toward consumers that have used or use primary care services.

Submissions are invited to address any or all of the following areas:

### **1. The scope of primary care services as the focus for the Commission's program of work.**

The consultation paper defines primary care services as:

*'services provided by general practitioners, practice and community nurses, nurse practitioners, allied health professionals, midwives, pharmacists, dentists and Aboriginal and Torres Strait Islander health practitioners either, in the home, general or other private practice, community health services and local or non-government services'*

Do you consider this to be an appropriate definition of primary care? Should this definition be amended? If so, what should be addressed in an alternative definition of primary care?

### **2. Safety and quality issues in Australian primary care services.**

What are the safety and quality issues experienced by you, your primary care service or the primary care services you support?

What strategies have been implemented to address these? Have these been evaluated?

Have you noticed any changes in the quality of the service you receive or provide?

What additional strategies, tools or resources should be developed and/or made available to make these strategies more effective?

**3. Developing a set of NSQHS Standards for primary care services other than general practices.**

What are the barriers and enablers for implementation of these standards in primary care?

How could the Commission address these?

What support could other organisations provide for implementation?

Which organisations need to be involved in this process?

**4. Reviewing the Commission's practice-level safety and quality indicators for primary care.**

What are the barriers and enablers for the review process, development and implementation of indicators in primary care?

How could the Commission address these?

Which organisations should be involved and what is their role?

**5. Safety and quality improvement in primary care more generally.**

What strategies are you, your primary care service or the primary care services you support, implementing to improve safety and quality of care? For example, do you have an incident or risk register in your service?

What strategies, tools or resources to support improvements in safety and quality should be considered?

What safety and quality strategies, tools and resources can be led by the Commission in a national approach?

What safety and quality strategies, tools and resources can be led by professional support organisations?

What are the barriers and enablers for implementation of these?

How could the Commission support implementation of these?

Which organisations need to be involved in the process and what is their role?

**6. Primary care consumers.**

What are your biggest safety and quality concerns?

What action would you like to see taken to address these concerns?

Can you provide examples of a safe, high-quality primary care service that you have visited? What did they do to support safe, high-quality care?

Does your primary care service support you to engage in your care?

Are you supported to involve your family, carers and/or friends in your care?

Does your primary care service support you to be involved in decisions about your treatment options?

Are you supported to communicate your wishes and goals for treatment?

When you visit primary care services, do you have an opportunity to provide feedback to the service on your experience of care?

Does the primary care service keep consumers and patients informed about changes they make in response to feedback they receive?

Submissions can be emailed to [NSQHSStandards@safetyandquality.gov.au](mailto:NSQHSStandards@safetyandquality.gov.au) or sent by post to:

Patient Safety and Quality Improvement in Primary Care  
Australian Commission on Safety and Quality in Health Care  
GPO Box 5480  
SYDNEY NSW 2001

Questions relating to the consultation process should be directed by email to [accreditation@safetyandquality.gov.au](mailto:accreditation@safetyandquality.gov.au) or by calling the Commission on 1800 304 056.

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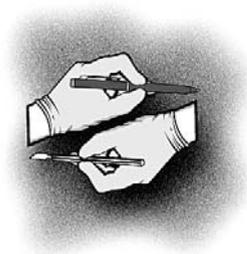
## AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

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## ORIGINAL ARTICLE ARTICLE ORIGINAL

# The ARTS of risk management in rural and remote medicine

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**Introduction:** This paper describes an action research process (in which the researchers are active participants throughout the process of development, testing and refinement) to develop a framework for clinical risk assessment and management in the context of rural and remote medicine. The framework is needed to support educational, medicolegal and quality improvement processes in rural and remote medical practice.

**Methods:** The research process included identifying a problem and gradually developing a research question, developing a potential model for application in a specific context, refining the tool and piloting the tool in a limited context. The research question and framework were developed during a series of teleconferences under the aegis of the Censorial Panel of the Australian College of Rural and Remote Medicine (ACRRM). After the framework was developed and refined, it was tested at a workshop in conjunction with the ACRRM Scientific Forum in Alice Springs, Australia, in July 2004. Workshop participants were principally but not exclusively rural medical practitioners from across Australia. The main outcome measure was a working framework for risk management broadly applicable in rural and remote medicine.

**Results:** The process clarified differences between safety and quality approaches in metropolitan and rural and remote medical practice, culminating in an appropriate clinical risk management framework.

**Conclusion:** The action research as undertaken resulted in a workable risk management framework that is worthy of further development and that may be a valuable educational tool, both for existing practitioners and for future rural doctors. Further, it has potential as a means of providing legal protection to rural practitioners when actual rural practice is at odds with "best practice" as defined by a metropolitan group of experts.

**Introduction :** Ce document décrit un processus de recherche-action (dans le contexte duquel les chercheurs participent activement à l'ensemble du processus d'élaboration, essai et amélioration) visant à élaborer un cadre d'évaluation et de gestion des risques cliniques en médecine dans les régions rurales et éloignées. Ce cadre est nécessaire pour appuyer des processus d'éducation, médicolegaux et d'amélioration de la qualité en pratique de la médecine en milieu rural et éloigné.

**Méthodes :** Le processus de recherche a consisté notamment à définir un problème et à élaborer graduellement une question de recherche, à mettre au point un modèle possible d'application dans un contexte précis, à raffiner l'outil et à en faire l'essai pilote dans un contexte limité. On a élaboré la question et le cadre de recherche au cours d'une série de téléconférences sous l'égide du Censorial Panel de l'Australian College of Rural and Remote Medicine (ACRRM). Une fois le cadre mis au point et raffiné, on l'a mis à l'essai en juillet 2004 au cours d'un atelier du Forum scientifique de l'ACRRM, à Alice Springs, Australie. Les participants à l'atelier étaient principalement, mais non exclusivement, des médecins ruraux de toutes les régions de l'Australie. Le cadre pratique de gestion du risque applicable de façon générale à la médecine en milieu rural et éloigné constituait la principale mesure de résultat.

**Résultats :** Le processus a clarifié des différences entre des approches axées sur la

sécurité et la qualité dans la pratique de la médecine en région métropolitaine et en milieu rural et éloigné et a produit un cadre approprié de gestion des risques cliniques.

**Conclusion :** La recherche-action entreprise a produit un cadre pratique de gestion des risques qu'il vaut la peine de développer davantage et qui peut constituer un outil précieux d'éducation à la fois pour les praticiens actifs et pour les futurs médecins ruraux. Il est de plus porteur de possibilités comme moyen de fournir une protection légale aux médecins ruraux lorsque la pratique rurale réelle entre en conflit avec la «meilleure pratique» telle que définie par un groupe d'experts d'une région métropolitaine.

## INTRODUCTION

Although quality has been the key issue in health care since Donald Berwick brought the work of Alexander Demming to the attention of the medical community in the 1980s,<sup>1</sup> it is being complemented and possibly superseded by a focus on risk in the last 10–15 years. In Australia, this has occurred since the 1995 landmark study of Wilson and colleagues,<sup>2</sup> in which medical errors were firmly identified as resulting in significant morbidity and mortality for hospital inpatients. The Australian Council for Safety and Quality in Healthcare, established in 2000, has reinforced the focus on safety and risk management. Following major events overseas<sup>3</sup> and more recently in Australia,<sup>4,5</sup> risk management has become a major priority for health systems.

The work of James Reason<sup>6</sup> was seminal in identifying the events leading up to an adverse event, and other industries, such as the airline industry, have used this framework in a very positive way. In medicine, such models have focused on patient safety through the analysis of adverse events almost entirely in the hospital setting. The process is retrospective and historical, and it gives rise to accumulated data on which to plan, improve and monitor. Vincent and colleagues' framework and root cause analysis are examples of this approach.<sup>7</sup>

A generic approach, applicable to a broad range of situations including health, is detailed in the Australian and New Zealand Standard for Risk Management.<sup>8</sup> The process is prospective but uses data when it is available, although it relies more on subjective assessment based on "what if" scenarios. Importantly, it allows for the assessment of impact on all stakeholders and it identifies opportunities as well as mitigating loss.

In the rural and remote context, however, there is little history of adverse event analysis, hence little data for planning improvement in any structured way.

## *RDA and ACCRM*

Rural and remote medicine in Australia has successfully traversed several major crossroads. Some 10 years ago it was realized that the then current organizations in Australia were not adequately serving the needs of either rural and remote practitioners or their patients. This brought about the establishment of the Rural Doctors Associations (RDA) in all states and the Australian College of Rural and Remote Medicine (ACRRM). These organizations have campaigned strongly for rural health and their recent application to the Australian Medical Council for the recognition of rural and remote medicine as a specialty in its own right (Application for Recognition of the Specialty of "Rural and Remote Medicine" by the Australian College of Rural and Remote Medicine. ACRRM, unpublished document, 2004) has seen the training program recognized as an accredited alternative for the training of rural generalists.<sup>9</sup>

Within the ACRRM, it has been necessary to critically examine what separates rural and remote medical practice from metropolitan medical practice. During this process, it became clear that risk and risk management in rural and remote medicine have characteristics that are unique, or at least sufficiently different from the characteristics when they are applied in a metropolitan setting to warrant further examination.

Thus the work of the Quality and Safety in Practice Committee of the ACRRM Censor's Panel (of which the authors were members) developed into an action research project in relation to risk in rural and remote medicine with the following aims:

- Improve patient safety by educating rural and remote practitioners about risks specific to the rural and remote context. This will enable informed management decisions that minimize the impact of risk on all stakeholders.
- Reduce the effect of the current attitude of

defensive medicine on the recruitment of junior doctors to rural and remote science.

- Analyze risk in rural and remote medicine to help define the specialty.
- Develop a framework for the analysis of events and research that would provide context-specific evidence for rural and remote best practice.

## **METHODS**

As opposed to a carefully designed prospective randomized controlled trial designed to answer one question, this project had characteristics of action research with the development of an iterative approach to the research question.

We briefly describe 6 stages; their outcomes will be presented sequentially in the results section.

### *Identifying the problem and gradually developing the research question*

The need to define risk in the context of rural and remote medicine was identified as an important part of the process of trying to define what makes rural and remote medicine unique.

### *Literature search*

We undertook a literature search to determine the current knowledge base about risk management, what is known about its specific application to medical areas and whether there is unique work in rural risk management.

### *Developing a potential model for application in a specific context*

Following the literature review, it was important to determine whether any existing models of risk management could be applied directly to a rural context or if modifications would be necessary to ensure applicability in the local setting.

### *Refining of the tool*

Following the initial development of a model, it was important to undergo an iterative process with a range of rural and remote stakeholders to refine the model so that it could be more broadly applicable.

### *Piloting the tool in a limited context*

Once we decided on a model, it was necessary to

“road test” it with a range of previously uninvolved rural and remote practitioners. This was done in the context of a workshop at the ACRRM Scientific Forum in Alice Springs, Australia, in July 2004.

### *Further refining the tool and extending the concept more broadly*

This is in the planning stages.

## **RESULTS**

### *Identifying the problem and gradually developing a research question*

There are several key distinguishing features of rural and remote medicine practice patterns:

- The care provided in rural and remote areas, including procedural and other advanced medicine, which in urban settings would ordinarily be provided by a range of separate medical craft groups (i.e., disciplines, specialties and subspecialties), is complex. This means that an individual's scope of practice requires a broad core as well as specific advanced clinical knowledge and skills, including knowledge of Aboriginal and Torres Strait Islander health issues, emergency care skills and knowledge of population health.
- The roles and settings, including hospitals and other community health facilities, are diverse. The geographic and sociologic contexts of practice range from larger regional centres to extremely remote communities, and the distinct health or morbidity profiles across rural and remote Australia must be taken into consideration.
- There is extensive practice of distance-based professional collaboration between rural and remote medical practitioners and other specialists in the provision of shared care, skills transfer and education.
- Rural medical practitioners face longer working hours and on-call responsibilities coupled with significant workforce shortages.
- There is closer contact between the doctor and the individuals within the community, and there are implications of the social-professional mix in that relationship.
- In the event of an adverse outcome, there are implications to the doctor and to the community.

From this analysis, we considered it likely that risk management in rural and remote areas would be different from that in metropolitan practices.

We developed the questions, “If this is so, what

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models exist that can be used locally or do they need to be modified, and what value might any be, if applied in particular contexts?"

### *Literature search*

The literature review revealed many methods for risk assessment and management,<sup>10-14</sup> but in relation to medicine, the seminal framework is that of Vincent and colleagues.<sup>7</sup> It was developed and validated in the major hospital context, which the authors suggested could be adapted to a range of circumstances. However it is clear that this work is primarily a retrospective approach and not ideally suited to the breadth of circumstances or the range of stakeholders encountered in the rural and remote context.

### *Developing a potential model for application in a specific context*

We decided to explore the generic approach specified in the Australian and New Zealand standard for risk management,<sup>8</sup> which is prospective in nature; it does rely on subjective assessments based on "what if" scenarios but allows the assessment of impact on all stakeholders. It also identifies opportunity and mitigates losses. The model has a sequence of steps:

1. Identify the context.
2. Identify the risks.
3. Analyze the risks.
4. Estimate the level of risks.
5. Treat the risks (in the rural and remote medicine context this is done via an education process or medicolegal checklist).

### *ARTS*

Rural medical practitioners have taken into consideration components of the ARTS (assessment, resources, transport and support) list intuitively based on their extensive experience. The challenge was to make the process explicit. An earlier attempt by one author, which identified areas of risk that needed to be balanced, was sufficient to arouse interest in the concept within the ACRRM but did not have practical application.

In Far North Queensland, a mnemonic for decision making was developed to teach registrars in general practice, particularly obstetrics (Dr. Bruce Cameron, Atherton, Queensland: personal communication, 2003): RATS stood for resources, assessment, telephone and support. We decided to use RATS to modify Vincent's framework accordingly.

The RATS framework was changed to ARTS and we developed a model with a number of sub-headings for each heading (Fig. 1). Assessment is primarily a situational analysis. The framework document is presented in the same form as the one that was used during the workshop, with the exception of some minor formatting and editing changes for publication purposes.

### *Risk analysis*

In relation to risk analysis, we used the pre-existing Australian and New Zealand Standard for Risk Management<sup>8</sup> matrix framework. For level of risk, we applied the qualitative risk matrix that considered consequence (on a 5-point scale from 1, insignificant, to 5, catastrophic) compared with likelihood (rated from A, almost certain, to E, rare). The overall level of risk is the product of the consequence of impact of the risk, if realized, and the likelihood of the risk happening; thus, in each situation the risk can be rated on a 4-point scale as low, moderate, high or extreme (Table 1 and Table 2). These assessments are subjective but are an attempt to standardize the approach to quantification of the risks identified in the ARTS framework. Table 1 and Table 2 are those used at the workshop, with the exception of some minor formatting and editing changes for publication purposes.

Clinical management differs according to the level of risk. Extreme risk requires risk management measures that include extensive protocols that are adhered to, regularly checked procedures and constant vigilance. High risk requires specific protocols and education about them as well as familiarity with procedures. Moderate risk requires standard protocols with flexibility as well as general preparedness. Low risk is managed by improved routine procedures and good-quality practice.

### *Refining the tool*

Each of the headings in the ARTS framework could be relevant to each of the stakeholders in any given scenario. In this light, it required a qualitative estimate of the level of risk that could then be fed into the ARTS framework to build a composite picture of the risk for each scenario. This was done using a steering group to develop the final instruments and to develop the plan for the workshop.

Initially, the concept was explored by using 3 typical clinical examples: acute appendicitis, acute myocardial infarction and acute psychosis. Manage-

ment for each condition by the primary attending clinician differs as a result of differences in geographical remoteness, access to support and professional expertise.

Table 3 describes the typical management of acute presentations by the primary attending clinician in different geographic settings as typified by Rural Remote Metropolitan Area codings. Generally, the more remote the location, the greater the involvement of the clinician and the less the available support. This will inevitably introduce an

increased number and variety of more severe risks to both clinicians and patients.

### *Pilot study*

We performed a pilot study at a half-day workshop in Alice Springs, Australia. About 40 participants were involved, including facilitators, speakers and support personnel. There were 21 formal participants, the vast majority of whom were doctors in small group settings. Following background presen-

<b>The ARTS of rural and remote medicine (assessment, resources, transport, support)</b>			
<b>Level of risk for patient (P), doctor (D) and community (C)</b>			
<b>RISK IDENTIFICATION</b>	<b>P</b>	<b>D</b>	<b>C</b>
<b>ASSESSMENT (situational analysis)</b>			
<b>Complexity</b> What risk of error does the clinical context and complexity result in? For example, is the clinical context acute or chronic, what speed of clinical response is required, are the diagnoses and treatment straight forward or are multiple steps required? Are there complex communication needs?			
<b>Socioeconomic factors</b> What risk will there be to the patient/family and community in relation to dislocation, cost, income and productivity?			
<b>Cultural and psychological factors</b> This risk relates primarily to those resulting from the patient and community's belief systems around illness, treatment and expectations, and around communication. For the doctor, it revolves around medicolegal risk and the pressures on management decisions from nonclinical sources.			
<b>Public health issues</b> This relates to infection control, occupational or environmental health issues, health promotion activities, and the risk to doctors, family and team from contagious illness.			
<b>RESOURCES</b>			
<b>Human</b> Given the available local human resources, what risk is there for the patient in this clinical context? Will safety for patients, practitioners, and the community be compromised by the demands of this case on local resources?			
<b>Advice and information</b> Is the availability of clinical information and specialist advice in this context adequate for patient safety or doctor support?			
<b>Technical</b> What risk is there for the patient in this clinical context given the physical infrastructure (facilities, communications, etc.)?			
<b>TRANSPORT</b>			
<b>Additional risks</b> What additional risk is there for the patient, doctor and other health personnel in this clinical context if transport is required?			
<b>SUPPORT</b>			
<b>Psychological</b> What are the risks to the patient and family, doctor, team and family, and community in this clinical context given the psychological (and professional) supports available to each?			
<b>Management and organizational</b> Are there systems in place that support the management of this case, or are they a barrier? Is the local (and distant) management supportive and enabling, or is it a battle to manage this case in the patient's best interest?			

Fig. 1. The ARTS framework, with the subheadings developed for each part of the framework (assessment, resources, transport and support).

tations relating to the importance of and rationale for the development of the risk assessment framework, we formed small group sessions in which a range of representative cases were discussed in an informal context by the groups applying the framework. These included medical, surgical and psychiatric case scenarios in both acute and chronic settings.

Each group reached a rating about level of risk for the patient, the doctor and the community for each item (if appropriate) in the ARTS framework. No attempt was made to reach an overall rating. At the end of the session, we assessed participants' learning and their thoughts about the value of the process and its ease of application to other contexts. At this stage, it was not considered appropriate to seek feedback about the specific cases.

The stated workshop objective was to enhance a joint understanding of the different and specific issues in risk management in the rural and remote context and to progress toward a working framework for risk management applicable to such a context. Participants were asked to rate the effectiveness of the workshop in achieving the identified learning objective. The results are presented in

Table 4. The response rate was 19 out of 21, or 90%.

Positive comments were received in relation to the value of the technique for teaching and education, for considering risk management in the broader context and for promoting safe practice within rural environments. It was also suggested by a number of participants that the "transport" heading of the framework be divided into acute care transport issues and general issues of access to primary medical and referral or hospital services for patients and other stakeholders. Similarly, some participants suggested that a "family" category would be a useful addition to the stakeholder analysis. These changes have not been included in the appended framework (Fig. 1).

### *Further refining the tool and extending the concept more broadly*

We have not yet refined the concept but plan to do so in the near future. There are also plans for discussion with other national organizations, such as the Australian Council for Safety and Quality in Healthcare.

## DISCUSSION

The action research as undertaken is the first stage of an evolving process that will integrate a "safety and quality" framework within rural and remote clinical practice and within a recognized professional medical college. The results from the workshop are encouraging. They indicate that there is grassroots support for work to be done to produce a product that is of more than academic interest.

There is no doubt that the process is currently complicated and subjective. If it is applied to multiple health problems in a range of contexts we may end up with results that are different or, at worst, conflicting, without any clear resolution. Further, the practical value of applying the framework to any particular case in a certain context is unclear at this stage. However, it must be stated that interest in the approach has been expressed by both the Australian

**Table 1. Risk matrix and overall level of risk: qualitative measures of consequence of impact on patient, practitioner and community\***

Level	Descriptor	Example, detail or description
1	Insignificant	No injuries, low financial loss, little inconvenience
2	Minor	Minor injury or health detriment, some financial loss, significant time impact
3	Moderate	Significant adverse event or outcome, disruption to family, practice or community
4	Major	Serious adverse outcome, permanent disability, costs beyond local resources, local health capacity exceeded
5	Catastrophic	Death, overwhelming effect on practice viability

\*Adapted from the Australia and New Zealand Standard for Risk Management.<sup>5</sup>

**Table 2. Risk matrix and overall level of risk: qualitative risk analysis matrix indicating overall grading of risk for each level of consequence and likelihood\***

	1 (insignificant)	2 (minor)	3 (moderate)	4 (major)	5 (catastrophic)
Likelihood					
A (almost certain)	M	H	E	E	E
B (likely)	L	H	H	E	E
C (possible)	L	M	H	E	E
D (unlikely)	L	L	M	H	E
E (rare)	L	L	M	H	H

E = extreme risk; H = high risk; M = moderate risk; L = low risk.  
\*Adapted from the Australia and New Zealand Standard for Risk Management.<sup>8</sup>

**Table 3. Management according to Rural Remote Metropolitan Area classification\***

Condition	RRMA 1–2	RRMA 3–4	RRMA 5–7
Acute myocardial infarction	<ol style="list-style-type: none"> <li>1. Immediate diagnosis.</li> <li>2. Initiation of care, (oxygen, IV nitrates, morphine).</li> <li>3. Immediate referral via specific coronary retrieval team.</li> <li>4. Post-coronary follow-up and coordination of secondary prevention activities.</li> <li>5. Participation in local divisional group health promotion and disease prevention programs.</li> </ol>	<ol style="list-style-type: none"> <li>1. Immediate diagnosis.</li> <li>2. Initiation of care, (oxygen, IV nitrates, morphine).</li> <li>3. Preparation for admission, pathology and assessment of status for definitive treatment (thrombolysis, arrhythmias).</li> <li>4. Management of definitive care or preparation for transfer to tertiary centre.</li> <li>5. Management of complications, arrhythmias, etc.</li> <li>6. Review and management of post-coronary state, rehabilitation coordination.</li> <li>7. Management of ongoing secondary prevention program.</li> <li>8. Initiation and supervision of community health promotion and disease prevention programs.</li> </ol>	<ol style="list-style-type: none"> <li>1. Immediate diagnosis.</li> <li>2. Initiation of care, (oxygen, IV nitrates, morphine).</li> <li>3. Preparation for admission, assessment of status for definitive treatment or transfer to major centre in the absence of immediate pathology access.</li> <li>4. Management or initiation of definitive care or preparation for transfer to tertiary centre.</li> <li>5. Immediate management of acute complications, arrhythmias, etc.</li> <li>6. Management and advice of community and family responsibilities, especially in indigenous communities.</li> <li>7. Review and management of post-coronary state, and rehabilitation coordination.</li> <li>8. Management of ongoing secondary prevention program.</li> <li>9. Initiation and supervision of community health promotion and disease prevention programs.</li> </ol>
Acute appendicitis	<ol style="list-style-type: none"> <li>1. Immediate diagnosis.</li> <li>2. Referral to surgeon or public facility.</li> </ol>	<ol style="list-style-type: none"> <li>1. Immediate diagnosis.</li> <li>2. Immediate ordering of pathology tests and confirmation of diagnosis.</li> <li>3. Assessment of surgical risk.</li> <li>4. Assessment of anesthetic risk.</li> <li>5. Preparation and transfer of patient to major centre if risks too substantial for immediate care.</li> <li>6. Completion of surgical or anesthetic procedure.</li> <li>7. Management of acute complications.</li> <li>8. Ongoing postoperative care.</li> </ol>	<ol style="list-style-type: none"> <li>1. Immediate diagnosis in the absence of pathology tests</li> <li>2. Assessment of surgical risk.</li> <li>3. Assessment of anesthetic risk.</li> <li>4. Preparation and transfer of patient to major centre if risks too substantial for immediate care or if in solo practice.</li> <li>5. Completion of surgical or anesthetic procedure (if not in solo practice).</li> <li>6. Management of acute complications (if not in solo practice).</li> <li>7. Ongoing postoperative care.</li> </ol>
Acute psychosis	<ol style="list-style-type: none"> <li>1. Immediate diagnosis.</li> <li>2. Acute referral to specialized psychiatric facility.</li> <li>3. Post-discharge shared care with specialized mental health team or psychiatrist.</li> </ol>	<ol style="list-style-type: none"> <li>1. Immediate diagnosis.</li> <li>2. Initiation of legal process of certification.</li> <li>3. Initiation and management of acute therapy, chemical or physical restraint.</li> <li>4. Preparation for retrieval to specialized psychiatric facility (may involve administration of general anesthetic prior to RFDS retrieval).</li> <li>5. Management of social and family consequences within community.</li> <li>6. Post-discharge ongoing care and management, (may be with intermittent allied health and mental health services).</li> </ol>	<ol style="list-style-type: none"> <li>1. Immediate diagnosis.</li> <li>2. Initiation of legal process of certification.</li> <li>3. Initiation and management of acute therapy, chemical or physical restraint.</li> <li>4. Preparation for retrieval to specialized psychiatric facility (may involve administration of general anesthetic prior to RFDS retrieval).</li> <li>5. Management of social and family consequences within community.</li> <li>6. Post-discharge ongoing care and management, (may be with seldom or intermittent allied health and mental health services).</li> </ol>
<p>RRMA = Rural Remote Metropolitan Area Index; IV = intravenous; RFDS = Rural Flying Doctor Service. *RRMA is a classification from 1 to 7 (1 = capital city, 7 = remote township or community of population &lt; 1000).</p>			

**Table 4. Effectiveness in achieving workshop learning objective: "to enhance a joint understanding of the different and specific issues in risk management in the rural and remote context and to progress a working framework for risk management applicable to the context of rural and remote medicine"**

Effectiveness rating	No. of respondents (and %); n = 19
Slightly effective	2 (11)
Effective	9 (47)
Highly effective	5 (26)
Extremely effective	3 (16)

achieved its effect by raising awareness of the issues and that it may at least have value as an educational tool both for existing practitioners and for potential rural doctors. Further, we believe it has a place in demonstrating that rural and remote medical practice is clearly and unavoidably different from metropolitan practice.

The process for implementation of the ARTS framework is under consideration. We anticipate that it can be refined, simplified and applied as a tool for many conditions across a range of contexts. The challenge will be the integration of ARTS into clinical guidelines for rural and remote practitioners as well as informing the safety and quality standards that will drive the censorial processes of a professional college.

There appear to be at least 2 areas of potential use, at least initially. One is educational — doctors who are potentially entering rural and remote practice, particularly those whose experience has previously only been in metropolitan practice, can use the framework (through the development of a simplified tool) for a range of simple medical conditions. They can compare and contrast risk and risk management between major metropolitan and rural and remote sites, for example, in Australia, between Double Bay and Dubbo, or between Toorak and Theodore (the former are in metropolitan Sydney and Melbourne, respectively, and the latter are in rural New South Wales and Queensland, respectively). In its simplest form, the framework can remain as a useful *aide memoir*, particularly for doctors in training and those new to the practice of rural and remote medicine.

Second, with the proliferation of guidelines for best practice for a range of conditions, the framework will allow rural practitioners to develop the tools to demonstrate that guidelines arising from metropolitan environments are not necessarily applicable to all contexts and that "best practice" is context dependent. As a root-cause analysis framework, ARTS can be used to collect the hard evi-

dence needed to support rural and remote best practice, to support existing rural practitioners against legal challenge and to assuage the fears of budding rural practitioners, particularly those with a procedural interest. If it achieves only this, it will be worth the effort invested in its development thus far.

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# COLLEGE STANDARDS

Recommended Minimum Standards  
for small rural hospital emergency departments

June 2016



## Foreword

These recommendations are to assist small rural hospitals in working towards being adequately equipped and resourced to initially manage any presentation to their Emergency Department. These standards are viewed as **minimum** requirements for such hospitals.

There are many factors that will influence the need for additional resources to be part of any particular Emergency Department's design and function. These include:

- Proximity to, or geographical isolation from, larger and more well-resourced facilities
- Availability of retrieval services and limitations imposed by weather, time of day, geography and operational issues.
- Training and experience of local medical, nursing and other health professionals
- Local, Regional and State policies, protocols and guidelines
- The projected population size, and specific health needs of the local population
- Seasonal variation in numbers of patients presenting to the Emergency Department

It is acknowledged that all health systems are constrained by budgets with many competing demands for the available finances. As such, these recommendations are not made with the intention of there being any specific time frame for implementation, but rather being a guide that will inform future planning and development and service delivery.

Finally, these recommendations will be subject to ongoing peer and College review that reflects current best practice, evidence based medicine and evolving clinical service delivery.

## College Position

These standards are developed on the understanding that people living in rural and remote areas should have timely access to emergency care of an acceptable standard. The 'gold standard' for safe, quality emergency care lies at the intercept of in-time access to services, and adequate resourcing with appropriately skilled staff. Decisions regarding resourcing as well as clinical quality and safety frameworks should always give due consideration to the risk to rural and remote patients of no service or delayed access to distant services.

## Definitions

A 'Small Rural Hospital Emergency Department' is broadly defined as that within MMM areas 4-7. MMM4 would be a town of up to 5,000 - 15,000 people. Larger MMM4 towns with associated catchment area would anticipate Emergency Department presentations of approximately 10,000 per year.

## General principles

An Emergency Department must have the following basic elements:

- Suitably trained nursing staff available 24 hours a day, seven days a week.
- A triage process whereby patients are allocated priority based on clinical need.
- A daily roster of medical staff available in house or on call 24 hours a day, seven days a week.



- Dedicated facilities to manage emergency presentations including a dedicated resuscitation area with appropriate equipment to provide advanced paediatric, adult and trauma life support prior to transfer to definitive care.
- A formal structure in place to be able to access specialty advice 24 hours a day, seven days a week.
- A formal structure in place to be able to access appropriate retrieval services 24 hours a day, seven days a week.

### Physical environment

- The Emergency Department is clearly signed with direct access for disabled patients and those arriving by private vehicle or ambulance.
- A means for patients/carers to summon hospital staff when the Emergency Department does not have 24 hour staffing.
- At least one room designated as the “Resuscitation” room (that may be used for other purposes but can instantly be made available for the assessment and management of serious, and potentially serious patients).
- The Resuscitation room has minimum of 25m<sup>2</sup> area and allows unimpeded entrance and exit for patient trolley to/from ambulance parking bay and helicopter landing area (if available)
- The room layout is sufficient to allow unimpeded staff circulation around the full 360 degrees of the patient trolley.
- A suitable dedicated patient trolley with hydraulic or electric assisted position adjustment, IV pole, portable oxygen and compatible with local Xray imaging.
- Transfer slide or sheet compatible with ambulance trolleys and hospital beds
- A minimum of two suction outlets, two oxygen outlets and eight General Power Outlets.
- Where possible, all power/medical gas/suction/patient monitoring lines etc come from a single point of origin (e.g. back wall or overhead pendant).
- Adequate shadowless room lighting (to AS/NZS standard) with separate overhead 360 degree mobile light source for direct illumination for procedural work.
- Sufficient in-room organised storage space for all resuscitation, medical and ancillary equipment that limits need for staff to exit room to obtain necessary items.
- Organisation of equipment required for urgent adult/paediatric use by designated drawers/colour coding/wall mounted “shadow board” or similar to allow rapid sourcing by all staff. (In smaller hospitals, resuscitation equipment and associated pharmaceuticals may be best organised in a “crash trolley” for use in areas outside the Emergency Department.)
- Wall mounted white board for documentation.
- Wall mounted clock
- Minimal delay automatic back-up generator to supply power for all resuscitation room requirements
- Separate battery back up/Uninterruptable Power Supply for emergency lighting

### Personnel

- A clearly defined and simple system for locating and calling in additional local medical, nursing and ancillary staff.
- A minimum of three health personnel available on site (or close call) with authority to activate call-in procedures, triage and provide immediate Basic Life Support.
- Medical



- A designated Emergency Department Team Leader with overall responsibility for orientating new/locum medical staff as well as liaising with local Hospital/Nursing administration on the delivery of Emergency Medicine services within the hospital (In smaller facilities, this may be the Director of Medical Services or a GP VMO).
- This doctor is also responsible for liaising with the Regional Health Authority/Clinical Network (or however designated) for those over-arching issues necessary for delivery of safe and sustainable emergency services.
- At all times, the ability to contact at least one other medical practitioner with Emergency/Resuscitation skills (In solo doctor towns this may be a doctor in a neighbouring town, RFDS doctor, regional Emergency Department, Retrieval service or via Telehealth services)
- Nursing
  - A dedicated Emergency Department Nursing Team Leader with similar nursing and liaison roles as Medical Team Leader.
  - Delegates to senior nurse on duty for 24 hour cover.
- Ancillary staff
  - A minimum of one other staff member on site with certification in Basic Life Support and familiarity with hospital policies and procedures.
  - Access to local ambulance personnel (or other emergency services personnel - may be volunteer) with agreed protocols to supplement hospital personnel as dictated by clinical need.

### **Standing orders/Policies/Protocols**

- Prominently displayed or immediately accessible resuscitation guidelines for adult, paediatric and neonatal BLS/ALS algorithms, Anaphylaxis, Choking.
- Immediately accessible documentation of pathways/protocols for urgent clinical management (e.g thrombolysis protocol, Failed intubation pathway, Severe asthma, Acute Pulmonary oedema, Burns management, Massive Transfusion protocol (if access to blood products))
- Documented multi agency Mass Casualty Plan part tested at least annually. (Mass Casualty defined as *“Any number of casualties produced in a relatively short period of time that exceeds local clinical and logistic support capabilities of the Hospital”*).
- Documented and regularly updated manual of clinical pathways for commonly presenting, but potentially serious medical conditions e.g. Acute Coronary Syndrome, Stroke, Chronic Obstructive Pulmonary Disease
- Documented and regularly updated manual of pharmacological agent storage, preparation and administration
- Documented and regularly updated manual of medical equipment use and trouble shooting.
- All the above to be consistent with local/regional health authority/clinical network practices and supported by regular in service training (at least annually).
- An agreed and clearly documented debrief and audit process for regular and systematic review of all serious cases/resuscitation/deaths/adverse events with input from appropriate health professional staff including regional referral centre.
- A clearly documented Security Response Plan, utilising appropriately trained in house staff (and external resources if required) to maintain a safe environment for patients, staff and visitors.

### **Lines of communication/referral/advice/distant support/resources**

- Dedicated hands-free telephone in Emergency/Resuscitation Room



- Prominently displayed telephone numbers and Direct dialling to Regional Emergency Physician/Retrieval Service/Advice line/Poisons Information etc. (as dictated by local, regional or state systems)
- Dedicated ED computer/fax/printer hardware with unrestricted internet/email access. This also requires local jurisdiction protocols for accessing medical records (including My Health Record) as well as receiving/sending/storing patient information/images to/from other health providers.
- In house access (preferably located in Emergency/Resuscitation Room) to Telehealth videoconferencing facilities and ability to transmit clinical images in real time
- An alarm system to summon additional hospital staff in the event of sudden patient deterioration/overwhelmed resources.
- In house reference material in readily accessible electronic or hard copy format e.g. Australian Medicines Handbook, Therapeutic Guidelines series, ACRRM Clinical guidelines, Royal Children's Hospital guidelines, Cameron et al *Textbook of Adult Emergency Medicine*, *Textbook of Paediatric Emergency Medicine*.
- Readily accessible patient information sheets for commonly presenting conditions, available for distribution by hospital staff and written in plain language relevant to local cultural and literacy requirements.

#### **Diagnostic and monitoring equipment\*\***

- Point of care diagnostic pathology testing that includes:
  - basic quantitative haematology, biochemistry and serology
  - Fingerprick blood glucose and ketones
  - Basic urinalysis including  $\beta$ hCG
  - Breath alcohol analysis
- Mobile Digital Xray unit capable of chest and limb imaging (and availability of appropriately trained staff)
- Digital camera for clinical photographs (and jurisdiction specific protocols for storage and transmission of images)
- Mobile diagnostic ultrasound unit with image storage capability\*
- 12 lead ECG machine (preferably with store capability)
- Portable or wall mounted ophthalmoscope/otoscope set
- Portable or wall mounted blood pressure monitor
- Standard thermometers and at least one thermometer capable of reading low temperatures
- Portable or wall mounted patient monitor capable of displaying continuous vital signs including
  - Pulse
  - Blood Pressure
  - Oxygen saturation
  - ECG wave form
  - End tidal CO<sub>2</sub>\* (Disposable colourimetric CO<sub>2</sub> indicator is an acceptable alternative)
  - Temperature



## Medical procedural and treatment resources \*\*\*

- A suitable cardiac monitor/defibrillator that incorporates AED, synchronisation and pacing capability (and 24 hour availability of staff trained in the use of this equipment) and associated pads/leads/cables.
- Airway requirements
  - full range of adult and paediatric oro-pharyngeal airways
  - Adult and paediatric rigid and flexible suction catheters
  - At least two suction points (either plumbed with medical gases or separate high volume electrical suction apparatus) and separate from any other manual or venturi operated suction devices.
  - A full range of adult and paediatric naso-pharyngeal airways
  - A full range of adult and paediatric laryngeal masks
  - A full range of adult, paediatric and neonatal endotracheal tubes
  - Adult and paediatric bougies and introducers
  - Adult and paediatric Magill forceps
  - Two laryngoscopes with interchangeable adult, paediatric and neonatal blades
  - A simple video laryngoscope system in addition to the above equipment\*
  - Adult and paediatric percutaneous cricothyroidotomy kits
  - Surgical cricothyroidotomy set (Disposable scalpel, tracheal spreader/artery forceps, bougie, Size 6 endotracheal tube, gauzes)
  - Associated lubricant, connectors, tubing, securing devices
- Respiratory support requirements
  - Adult and paediatric non-rebreather oxygen masks
  - Adult and paediatric nasal cannulae
  - Adult and paediatric nebulisation masks
  - Adult, paediatric and neonatal Bag-Valve-Mask assemblies with full range of mask sizes
  - Portable ventilator with CPAP/BiPAP capability and suitable for both adult and paediatric requirements\*\*\*
  - Directly plumbed or portable cylinder supply of oxygen, medical air, and Nitrous Oxide capable of maintaining prolonged high volume requirements
  - Associated connectors, tubing, filters
  - Pneumothorax set including full range of intercostal catheters, fine wire guided catheter, aspiration set and associated non-return underwater seals and flutter valves
- Circulatory requirements
  - Full range of peripheral IV cannulae
  - Intra-osseous cannulae (manual or power driven)
  - Multi lumen central venous line insertion kit
  - Rapid infusion exchange catheter
  - Associated giving sets, lines, 3 way taps, securing tapes etc
  - In line IV pump sets – manual and electronic
  - In line warming device or warm fluid storage
  - Paediatric burettes
  - Adequate supplies of appropriate IV resuscitation, maintenance and infusion fluids
    - 0.9% Normal saline (NaCl)
    - 5% Dextrose
    - 0.9% normal saline/5% Dextrose (or other suitable paediatric maintenance fluid as per local/regional guidelines)
    - Saline/glucose/potassium adult maintenance fluid as per local/regional guidelines



- Paediatric specific requirements
  - Readily accessible paediatric flowcharts, percentile charts, guidelines and protocols
  - Paediatric pharmacopeia and calculator
  - Broselow tape (or similar rapid measure system)
  - Nasal administration devices/atomisers
  - Infant scales
- Obstetric and Gynaecological
  - Delivery bundle (drapes, obstetric lubricant, cord clamp, scissors, Foetal heart doppler)
  - Vaginal speculae and light source
- Neonatal set (warming blankets/heater, meconium aspirator, small suction catheters, cord blood sample tubes)
- Musculoskeletal requirements
  - Adult and paediatric semi-rigid and soft cervical collars
  - Adjustable lower limb traction splint
  - Upper limb slings and splints
  - Pelvic binder
  - Suitable plaster or fibreglass casting material and associated soft underlay
  - Cast cutter and spreaders
- ENT and Ophthalmological requirements
  - Head torch/binocular magnifying glasses
  - Nasal speculae
  - Otoscope
  - Nasal packing system for both anterior and posterior packing
  - Fine alligator forceps, blunt hook/probe
  - Fine suction catheters
  - Silver nitrate sticks
  - Slit lamp\*
  - Ophthalmoscope
  - Alger brush and burrs
- Dental requirements
  - Emergency Dental Handbook for Medical Practitioners
  - GC Fuji IX kit powder + liquid
  - Dycal Cs(OH)<sub>2</sub> base + catalyst
  - Plastic cement spatula
  - SS double ended spatula
  - Microbrush applicators
  - disposable dental mirrors
  - surgicel or Kaltostat
  - 500mg Tranexamic acid tablets (to make 5% solution for intra-oral haemorrhage control)
  - Bupivacaine 0.5%
- Urological requirements
  - Bladder scanner (if ultrasound unit not available)
  - Full range of Foley catheters
  - Multi-lumen irrigation catheters
  - Suprapubic catheter set
  - Lignocaine gel/lubricant
  - Associated connectors, measuring and collection bags
- Gastro-enterological requirements
  - Range of Oro-gastric and naso-gastric tubes



- Proctoscope and light source
- Wound care
  - Skin cleaning/Irrigation fluids – saline, chlorhexidine, iodine
  - Range of dressings including specialised burns care (non-stick gauze and plastic cling film)
  - Suture sets and range of common size suture material - absorbable and non-absorbable
  - Tissue glue
  - Surgical instruments – disposable scalpels, large and small needle holders, large and small scissors, large and small artery forceps, toothed and non-toothed tissue forceps
- Miscellaneous requirements
  - Assorted Syringes, syringe labels, needles for injection
  - Personal protective equipment – gloves, goggles, masks, waterproof aprons, gowns
  - Weight scales
  - Large scissors for clothing removal
  - Battery powered vacuum for safe removal of broken glass/foreign material
  - Miscellaneous tools to aid foreign body removal – ring cutter, pliers, wire cutter, bolt cutter

### **Pharmaceutical supplies**

(NB: some pharmaceuticals are listed in multiple categories)

- Resuscitation/cardiac
  - Adrenaline 1:1000
  - Amiodarone
  - Atropine
  - Aspirin
  - Clopidogrel
  - Ticagrelor
  - GTN spray or sub-lingual, topical and IV
  - Frusemide
  - Magnesium
  - Adenosine
  - Metoprolol
  - Digoxin
  - Calcium gluconate
  - Tenecteplase
  - Enoxaparin
  - Unfractionated heparin
- Other agents
  - Antibiotics
    - Penicillin
    - Clindamycin
    - Amoxycillin
    - Flucloxacillin
    - Piperacillin/Tazobactam
    - Cephazolin
    - Ceftriaxone
    - Metronidazole
    - Gentamicin
    - Vancomycin
    - Doxycycline



- Acyclovir
- Inotropes/Vasoconstrictors
  - Adrenaline
  - Noradrenaline
  - Metaraminol
- Induction agents/sedatives
  - Midazolam
  - Propofol
  - Ketamine
- Neuromuscular blockers
  - Suxamethonium
  - Rocuronium
- Metabolic agents
  - Glucagon
  - Short acting insulin
  - 50% Dextrose
  - Sodium Bicarbonate
  - Potassium Chloride (KCl)
- Analgesics
  - Morphine
  - Fentanyl
  - Ketorolac
  - Oral Oxycodone
  - IV Paracetamol
  - Minor analgesics
    - Paracetamol (oral and rectal)
    - Ibuprofen
    - Non-steroidal anti-inflammatory drugs
    - Paracetamol/codeine combinations
- Anti-emetics
  - Metoclopramide
  - Ondansetron
  - Droperidol
  - Prochlorperazine
- Respiratory
  - Salbutamol (MDI, nebuliser and IV)
  - Ipratropium
  - Prednisolone
  - Hydrocortisone
  - Dexamethasone
- Gastro-intestinal preparations
  - Oral antacid
  - Esomeprazole (or other PPI)
  - Activated charcoal
  - Octreotide
- Anti-convulsants
  - Midazolam
  - Phenytoin
- Anti-psychotics/anxiolytics/sedatives



- Olanzapine
- Ketamine
- Droperidol
- Haloperidol
- Chlorpromazine
- Diazepam
- Ophthalmological and ENT preparations
  - Oxybuprocaine ocular drops
  - Fluorescein ocular drops
  - Atropine or short acting mydriatic ocular drops
  - Chloramphenicol drops and ointment
  - Dexamethasone ocular drops
  - Steroid + antibiotic otic drops
  - Co-phenylcaine spray
  - Lignocaine spray
- Haemostasis
  - Tranexamic Acid
  - Other Blood products\* (e.g. Fresh Frozen Plasma, Group O Rh negative blood, Platelets, Prothrombinex) as determined by regional/state guidelines.
- Toxinology
  - Naloxone
  - Flumazenil
  - N-acetylcysteine
  - Vitamin K
  - Dantrolene\*
  - Antivenom\* (relevant to local geographical area and regional/state guidelines)
- Obstetric and gynaecological
  - Syntocinon
  - Ergometrine
  - Anti D
- Local anaesthetics
  - 1% and 2% lignocaine
  - Lignocaine + Adrenaline
  - Ropivacaine
  - Topical Amethocaine/Lignocaine/Adrenaline solution
  - Topical Lignocaine/Prilocaine cream or patch (EMLA)

### Notations

\* This item/equipment is recommended for larger emergency departments with 10,000 or more patient attendances per annum.

\*\*Where possible, any new equipment purchased should be consistent with that used by local ambulance or retrieval service

\*\*\*Where possible, medical procedural equipment should be packaged as a bundle with all requirements for that procedure, or purchased as a single use kit with long shelf life.



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- Dr Peter McInerney FACRRM
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## **MEDICATION SAFETY**

Medication errors at hospital admission

- rate of 260,000 annually (4-5% Australian Admissions)\*
- Medication histories (error rates of 1-2 per patient per admission)
- Prescribing errors (2.5% prescriptions)
- 40% and 50% of residents in aged care facilities were prescribed potentially inappropriate medicine use, as defined by explicit criteria such as the Beers or McLeod's Criteria
- 8.5% to 12% of people attending GP had experienced an adverse medication event in the previous six months
- 11-12% of these adverse events were considered severe and approximately 5% required hospitalization
- 10% of patients seeing a GP had had an adverse medication event in the previous six months

### **Quality Improvement measures**

#### **Medication safety for dummies!**

- "non-brand prescribing",
- deprescribing to reduce medication errors and unnecessary medication events,
- Home and Residential Medication Reviews.
- Pain Management in chronic disease (GP responsibility)
- Audit, Morbidity and Mortality Meetings
- Increased medical and staff **Education** as a baseline framework for developing a skilled workforce

### **Improved communication: -**

- EHealth, use of the PCEHR/MyHealth Records to overcome after hours access to patient health summaries across the region
- Promotion and advocacy for Telehealth integration within clinical practice.
- Advocacy for the implementation of ACRRMs "Standards for rural and remote Emergency Departments" to address shortfalls in infrastructure and equipment in rural Eds.
- Quality improvement measures
- Statewide Clinical Guidelines and Clinical Senate responsibility for consistent guidelines.
  - Removal of local clinical turf wars (e.g.RHH vs LGH vs NWRH)
- Evaluation of practice outcomes and Cycle of Care implementation: -
  - Process evaluation replaced by outcome evaluation e.g. using the NPS MedicineInsight program.
  - Making individual clinicians accountable for their clinical outcomes.

### **Strategic Approach**

Strategies that reflect ACRRM Q&S principles inserted into: -

- Training of Rural Health Providers
- Professional Development
- Research and Evaluation
- Emerging practice accreditation arrangements
  - Rural General Practices, Aboriginal Medical Services, Rural Facilities, hospitals
  - Quality Improvement approach - (EEMCC)



# POSITION STATEMENT

## COLLEGE POSITION STATEMENT ON DEFINING SAFE AND QUALITY PROCEDURAL AND ADVANCED CARE IN RURAL AND REMOTE LOCATIONS

The College is committed to setting and advancing the highest possible standards of safe, quality procedural and advanced care for people living in rural and remote locations.

ACRRM upholds that measures of the safety and quality of healthcare services to people in rural and remote communities must factor in the distinctions of the rural and remote context. Failure to apply appropriate measures leads to poorly informed policy and resource decisions which may worsen rather than improve the safety and well-being of the people living in these communities.

### COLLEGE POSITION IN SUMMARY

- It is essential that rural and remote, Aboriginal and Torres Strait Islander communities' perspectives are included in the development of all quality and safety measures implemented in those communities.
- Evaluation of the quality and safety of healthcare delivery in rural and remote communities is only possible where context-appropriate measurement tools are used.
- The quality and safety of specific procedures, services or resources in rural and remote health care should not be assessed in isolation from the wider health and safety issues in that community.
- If enforcing quality or safety compliance measures will worsen access to healthcare in a community, either the measures should be reviewed or positive risk mitigation strategies should be implemented.
- It is the role of the College Quality and Safety in Practice Council to work on behalf of rural communities to define and advocate for appropriate evidence-based, standards of care for them.
- The College is committed to advancing evaluation approaches which can provide communities with reliable measures of the quality and safety of the services provided to them. The resultant tools will support optimal models of care in context and should be given due consideration in development of quality and safety frameworks.

### WHY A DISTINCT APPROACH IS REQUIRED

Any assessment of the quality and safety of healthcare services should logically incorporate consideration of patients' capacity to 'access' those services. Van Weel has suggested that, "to compare outcomes of care asks for an analysis of the most important differences and similarities between settings."<sup>1</sup> This axiom should apply in all circumstances but is a vital consideration in the context of rural and remote medical service provision.

Metropolitan healthcare systems are characterised by an increasingly specialised workforce of clinicians and healthcare professionals supported by correspondingly specialised resources. This system of care is not replicable outside major centres due to economic and workforce realities and people living in rural and remote areas face considerable and potentially prohibitive barriers to accessing such specialised services.

To optimise quality and safety outcomes in the provision of procedural services for these communities distinct models of care are required. These involve a combination of extended local generalist care, transport to distant consultant specialist care in metropolitan centres, and collaborative care by local generalist doctors and distant consultant specialists using telecommunications and outreach visits; as well as with the local health service team.

Identification of the minimum safe, quality standards of care for rural and remote people needs to recognise the fundamental distinctions between urban specialised care and rural or remote generalist care. In particular such standards must recognise the 'access risk' associated with loss of local health service capacity including:

- The risks associated with travel and with delayed care due to travel time
- The risks associated with fractured continuity of care and communication breakdown
- The loss of advanced life saving capacity that occurs when surgical and anaesthetic services cease locally
- The potentially prohibitive costs to patients (i.e. physical, financial, social, psychological, employment, family) associated with transport to, and extended

stays in cities to receive procedural or consultant specialist care, and

- The interdependence and inherent fragility of the rural and remote team skill set whereby the loss of provision of any given service can lead to loss of local provision of other services in a domino effect. (For example, rural generalist doctors who provide anaesthetic services are more skilled and practiced in emergency management of airways and resuscitation. Closing obstetrics and operating theatres causes loss of local anaesthetic clinicians which will reduce the capacity for emergency management in the community.)

A safety determination recommending a restriction of local procedural and advanced care services therefore should be required to demonstrate that risks to local safety of maintaining local services are greater than the risks to that community of removing them.

Where unacceptable risk is identified, broader consideration should be given to positive risk mitigation strategies such as improved resourcing, better care pathways, practitioner upskilling and provision of expert assistance.

### QUANTIFYING 'ACCESS RISK'

Australia is moving toward increasing levels of quality and safety compliance. It is of concern that compliance frameworks are commonly being designed based on highly-specialised (high volume, narrow scope, resource intensive) service models. Benchmarks set according to these models of care can present prohibitive compliance conditions for rural and remote procedural and advanced care services and result in loss of local capacity.

Approximately one-third of Australians live in rural areas. These people have significantly poorer health status than their urban counterparts by all key indicators<sup>2</sup>, they receive considerably less of the Government's annual spend on health services<sup>3</sup>, and one in five rural people continue to report longer than acceptable waiting times to see a general practitioner.<sup>4</sup>

The loss of local services has clear and quantifiable impacts on the quality and safety of health services available to these communities.

- 'Quality care' includes delivering the healthcare that is demanded. Many members of rural and remote communities prefer to receive procedural care locally hence these services are essential to quality delivery.<sup>5</sup>
- The people that consistently record the nation's poorest health statistics are likely to be most impacted by loss of local rural services. Local access

to hospitals and advanced care is especially important for those who lack the financial and personal support to enable transport to, and extended stays in cities. Rural and remote communities include a high proportion of the chronically ill, Aboriginal and Torres Strait Islander peoples, isolated single parents, the aged and the most poor.<sup>6</sup>

- The loss of maternity services in rural towns diminishes health service quality for rural communities and significantly lowers maternal safety. Local services are essential to deal with obstetric emergencies and studies have clearly linked the need for extended travel time to access maternity services to increased rates of mortality and adverse outcomes.<sup>7</sup> Canadian studies have found that women with no local access to maternity services have worse maternal and newborn outcomes than women from similar communities with local access to even limited birthing services.<sup>8</sup>
- Extensive literature documents the risks associated with patient travel to access distant health care.<sup>9,10,11</sup> One study of stroke care for example found that the clinical risks of longer journeys outweighed the benefits of accessing the tertiary service.<sup>12</sup> Another study found that for every mile a seriously injured person had to travel to hospital, the risk of death increased by one per cent.<sup>13</sup>
- International studies have shown that longer journeys discourage the use of healthcare services.<sup>14</sup> The much lower use of both Pharmaceutical Benefits Scheme and Medicare services recorded by rural people relative to people in major cities would suggest that this is also the case in Australia.<sup>15</sup>

### LOW VOLUME PRACTICE AND QUALITY AND SAFETY

There is a trend among policy makers to cite a statistical correlation between positive patient outcomes and high volume of practice as a rationale for using volume of practice as a proxy measure of capacity for safe practice. In particular, volume of caseload is increasingly being used to determine rural practitioners' suitable credentialing and scope of practice in procedural and advanced care skills.

The inevitable impact of this approach is to constrict rural services (where only low volume practice maybe possible) in favour of centralised urban specialised care.<sup>16</sup>

Systematic reviews of the body of evidence supporting this correlation have deemed it unreliable as a guide to policy action. They cite a number of reasons including the incompatibility of comparative datasets and the lack of a consistent definition of high and low volume as well

as outcomes.<sup>17,18,19</sup> The most significant problem with the available data as a policy guide is that a causal link between volume and outcomes has not been established.

Importantly, the tacit presumption that '*practice makes perfect*', that is that practitioners' capacity to safely perform tasks increases with repeated performance over a period of time is not evidentially supported. A number of seminal studies have specifically examined this notion and found no such effect.<sup>20,21</sup> Practice makes permanent, but does not guarantee competency.<sup>22</sup> In fact there are a number of confounding variables that warrant consideration.

1. Whilst there is a positive relationship between case volume and outcome the relationship is not direct. Significant variation occurs, with some high volume units having poorer outcome statistics than low volume units. It is apparent that other factors must influence the outcomes rather than simply volume *per se*. It is suggested that specific clinical processes of care allied with the procedure, rather than the frequency of undertaking the procedure, may contribute to determining outcomes.<sup>23</sup>
2. Case-mix factors reflect the marked disparity between rural and urban communities (which could be described as low volume and high volume communities). Rural patients are sicker and have a higher risk than their urban counterparts for any procedure. So the sicker population is dispersed in smaller communities with low case volume.
3. These differences are likely to be further exacerbated by the fact that the people in rural communities with the highest needs and lowest health status are also those most likely to utilise local rural hospitals while those rural people with the health, wealth and social supports to enable extended stays in cities would be the most likely to be in a position to use the more highly-resourced urban hospitals.
4. Lower performance by low volume hospitals may also reflect the lower (and potentially inadequate) resource levels including support staff in the smaller rural hospitals compared with the larger urban hospitals. Should this be the case, using case volume as a proxy measure of individual practitioners' professional capacity, instead of highlighting the need for better resourcing, would serve as justification for further restricting local service delivery and hence further diminishing local access to care.

The oft cited evidence base for a positive volume/outcomes relationship discounts the substantive literature suggesting as good or better outcomes being achieved in rural areas relative to urban areas. This is apparent across the care spectrum including in surgery,<sup>24,25,26,27,28</sup> cardiovascular medicine,<sup>29,30,31</sup> obstetrics,<sup>32,33,34</sup> anaesthesia,<sup>35,36</sup> and chronic disease management.<sup>37</sup> These exemplary models of care in rural (i.e. low volume) contexts clearly refute the contention that only 'high volume' can cause successful outcomes and warrant close attention by policy makers to identify the factors affecting their success.

### ALTERNATIVE APPROACHES TO DETERMINING SAFE, QUALITY RURAL PROCEDURAL AND ADVANCED CARE

It is beholden of the College to work continuously to identify and refine evidence-based standards to describe best practice and minimise safety risks in rural and remote contexts, and tools to measure compliance with these.

Clearly a more nuanced and context sensitive approach is required to support safe, quality care by doctors in rural and remote health services.

Standards appropriately should incorporate measures of 'access risk' and reference holistic outcomes (timeliness of care, patient focus of care, psycho-social disruption or support etc.). They should allow flexibility of models of care and service design to meet the needs of communities and to recognise the role of rural practitioners to stratify risk.

### ARTS FRAMEWORK

One effective way to assess such doctors' and their respective services' capacity to provide care at acceptable levels of quality and safety is to take a complex risk analysis approach. This should consider the service and its attendant risks in the context of the patient, the practitioner and the community.

Doctors that provide procedural and advanced services in rural areas need to be trained in the complex clinical decision-making that is required to ensure the safest possible clinical decision is made in any given circumstance. They also need to be trained to become self reflective doctors who know and recognize what is outside of their skill and scope and take responsibility for upskilling to ensure they are maintaining competence and confidence as required.

McConnell, Pashen and McLean have described and piloted an appropriate framework by which these risks might be effectively measured – "ARTS of rural and remote medicine' as outlined in Figure 1 below.

Figure 1: The ARTS Framework

The ARTS of rural and remote medicine (assessment, resources, transport, support)			
Level of risk for patient (P), doctor (D) and community (C)			
RISK IDENTIFICATION	P	D	C
<b>ASSESSMENT (situational analysis)</b>			
<b>Complexity</b> What risk of error does the clinical context and complexity result in? For example, is the clinical context acute or chronic, what speed of clinical response is required, are the diagnoses and treatment straight forward or are multiple steps required? Are there complex communication needs?			
<b>Socioeconomic factors</b> What risk will there be to the patient/family and community in relation to dislocation, cost, income and productivity?			
<b>Cultural and psychological factors</b> This risk relates primarily to those resulting from the patient and community's belief systems around illness, treatment and expectations, and around communication. For the doctor, it revolves around medicolegal risk and the pressures on management decisions from nonclinical sources.			
<b>Public health issues</b> This relates to infection control, occupational or environmental health issues, health promotion activities, and the risk to doctors, family and team from contagious illness.			
<b>RESOURCES</b>			
<b>Human</b> Given the available local human resources, what risk is there for the patient in this clinical context? Will safety for patients, practitioners, and the community be compromised by the demands of this case on local resources?			
<b>Advice and information</b> Is the availability of clinical information and specialist advice in this context adequate for patient safety or doctor support?			
<b>Technical</b> What risk is there for the patient in this clinical context given the physical infrastructure (facilities, communications, etc.)?			
<b>TRANSPORT</b>			
<b>Additional risks</b> What additional risk is there for the patient, doctor and other health personnel in this clinical context if transport is required?			
<b>SUPPORT</b>			
<b>Psychological</b> What are the risks to the patient and family, doctor, team and family, and community in this clinical context given the psychological (and professional) supports available to each?			
<b>Management and organizational</b> Are there systems in place that support the management of this case, or are they a barrier? Is the local (and distant) management supportive and enabling, or is it a battle to manage this case in the patient's best interest?			

From: McConnell F, Pashen D, McLean R. (2007) The ARTS of risk management in rural and remote medicine. *Can J Rural Med.* 12(4). Developed with the guidance and assistance of Dr Bruce Cameron.

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