

# Defining safe and quality procedural and advanced care in rural and remote locations

## POSITION STATEMENT



### College position

- 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.

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.

### 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.

### Find out more

If you have any queries relating to this Position Statement, please contact us by:

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*ACRRM acknowledges Australian Aboriginal People and Torres Strait Islander People as the first inhabitants of the nation. We respect the Traditional Owners of lands across Australia in which our members and staff work and live, and pay respect to their Elders past present and future.*



**Figure 1: The ARTS Framework**

<b>The ARTS of rural and remote medicine (assessment, resources, transport, support)</b>			
<i>Level of risk for patient (P), doctor (D), and community (C)</i>			
<b>Risk Identification</b>	<b>P</b>	<b>D</b>	<b>C</b>
<b>Assessment (situational analysis)</b>			
<p><b>Complexity</b></p> <p>What risk of error does the clinical content 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 there multiple steps required? Are there complex communication needs?</p>			
<p><b>Socioeconomic factors</b></p> <p>What risk will there be to the patient / family and community in relation to dislocation, cost, income and productivity?</p>			
<p><b>Cultural and psychological factors</b></p> <p>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.</p>			
<p><b>Public health issues</b></p> <p>This relates to infection control, occupational or environmental health issues, health promotion activities, and the risk to doctors, family, and team from contagious illness.</p>			
<b>Resources</b>			
<p><b>Human</b></p> <p>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?</p>			
<p><b>Advice and information</b></p> <p>Is the availability of clinical information and specialist advice in this context adequate for patient safety or doctor support?</p>			
<p><b>Technical</b></p> <p>What risk is there for the patient in this clinical context given the physical infrastructure (facilities, communications, etc.)?</p>			
<b>Transport</b>			
<p><b>Additional risks</b></p> <p>What additional risk is there for the patient, doctor, and other health personnel in this clinical context if transport is required?</p>			
<b>Support</b>			
<p><b>Psychological</b></p> <p>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?</p>			
<p><b>Management and organisational</b></p> <p>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?</p>			

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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