

Defining remote medical practice

A consensus viewpoint of medical practitioners working and teaching in remote practice

Janie D Smith, Stephen A Margolis, Jeff Ayton, Victoria Ross, Elizabeth Chalmers, Patrick Giddings, Louise Baker, Martin Kelly and Catherine Love

“Remote” is geographically classified as making up more than three-quarters of the Australian landmass and territories.^{1,2} It is enormously diverse, characterised by geographic isolation, cultural diversity, socioeconomic inequality, and Indigenous health inequity, amid poor resourcing and extreme climatic conditions.³⁻⁵ These factors intensify the experience of those 4% of the population who live remotely, and those who provide services to them.⁶

In 2007, the Australian College of Rural and Remote Medicine (ACRRM) commissioned RhED Consulting Pty Ltd to work with a small and diverse group of nine doctors with expertise in remote medical practice and an educational consultant to develop the first advanced specialised remote medicine training curriculum.⁷ The group (Box 1) were actively working in a full range of remote clinical practice and education settings, including polar medicine, remote primary health care, Indigenous and non-Indigenous settings, remote vocational training, telehealth, remote aeromedical retrieval and emergency care, and the Australian Defence Force, which provides care to troops and international humanitarian aid services.

Given the variety of these doctors' roles, an early part of this process was to describe what they collectively meant by “remote medicine” or “remote medical practice” in Australia. A keyword database search (Box 2) identified 10 articles containing “remote medical practice”, of which only one provided a definition of “remote health”,⁸ and three others provided a definition or description of “remote practice”.^{4,9,10} These focused largely on remote Indigenous health, the multidisciplinary nature of practice, or considered remote as an “add-on” to definitions of rural medical practice. No existing definition of remote medical practice was identified.

In the absence of guidance from the literature, the group collectively defined “remote medicine” or “remote medical practice” in Australia in the broadest possible sense, reflecting the marked range of their practice environments.

Eight key features of remote medical practice⁴

Remote medical practice differs from urban and rural medical practice.

Employed: Remote doctors usually work within government and non-government organisations rather than in a private practice. They usually share their workloads with other doctors from that organisation. They often have highly geographically mobile roles and have a high community profile.

Isolation: Remote medical practice is isolated and often occurs in extreme conditions — geographically, climatically, professionally, personally, environmentally, politically, and culturally — with limited sophistication of medical and logistical resources or access to peers. In some locations the fly-in and fly-out model prevails.

Telehealth: Remote doctors often work remotely from the patient and provide diagnostic and management advice over the telephone, radio or other electronic means.

ABSTRACT

- More than three-quarters of Australia is classified as geographically remote. Remote areas are characterised by geographic isolation, cultural diversity, socioeconomic inequality, resource inequity, Indigenous health inequality, and a full range of extreme climatic conditions.
- Although several descriptive definitions have been developed for “remote health” and “remote practice”, definitions of “remote medical practice” or “remote medicine” have not been previously published.
- In 2007, a working group of doctors and academics with experience in remote medicine was formed to develop the first advanced specialised remote medicine curriculum for remote doctors undertaking training with the Australian College of Rural and Remote Medicine. The first step was to define remote medical practice.
- Remote medical practice has eight key features: employment rather than private practice, isolation, use of telehealth, increased clinical acumen, extended practice, cross-cultural setting, multidisciplinary practice, and an emphasis on public health and personal security.
- From these eight features, we developed the first working definition of remote medical practice in the Australian context.
- Our definition will assist policymakers, medical colleges, standard setters, and educators to develop programs and resources for the future remote medical workforce.

MJA 2008; 188: 159–161

Increased clinical acumen: Remote doctors require a higher level of clinical acumen to diagnose and manage illness, as there are often no pathology, radiology or other usual clinical diagnostic support and specialist services, and the ultimate responsibility lies with the remote doctors.

Extended practice: Remote medical practice extends across primary, secondary and tertiary levels of care, which require methods of practice that are often based on different treatment protocols. This includes advanced procedural care and practices that in metropolitan areas would usually be the province of a specialist (eg, physician — renal medicine, complex conditions, palliative care; obstetrics, surgery, anaesthetics, pathology, dentistry) or care provided by other health care workers such as paramedics, veterinarians, forensic pathologists, and humanitarian aid workers.

Cross-cultural: Remote doctors often work with marginalised populations with poorer health status, different worldviews and cultural understandings of health that result in a different mindset.

Strongly multidisciplinary: Remote medicine is strongly multidisciplinary with an emphasis on teamwork, and there are often blurred role boundaries between professional groups. Each mem-

1 Authors' experience in remote medical practice

Janie D Smith

- 25 years' rural and remote experience, including 2 years' remote Indigenous clinical practice and 10 years' remote educational (all health disciplines).

Stephen A Margolis

- 20 years' rural and remote practice in Australia, Ireland, Brunei and the Middle East, including 2 years' remote Indigenous practice and aeromedical retrieval with the Royal Flying Doctor Service and 10 years' academic experience in rural and family medicine in Australia and the Middle East.

Jeff Ayton

- 12 years' rural and remote generalist practice, including 3 years' remote island and Antarctic practice of medicine and 5 years' Antarctic medicine clinical support, expedition medicine, and medical education.

Victoria Ross

- 21 years as Army Medical Officer, including 5 years in direct remote field support and 14 years in health policy and planning.

Elizabeth Chalmers

- 20 years' experience in remote Northern Australia as a clinician and academic.

Patrick Giddings

- 20 years' rural medical practice.
- 8 years as a remote medical educator.

Louise Baker

- 20 years' rural practice in general practice, obstetrics and emergency medicine.
- 2 years' remote medical education.

Martin Kelly

- 10 years' remote, Indigenous practice with Nganampa Health Council.

Catherine Love

- 8 years' remote general practice in the Northern Territory.
- 3 years' refugee and warzone medicine in Sri Lanka, Uganda and Burma. ♦

2 Literature search

Keywords

- Remote, medicine, medical, practice, definition, isolated practice and excluding rural.

Dates included

- 2000–2007

Databases

- Informit Meditext and Humanities & Social Sciences Collection, APAIS-Health, and RURAL.
- Websites of the Australian Institute of Health and Welfare and the Australian Bureau of Statistics, government publications and books known to the authors were also examined.

Number of articles retrieved

- 153 articles on remote medical practice, of which 10 were specific to remote medicine.
- Three contained definitions of remote practice and one contained a definition of remote health.
- None defined remote medical practice. ♦

ber of the remote team usually performs an advanced and extended role, when compared with their urban counterparts, amid a high turnover of all health care staff. Team members may include physician, medical assistant, remote nurse practitioner, Indigenous health worker, refugee worker, allied health professionals and others.

Public health and security: Remote medicine occurs in environments where it is critical to have a strong understanding of public health and an ability to use a population health approach. These environments often require the doctor to be the leader and to take on an increased level of responsibility. Remote doctors often develop close working relationships with people they care for and about. Personal security issues are often paramount. Remote practice predominantly occurs amid an overall high turnover of health care staff with an associated limited corporate memory.

Definition of remote medical practice

From the eight key features listed above, we offer the following working definition of "remote medical practice".

Remote medical practice is strongly multidisciplinary extended practice that includes the provision of diagnostic and management advice via telehealth; fly-in and fly-out service models; innovative methods of practice; limited clinical diagnostic support and specialist services; different treatment protocols; primary, secondary and tertiary levels of care that require a higher level of clinical acumen; public health knowledge; cross-cultural understanding; resourcefulness; and increased responsibility.

The remote medical context refers to locations that are geographically, professionally and personally isolating with limited sophistication of medical and logistic support, limited access to peers, in extreme climatic, political or cross-cultural environments. Remote medical services are usually provided to marginalised populations with poorer health status, different worldviews and cultural understandings of health where it is critical to have a strong understanding of public health and to be able to work as part of a multidisciplinary team. Government and non-government organisations largely employ remote doctors who often have highly mobile roles, and a high personal profile in the community.

Conclusion

There is a considerable gap between undergraduate education and the advanced and extended role of all health professionals in remote areas.^{11,12} Preparation for remote medical practice and the maintenance of professional standards poses unique challenges in the remote context. This places an emphasis on distance education techniques and innovative models of trainee supervision and mentoring. Maintenance of professional standards often depends on educational delivery via teletutorials, the Internet and satellite broadcasts, requiring remote practitioners to be familiar with these technologies.

The remote Australian medical workforce is extremely diverse, which affects the training these doctors require to work effectively in these "different" types of remote services. This article provides the first definition of remote medical practice, an essential first step in designing a training path for medical practitioners working in remote Australia. The defining eight key features of remote medical practice offer professional colleges, health departments, researchers, employers, policymakers, governments and funding bodies a starting block to work from. The next step is to develop a curriculum that permits

dedicated training for doctors to develop the knowledge, skills and, most importantly, the behaviours that enable them to provide quality medical services to these diverse populations safely.

Competing interests

None identified.

Author details

Janie D Smith, MPH, EdD, Director,¹ and Associate Professor²

Stephen A Margolis, DRANZCOG, FRACGP, FACRRM, Associate Professor,² and Medical Officer³

Jeff Ayton, AFFTM, DRANZCOG, DA, Chief Medical Officer⁴

Victoria Ross, MB BS, FRACGP, MPHTM, Lieutenant Colonel⁵

Elizabeth Chalmers, FACRRM, ACRRM, AFPHM, Associate Professor and Head⁶

Patrick Giddings, FACRRM, FRACGP, DRANZCOG, Chief Executive Officer⁷

Louise Baker, FRACGP, DRANZOC, DCH, Medical Educator⁸

Martin Kelly, MB BS, PhD, RVTS Registrar⁹

Catherine Love, MB, FACRRM, FRACGP, Supervisor⁹

1 RhED Consulting Pty Ltd, Ocean Shores, NSW.

2 School of Medicine, James Cook University, Townsville, QLD.

3 Royal Flying Doctor Service, Cairns, QLD.

4 Polar Medicine Unit, Australian Antarctic Division, Hobart, TAS.

5 Joint Health Support Agency, Department of Defence, Canberra, ACT.

6 Centre for Remote Health, Flinders University, Katherine, NT.

7 Remote Vocational Training Scheme, Albury, NSW.

8 Remote Vocational Training Scheme, Cowra, NSW.

9 Remote Vocational Training Scheme, Alice Springs, NT.

Correspondence: janie.dadesmith@bigpond.com

References

- 1 Australian Bureau of Statistics. Population distribution: population characteristics and remoteness. In: Australian social trends 2003. Canberra: ABS, 2003. (ABS Catalogue No. 4102.0.)
- 2 Australian Institute of Health and Welfare. Rural, regional and remote health: a guide to remoteness classifications. Canberra: AIHW, 2004. (AIHW Catalogue No. PHE 53.)
- 3 Ellis I, Kelly K. Health infrastructure in very remote areas: an analysis of the CRANA bush crisis line database. *Aust J Rural Health* 2005; 13: 1-2.
- 4 Smith JD. Australia's rural and remote health: a social justice perspective. 2nd ed. Melbourne: Tertiary Press, 2007.
- 5 Australian Bureau of Statistics. Housing and infrastructure in Aboriginal and Torres Strait Islander communities, Australia 2006. Canberra: ABS, 2007. (ABS Catalogue No. 4710.0.)
- 6 Australian Bureau of Statistics. Regional population growth, Australia, 2004-05. Canberra: ABS, 2006. (ABS Catalogue No. 3218.0.)
- 7 Australian College of Rural and Remote Medicine Remote Working Party. Advanced specialised remote medicine curriculum. Brisbane: ACRRM, 2007.
- 8 Wakerman J. Defining remote health. *Aust J Rural Health* 2004; 12: 215-219.
- 9 Remote Vocational Training Scheme. The remote vocational training scheme. 2003. http://www.nswrdn.com.au/client_images/6713.pdf (accessed Nov 2007).
- 10 Australian College of Rural and Remote Medicine. Australian Medical Council submission. Brisbane: ACRRM, 2004.
- 11 Wakerman. J. Access to health care services in remote areas. Regional Australia Summit. Canberra. 27-29 Oct 1999. http://www.dotars.gov.au/regional/forum/summit/back_sub/background_papers/index.aspx (accessed Nov 2007).
- 12 Centre for Remote Health. Postgraduate courses and programs: remote health practice. Adelaide: Flinders University. <http://www.flinders.edu.au/courses/postgrad/rhealth.htm> (accessed Nov 2007).

(Received 2 Jul 2007, accepted 6 Nov 2007)

□