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Non clinical rural and remote competencies: Can they be defined?

E. Bell[1], J. Walker[2], R. Allen[3], G. MacCarrick[4] & E. Albert[5]

Abstract

This paper aims to explore what non clinical rural and remote competencies are and how they have been described in different contexts. The findings are based on searches for publicly available national (and any international) curriculum statements of rural and remote practice published by agencies relevant to rural and remote medical practice, both government and non government, across the globe. The national statements of non clinical rural and remote competencies considered in this paper suggest that these competencies can be wide-ranging. They include specific kinds of content knowledge, high level problem-solving in specific contexts, skills in managing professional identity and ethical self-awareness, as well as teamwork skills and public health management skills. The paper concludes that there is insufficient evidence to specify how different non clinical rural and remote competencies are from non clinical competencies per se. However, the models examined suggest that, far from being undefinable, non clinical rural and remote competencies can be complex and multi-faceted, reflecting the demands of rural and remote contexts. The well-developed models of these competencies that exist and the strong interest in many countries in producing them, suggest their importance for not only better preparation of rural and remote practitioners, but also well-rounded medical professionals generally.

Keywords: Rural and remote competencies, medical curriculum design, non clinical medical competencies

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Aim

This paper aims to describe what non clinical rural and remote competencies are and how they have been defined in different contexts. At the general level, this paper can help further understandings of the distinctiveness of rural and remote medical practice, in a context where there is uncertainty about this distinctiveness among medical educators. The specific emphasis of the paper is on illustration of key features of these medical competencies using national statements of such competencies. Thus the paper aims to offer models for the tasks of developing curriculum standards for non clinical medical education and training at the local, national and international levels. Its findings have particular relevance to those who seek to audit their own curriculum statements and competency standards to ensure that they appropriately integrate rural and remote contexts.

Method

The primary literature search for this paper related to the identification of key models for describing non clinical rural and remote competencies, not necessarily documented in the scholarly literature. The focus of this search was on publicly available national (and any international) curriculum statements of rural and remote practice. To find these, internet searches were undertaken of national and international agencies relevant to rural and remote medical practice, both government and non government, across the globe. An email request to be directed to publicly available information about national statements was made to around 15 agencies with national and international responsibilities in the area of advocacy for practitioners and/or a quality assurance role in relation to health practice. Most of these agencies forwarded the request to their associates and members. For example, the organisation Towards Unity for Health forwarded the request to over 10,000 of its members, attracting 75 responses from 24 countries. Around 25 medical school websites in developed and developing countries were also searched largely to confirm what such responses had suggested about the existence of national statements of competencies.

The decision to include sources was made on the basis of the extent to which they were useful to identifying national models of rural and remote competencies. Competencies were identified as explicit statements of knowledge, skills and attitudes needed for rural and remote practice, broadly understood as non urban practice. The task of identifying the non clinical components of such models is a controversial one, not least because many clinical skills trainers quite rightly teach (and clinicians perform) clinical and non clinical skills together. There is little consensus in the literature about the distinction between non clinical and clinical skills. Non clinical skills were initially conceptualised for this project in a manner consistent with the Institute of International Medical Education (IIME) as part of its Global Minimal Graduate requirements project. The IIME defines seven domains of competencies for core medical education, the first four of which encompass the last three. The fact that clinical skills is given as one of the four encompassing domains suggests how

clinical and non clinical skills are related, but distinguishable, in medical practice. The seven domains are: 'Professional Values, Attitudes, Behavior and Ethics'; 'Scientific Foundation of Medicine'; 'Clinical Skills'; 'Population Health and Health Systems'; 'Communication skills'; 'Critical thinking and research'; 'Management of Information'. Thus communication, critical thinking and research, as well as information management are represented as the core of essential requirements in medical education.[1, 2] The purpose of this project was to further explore how non clinical skills as such might be defined for rural contexts, as part of clarifying what makes rural practice distinctive.

The decision to focus on curriculum statements related to the focus of the paper on offering information useful to medical educators and trainers who are designing curriculum statements. It is acknowledged that curriculum statements are statements of intention: however, they are an important 'first step' in integrating rural and remote contexts into the education and training students actually experience. The lack of a body of research literature on non clinical rural and remote competencies and the need to focus on working models meant that this paper includes 'grey literature' in its sources.

Background: Are non clinical rural and remote competencies really necessary?

Rural and remote communities are typically defined in terms of their location away from major urban centres, often (but not always) with associated resource implications and differences in health outcomes. There is great heterogeneity across rural and remote communities, between countries but also within countries.[3] At the same time, the existence of a distinctive research literature, organisations for rural health and rural practice, rural medical training programs, as well as statements of rural and remote practice used in delivering that education, suggest that rural and remote medicine is a discrete speciality.[4]

While rural and remote medical practice may share certain challenges distinct from urban practice, including problems of access to healthcare infrastructure and supports arising from the 'tyranny of distance', there are differences. Remote medicine, at least in Australia, is also about cultural distance and a style of practice that is responsive to the distinctive historical and social contexts that shape the healthcare needs of indigenous people, and their traditional lifestyles, in remote regions.[5]

The many medical education initiatives that have been implemented across the globe to better prepare doctors for rural and remote practice—undergraduate training and community placement programs, as well as postgraduate and professional development courses—suggests some priority is being given to the workforce needs of these non urban communities. Yet in developed and developing countries alike, there is evidence that medical professionals continue to be ill-prepared for these contexts.[6]

Statements of rural and remote competencies can have a key role to play in shaping medical education initiatives and ensuring that graduates are better prepared for the distinctive nature of rural and remote practice.[4] The

dominant argument for having explicit statements of competencies in education practice is about their role in developing the quality of teaching and learning: they facilitate accountable and coherent curriculum mapping, assessment, and student feedback, at least.[7, 8] Explicit statements of rural and remote competencies can help ensure that the distinctive contexts of rural and remote practice are not 'lost in translation' in education delivery.[9] Accordingly, non clinical rural and remote competencies can help medical education and training better prepare doctors for, and support their decisions to, practice in non urban locations that may require particular non clinical skills.

Non clinical rural and remote competencies might be important to medical education for another reason. The capacity to think and act in a variety of different contexts is the modern hallmark of the well-prepared graduate. In the education literature generally, diverse context-based learning is seen as important to quality learning.[10] However distinctive it may arguably be, accounts of rural and remote education suggest that it can also play a role in reinforcing the desirable knowledge and skills of medical education, including non clinical competencies.[11-15] It seems that learning about rural and remote practice is also about learning to take a whole-of-patient, interprofessional, and community-based approach to complex health challenges.[16] Accordingly, non clinical rural and remote competencies can also be seen as having a role to play in helping medical education to produce well-rounded professionals.

Findings

The World Health Organisation has published guides for developing education statements that emphasise the importance of their responsiveness to local health and training needs.[17] At the same time, the work of bodies such as the World Organisation of Family Doctors (WONCA), which represents rural doctors on international education and training issues, also indicates the value of international lesson-drawing and pooling of expertise. More recent guidelines by the World Health Organisation (WHO) and the World Federation of Medical Education (WFME)—'Accreditation of Basic Medical Programs', and 'Global Standards for Quality Improvement in Postgraduate Medical Education'—encourage medical education around the world to develop curriculum standards for national accreditation.[18, 19]

National statements of rural and remote competencies tend to be found in wealthier countries. Australia is one such country—and its relatively small population in relation to its landmass makes rural and remote healthcare something of a national cause *célèbre*. The Australian College of Rural and Remote Medicine (ACRRM) offers a very detailed model of such competencies in its accredited primary curriculum document for use across different education levels, from undergraduate medicine to professional development. This document represents rural and remote practice as a distinct discipline requiring specialised competencies, including non clinical competencies: for example, demonstrating an understanding of the differing cultural beliefs, values

and priorities of Aboriginal and Torres Strait Islander peoples; maintaining confidentiality in small communities as part of ethical practice; demonstrating resourcefulness, independence, and self-reliance in geographically, socially and professionally isolated contexts.[20]

Table 1 gives examples of the learning outcomes from three of the seven competency domains that apply across the different curriculum content areas.

Many of the 22 topic areas in the ACRRM curriculum document offer more detail about these and other non clinical rural and remote competencies. Given that medical education courses rarely engage with the information technology competencies required for rural and remote practice, the topic area 'Information technology/information management' is of particular interest. The learning objectives for this topic are

Table 1

DOMAIN 5. ABORIGINAL AND TORRES STRAIT ISLANDER HEALTH IN GENERALIST PRACTICE

501 Demonstrate an understanding of the links between the social, cultural, historical, economic and political framework that influence the health status of Aboriginal and Torres Strait Islander peoples

502 Apply clinical practice knowledge of the differing profile of disease among Aboriginal peoples and Torres Strait Islanders

503 Demonstrate an understanding of the differing cultural beliefs, values and priorities of Aboriginal and Torres Strait Islanders peoples regarding their health and health care provision

503.1 Reflect on own assumptions, cultural beliefs and emotional reactions in providing culturally safe health care for Indigenous Australians

504 Communicate effectively and in a culturally safe manner with Aboriginal and Torres Strait Islander people

504.1 Identify key community contacts, mentors and support structures in the provision of effective health care

505 Develop capacity building and skills transfer strategies when working with Indigenous health care workers

506 Describe the common patterns and prevalence of disease, and use best evidence in the management of chronic diseases experienced by rural and remote Aboriginal and Torres Strait Islander peoples

507 Appreciate the role and effect of comprehensive Aboriginal community-controlled Primary Health Care including self-determination, collaboration, partnership and ownership

507.1 Use a primary health care approach in rural and remote Indigenous health practice

507.2 Discuss the different power based structures and decision making that need to be taken into account when working in a community controlled organisation

508 Identify overt, covert and structural forms of discrimination in interactions with patients, health professionals and systems; and advocate for their resolution

509 Work effectively and respectfully as part of a cross cultural team, and use local protocols for referral and involvement of health workers

509.1 Describe the role of the Aboriginal and Torres Strait Islander Health Worker

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

511 List potential strategies to address social, economic and environmental determinants of disease among Aboriginal peoples and Torres Strait Islanders, and advocate for change

Table 1 (continued)

DOMAIN 6. PROFESSIONAL, LEGAL AND ETHICAL PRACTICE IN GENERALIST PRACTICE

601 Manage, appraise and assess own performance in the provision of health and medical care for patients

602 Engage in continuous learning and professional development in rural and remote practice

603 Engage in education of other medical and health professionals

604 Provide accurate and ethical certification when required for sickness, employment, social benefits and other purposes

605 Apply knowledge of practice billing, insurance and health financing systems in clinical practice

606 Maintain confidentiality in small communities

607 Maintain professional and social boundaries

608 Use and undertake relevant research to inform practice

608.1 Demonstrate an ability to think critically and make informed decisions

609 Use communication technology to network and exchange information with distant colleagues, and for continuing educational purposes

610 Contribute to the management of human and financial resources within a health organisation/medical practice 611 Identify and apply strategies for self-care, personal support mechanisms, debriefing, and caring for their family in the rural and remote context

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

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

614 Apply professional, ethical, and legal guidelines to their practice

615 Implement and adhere to occupational health and safety guidelines in practice

DOMAIN 7. RURAL AND REMOTE CONTEXT IN GENERALIST PRACTICE

701 Apply to their role of medical practitioner knowledge of the social, cultural, historical, economic and political issues facing rural and remote communities

702 Demonstrate resourcefulness, independence, and self reliance while working effectively in geographic, social and professional isolation

702.1 Respond to community needs

703 Identify and reflect upon their own personal strengths, values, attitudes, priorities and vulnerabilities in being able to maintain balance between personal, social and professional responsibilities and in managing isolation

704 Respect local community norms and values in own life and work practices

705 Identify and acquire extended knowledge and skills as may be required in order to better meet the health care needs of the practice population. (20)

Table 2

LEARNING OBJECTIVES
'Information technology/information management'

The candidate will have:

- Developed the necessary skills to use information technology (IT) to aid in information exchange associated with patient management.
- Developed the necessary skills to use various applications of IT in the practice of rural and remote medicine and for ongoing professional development purposes.
- Developed the ability to use technology to aid in differential diagnosis, the development of management plans, electronic prescribing, and storing relevant patient information which can be communicated as appropriate.
- Developed the necessary skills to electronically order and communicate the findings of appropriate investigations.
- An understanding of the role of IT in emergency management, particularly pertaining to rural and remote medical practice.
- An understanding of the advantages of using computers to maintain patient records in a regular and orderly manner.
- Developed personal confidence and competence in the use of current medically related ITmodalities. (20)

given in Table 2; the document offers much more detail about the required competencies.

The Royal Australian College of General Practitioners (RACGP) has developed postgraduate curriculum documents for use in preparing medical graduates for rural practice which, like the ACRRM document, have placed a strong emphasis upon the non clinical demands of rural and remote health contexts: for example, procedural knowledge and skills in emergency management in rural settings; understanding and using public health structures in rural settings in the interests of public health management; developing professional networks for inter-professional healthcare delivery in rural contexts.[19] [20-23] However, it is fair to say that the RACGP's curriculum documents offer broad rather than detailed statements of competencies. Table 3 provides a sample of the objectives from the 'organisational and legal' domains of the RACGP curriculum guidelines for the Fellowship in Advanced Rural General Practice (FARGP) which has replaced the Graduate Diploma in Rural General Practice (GDRGP).[19] The FARGP is offered to GP registrars enrolled in vocational training as well as experienced general practitioners (at the time of writing, the same curriculum document is being used for the FARGP as the GDRGP).

Canada, which has many cultural and demographic parallels to Australia, has developed a strong profile in education for rural and remote practice, particularly at the postgraduate level. The Society of Rural Physicians of Canada and the College of Family Physicians of Canada have published a number of important position and other papers available

Table 3

The Grad. Dip. Rural will contribute to the ability of candidates to:

- Balance time management between the demands of the consulting rooms and the community hospital
- Be aware of the local issues which impact upon the GP's decision to treat the patient locally or to refer on
- Develop an understanding of the principles of small business management relevant to a rural general practice
- Utilise the principles of triage and disaster management in the rural setting
- Establish and utilise a comprehensive professional emergency referral network
- Utilise appropriate protocols for hospital, home and hostel visiting (21)

from their library at http://www.srpc.ca/ that suggest the distinctive set of education and training requirements for rural practice, in speciality areas and in general family practice.[26] Of particular interest in Canada is the 'CanMEDS project' enhancing specialist training in rural settings through adapting specialist competency frameworks developed by the Royal College of Physicians and Surgeons of Canada to non-urban medical education.[27] There are seven key roles adapted by CanMEDS for rural and regional practice used as learning objectives and as the basis for specialist resident training and evaluation: 'medical/expert/clinical decision-maker'; ' communicator'; 'collaborator'; 'manager'; 'health advocate'; 'scholar/learner'; and 'professional/personal' roles [28]. Table 4 gives the details of these seven key roles.

Table 4

MULTI-SPECIALTY COMMUNITY TRAINING NETWORK OBJECTIVES

Medical/expert/clinical decision-maker: "Know and do the right thing."

- Identify the knowledge and skills required for a rural/community based practice and note how they differ from urban practice.
- Identify limitations and demonstrate use of referral resources appropriately.
- Demonstrate diagnostic and therapeutic skills for ethical and effective evidence-based patient care within the context and limitations of the
- rural/community environment.
- Identify peer review, audit, and other methods of assessing one's own practice and rural/community patient care.

Communicator: "Communication is the key to success."

- Identify particular health care challenges and difficulties from a rural/community patient's cultural and geographic context.
- Demonstrate good interviewing and communication skills with patients.
- Demonstrate effective communication with all members of the rural/community health care team as member, coordinator, and leader.

Collaborator: "Don't get swamped."

- Identify and use local community resources, programs, and distant referral resource and clinical-support networks.
- Demonstrate collaboration as community consultant with both local family physicians and tertiary care subspecialists.
- Identify when and how to effectively transfer patients from smaller referring centres, to tertiary care centres

Manager: "Keep the CEO off your back."

- Identify effective practice management appropriate for rural/community practice.
- Identify strategies to develop your referral base.
- Identify and discuss benefits and risks of investigations and treatments available locally, regionally, and at tertiary care centres.

Health advocate: "You can make a difference in your community!"

- Demonstrate preventative health care and health promotion.
- Advocate for accessible and appropriate rural health care.
- Identify existing and potential resources to meet the unique needs of your community patients.

Scholar/learner: "Yes, you can be a scholar in the country."

- Identify and develop strategies for self-directed, life-long learning strategies including use of distance education to maintain up-to-date and competent skills relevant to a rural/community setting.
- Identify clinical research appropriate to one's scope of practice, interests, and rural/community setting.

Professional/personal: "Remember yourself, your partner, and your children."

- Identify and experience the joys and challenges of rural/community medical practice and life.
- Identify and develop strategies to balance personal, family, and professional needs and demands.
- Demonstrate positive attitude and working relationships with patients, staff, administration, and colleagues.

*Modified from CanMeds 2000 (28)

The United Kingdom is another international leader in development of national statements of rural and remote competencies, through the work of its Sector Skills Council (SSC). They have identified all competencies required for remote and rural health settings, whether they are also required in urban settings or not. It is important to emphasise that these are not competencies solely for medical professionals, but rather relate to the competencies needed by rural and remote healthcare teams. As such they take a strong non clinical focus. Consistent with the evidence from Australian and Canadian statements, the competencies identified that appear to be specific to rural and remote communities arise from the closeness of many of these communities (such as maintaining confidentiality and professional boundaries) and the need to take on different roles that would, in other communities, be part of other practitioners' roles.

Table 5 gives an extract from the report of this UK project, suggesting how the particular contexts of rural and remote communities place greater demands on non clinical skills: for example, to do with effective teamwork and networking, seeking support and feedback for professional and personal issues (in the context of professional isolation), maintaining and developing skills and competence, maintaining appropriate work-life balance (given the close relationship between the practitioner and the community they serve) and so on.[29]

Other European countries do not have national statements of rural or remote competencies, although the European Academy of Teachers in General Practice has developed a statement of general practice 'The European Definition of General Practice/Family Medicine' which includes an emphasis on responsiveness to contextual factors and community-based practices, as well as the other non clinical hallmarks of rural and remote medicine such as whole-of-patient and interdisciplinary approaches.[30] Yet many small European countries such as Norway, Denmark and Belgium do experience problems recruiting doctors to rural and remote areas. National statements from European countries on medical competencies, such as Denmark's ministry-approved national medical competencies (http://www.dsam.dk) suggest some of the non clinical features of rural and remote medicine already noted.

In Asia, Africa, South America and other non western countries, rural and remote health is a vital and constantly developing area of medicine, though again, none of these countries have national statements of rural and remote competencies as such. Yet in many of these countries, the fact that undergraduate medical education at least includes a strong community-based education and practice focus means that there is considerable interest in developing definitions of rural and remote medicine, including non clinical definitions, for use in nationally accredited programs, consistent with WFME global standards.

Turning to America—while the American Academy of Physicians has documented the fact that this country's rural areas have been underserved for decades (http://www.aafp.org/online/en/home/policy/policies/r/ruralpracticekeep.html), with consequent needs for better preparation and training of

Table 5

Rural and remote competencies identified by 'Skills for Health'

We have identified however some competences that appear to be specific to remote and rural healthcare. Those identified to date include ethical issues related to:

- the closeness of communities (eg maintaining confidentiality and professional boundaries in small closely knit-communities)
- the need to undertake a number of roles that would, in other communities, be undertaken by other practitioners (eg in both prescribing and dispensing drugs and the direct relationship of this to practice income).

We have also identified some competences that are often undertaken by remote and rural healthcare teams that would not be undertaken by such teams in other areas (although they would be undertaken by different healthcare practitioners). These include:

- dispensing and quality assuring the prescription of pharmaceutical products
- emergency care (such as taking an active role in road traffic accidents, major incidents, stabilising patients prior to their hospitalisation, obstetric emergencies).

There are also some aspects of work that might need greater stress in remote and rural communities due to the size of the communities, the difficulties caused by travel and the size/range of the healthcare team available to patients and the public in those communities. These include:

- effective prioritising and planning of workload (due to distance etc)
- effective team working
- flexibility of approach adapting own skills and competence to meet the needs of the community given the skills and competence of other members of the team
- maintaining and developing skills and competence
- seeking support and feedback for professional and personal issues (particularly when working on one's own / in very small practices)
- maintaining work-life balance (given practitioners are always in the community they serve)
- electronic literacy skills – to access up-to-date information on diagnoses, management of conditions, for telemedicine etc
- networking skills – to gain greater understanding of conditions on which one cannot be an expert.

(29)

doctors, America has not developed national curriculum statements in this area. Of course, like other countries, America has outcomes-based medical education, given in the frameworks provided by the Liaison Committee for Medical Education[31] and also the Accreditation Council for Graduate Medical Education (ACGME) which has defined 6 core competencies for all physician training: in the areas of patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice (see http://www.acgme.org/outcome/). The ACGME competencies have been incorporated into education training in the USA, having been designed as a point of departure for developing discipline-specific learning objectives.[32] Consequently, the Rural Physician Associate Program (RPAP) has been developed to incorporate into curriculum and evaluation the six general competencies of the ACGME.[33, 34] The delivery of rural and remote training programs in America, like many other countries, often emphasises the inter-professional nature of quality healthcare delivery in these contexts and the importance of non clinical skills to do with communication, professional ethics, and community-based knowledge and skills.

Conclusions

The national statements of non clinical rural and remote competencies considered in this paper suggest that these competencies can be wide-ranging. Such statements include specific kinds of content knowledge, high level problem-solving in specific contexts, skills in managing professional identity and ethical self-awareness, as well as teamwork skills and public health management skills.

How different are non clinical rural and remote competencies from non clinical competencies *per se*? The answer is uncertain. The medical education literature is scattered with studies of non clinical competencies, some of which overlap with the models described in this paper: non clinical aspects of patient interaction and communication, including those specific to patient sub-groups[35, 36]; non clinical aspects of integrative 'whole-of-patient' medicine [37]; generic organisational skills[38] [39]; health advocacy[39]; non clinical end-of-life healthcare[39]; ethics[40, 41]; teamwork to do with managing change, conflict resolution, and negotiation[42]; healthcare quality, safety, and systems improvement [43]; non clinical public health emergency management.[44]

Not enough work has been done identifying, elaborating and measuring many of these non clinical aspects of medical practice, including for rural and remote practice. Future studies will hopefully address these gaps. This paper has suggested that, far from being undefinable, non clinical rural and remote competencies can be complex and multi-faceted, reflecting the demands of rural and remote contexts.

It would be simplistic to assert that such competencies are not practiced in urban contexts—rather the practice of such skills in different contexts most likely makes them distinctive. The well-developed models of non-clinical rural and remote competencies that exist and the strong interest in many countries in producing them, suggest their importance for better preparation of rural and remote practitioners and well-rounded medical professionals generally.

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