



The Royal Australasian
College of Physicians

Royal Australasian College of Physicians. Linked dual-trained physician care in rural communities

The Royal Australasian College of Physicians (RACP) proposes a model of dual-trained physicians to:

1. address rising rates of complex and co morbid chronic disease in rural and remote areas;
2. increase the self-sufficiency of rural and remote areas to manage more complex diseases and treatments, and reduce transfers to urban facilities for specialist treatment; and
3. build a secure and stable physician workforce that meets the needs of rural areas

1. THE RURAL HEALTH CARE GAP

Rural communities face challenges in accessing a range of health care services. There are unique challenges to delivering health care in these areas, including sparse populations, isolation, long travel distances, scarcity of specialty care, provider shortages, under-resourced infrastructure, financial pressures and a predominately older population, often with multiple chronic conditions.

These factors affect the quality of health care in rural areas as opposed to urban areas. Sparse populations in large geographic areas have inconsistent access to care due to a shortage of health professionals across general as well as specialist care. There is widespread concern about the mismatch between current physician workforce supply and demand for health care.

Compounding the pressure on health service delivery in rural areas are patients with severe chronic illnesses who are at very high risk of experiencing an acute event and are presenting more frequently to Emergency Departments. Their care is more complex due to the need to coordinate care across co-morbidities and they are at high risk of complications. Patients with chronic, comorbid diseases require continuing care, maintenance of treatment, rehabilitation and advanced care planning, all of which is difficult to access in rural and remote communities across Australia.

The lack of access to specialist treatment and management increases the impact of rising rates of chronic disease with co-morbidities. This contributes to worsening health outcomes of the population based in rural areas.ⁱ For chronic illnesses the only alternative to getting treatment far from home is to accept limited specialist care. This lack of access to care is exacerbated by a decrease in the scope of practice among general practitioners. According to the Australian College of Rural and Remote Medicine (ACRRM) many general practitioners in Australia have relinquished procedural, obstetric, hospital, public health and medically complex care.

About 70 per cent of the additional deaths that raise mortality in rural areas above that in major cities are due to:

- coronary heart disease (CHD – 19 per cent of excess deaths) and other circulatory disease (18 per cent, excluding stroke);
- diabetes (six per cent) as the primary cause of death, although this greatly understates its association with the development of other diseases (e.g. CHD); chronic obstructive pulmonary disease (COPD – nine per cent); and
- cancer (15 per cent), especially lung and prostate cancer.ⁱⁱ

The RACP is currently looking at how the wide array of specialty services needed for chronic disease and other illnesses can be provided in rural and remote areas, recognising that it is not feasible for a physician in every specialty to be located at every rural and remote hospital.

2. COST OF RURAL HEALTH CARE TODAY

Rural patients with complex illnesses may need to see multiple specialists, entailing multiple trips to distant urban facilities. The associated cost is tremendous and not sustainable. NSW Health Isolated Patient's Travel and Accommodation Assistance Scheme (IPTAAS), for example, reports the need for an additional \$28 million in supplementary funding, over four years. In 2011/12 forecast expenditure is \$18 million, a \$7 million increase on the previous year.

Sending locum doctors to rural areas, a common fall-back for providing care, leads to rising expenditures and affects continuity of care. In the last financial year NSW spent \$59 million on locum doctors for regional areas and Queensland spent \$86m. ⁱⁱⁱ

Investing additional business-as-usual funding in hospital settings in rural areas does not address the structural problem. The imperative for a sustainable and well-functioning health care system is that service delivery must be based on the resource and quality stewardship principle: appropriate care in the appropriate location, through the appropriate channel. The question is what are the levers that will promote quality, cost effectiveness, equity, and service delivery sustainability in the hospital setting in rural areas?

3. A NEW SUSTAINABLE RURAL HEALTH CARE DELIVERY MODEL

The RACP recommends taking action to match the supply of health care in rural areas with the quality and quantity of service demanded. An improved and innovative solution to health care delivery is needed. The RACP proposes a model of specialist service delivery that simultaneously addresses the impediments for the supply of sustainable health care delivery in rural and remote communities: maldistribution of specialists in rural areas and chronic disease management.

In the RACP model, dual-trained specialist physicians have a core training in general medicine and further training in an additional specialty, which provides a range of expertise in key chronic diseases or population groups that require in depth management. Core training in general medicine will enable expertise in the diagnosis and management of acute, undifferentiated illnesses and complex, chronic and multisystem disorders in adult patients. Additional training in a specialty such as endocrinology, oncology or respiratory medicine, will increase the level of expertise of the general physician. For example, a general physician with an additional specialty in endocrinology would be able to manage complex acute complex diabetes cases in a population with a high rate of diabetes.

There are several advantages of introducing such a role in the rural setting:

- a) Improved access to health care service for patients in rural areas:

Dual-trained physicians bring additional and wider specialty focus in rural areas increasing the volume of patients treated and the spectrum of services available to meet the needs of the population. Dual-trained physicians will have the breadth of expertise to cover the range of complex chronic co morbidities experienced in rural areas. Additionally they will have the depth of specialty expertise in order to initiate investigations into complex disease processes and provide early diagnosis, treatment and ongoing management.

- b) Focus on patient centred health care service delivery:

A needs-based approach to health workforce planning should underpin an understanding of the demand for health care.^{iv} This means measuring population needs, understanding risks and rates of chronic disease, and building capacity to self-manage chronic disease.^v An ageing population means rising rates of chronic or complex illnesses such as diabetes, heart disease, asthma or cancer, as well

as an understanding that patients are increasingly likely to have other co-morbidities such as dementia, chronic renal failure, arthritis and depression.

The challenges of an ageing population and the burden of chronic and complex illness are not just rural issues. Australia’s health care system is largely designed to care for people who have only one thing wrong at once but which is chiefly subscribed to by people who have many things wrong^{vi}. While chronic disease prevention and management is now a major focus of Federal, State and Territory government health policy, the policy framework’s focus on single diseases rather than co morbidities, and priority areas viewed in isolation. Too much focus on single diseases creates barriers in addressing multi-morbid chronic disease including inflexibility in service delivery and risk of poor coordination of care. ^{vii viii}

To ensure optimal quality and safety there is need for mechanisms that ensure the provision of appropriate specialist services while recognising that in rural areas there are barriers that limit the supply of specialists. Allowing the physician workforce to develop in its current form of narrow specialisation will not address the broad needs of the ageing population and rising rates of chronic disease and co morbidities. Increasing opportunities for general medicine and dual-training is one way to manage this.

There are various possible combinations of dual-trained physicians in rural areas. This proposal includes a model of dual-trained physicians providing generalist care with additional capacity in an area of specialty associated with a major chronic illness, in particular diabetes, cancer, Chronic Obstructive Pulmonary Disease (COPD), and asthma.

Table one indicates the possible specialties that can be combined with general medicine to specifically address these chronic illnesses, their management areas (e.g. rehabilitation) or more broadly the patients who may experience a disproportionate impact from the disease due to age (e.g. geriatrics).

Table one: Specialties that may combine with general physician training to address specific chronic illnesses or the population groups impacted by these illnesses.

Chronic disease	Focus on the clinical specialty	Focus on population health
Diabetes	Adult Endocrinology	Geriatric Medicine
	Paediatric Endocrinology	General Paediatrics
	Endocrinology and Chemical Pathology	Adolescent and Young Medicine
Cancer	Medical Oncology	Geriatric Medicine
	Palliative Medicine	Rehabilitation Medicine
	Nuclear Medicine	
COPD	Respiratory Medicine	Geriatric Medicine
	Sleep Medicine	Rehabilitation Medicine
	Palliative Medicine	
Asthma	Respiratory Medicine	General Paediatrics
	Thoracic Medicine	Adolescent and Young Adult Medicine

Rural based dual-trained physicians live in the local area, work in the local hospital and community, and understand the area's service limitations. They are able to triage and manage the transfer of patients to metropolitan services for complex diagnostics and treatment if necessary.

c) Generates medium and long-term sustainable cost savings for the health system:

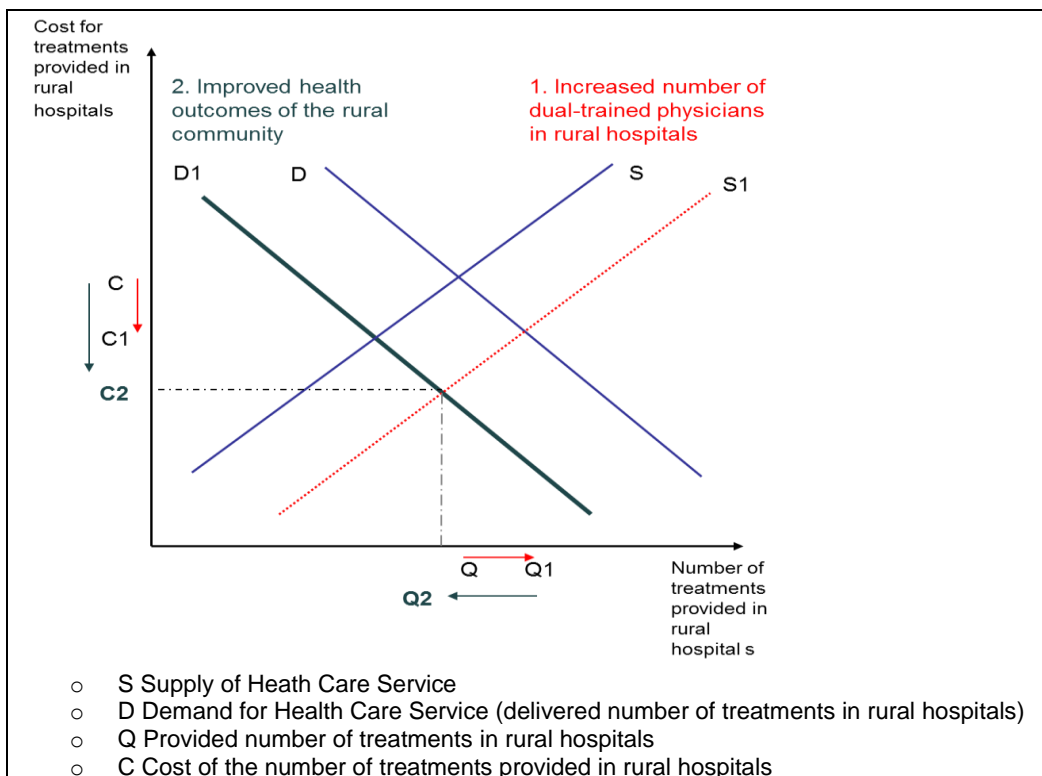
Evidence shows that current demand for medical treatment in rural areas is either not addressed or shifted inefficiently to metropolitan areas. An increased number of dual-trained physicians will lead to an immediate increase in demand for treatment.

Two effects are likely to follow: In the short/medium term the number of treatments carried out through additional dual-trained physicians will increase. For patients this will mean improved access to treatment and sustainable care near home, local follow-up, improved self-management and improved long-term health outcomes. This means a real prospect of reduction in the need for use of metropolitan hospitals. Better health outcomes and appropriate treatment will translate into reduced care costs and savings for patients who can receive quality care close to home.

The dual-trained physician workforce in rural areas will have a positive impact on early diagnosis for the patients, with potential to reduce disease progression by preventing complications from disease with corresponding reduction in costs for treatments (Figure 1). The reduced number of hospital admissions reduces the overall cost for the health system, which is likely to fall even further in the long term.

It is suggested that the number of dual-trained physicians will be rigorously monitored and adapted to the shifting demand for health care service and capacities within the rural public hospital setting.

Figure 1: Dual-trained physicians and the demand-supply functions in rural hospitals



An increase in the severity of prevalent chronic diseases in rural areas usually corresponds with an increase in the costs for treatment (Figure 2). Timely intervention of dual-trained physicians will identify chronic diseases at an early stage. This intervention would decrease the number of treatments needed more rapidly than the increase of cost per treatment due to progression and severity of illness. Expanding the dual-trained physician workforce in rural hospital settings will prevent disease progression and promote health at earlier stages, which will translate into massive costs savings for the health system.

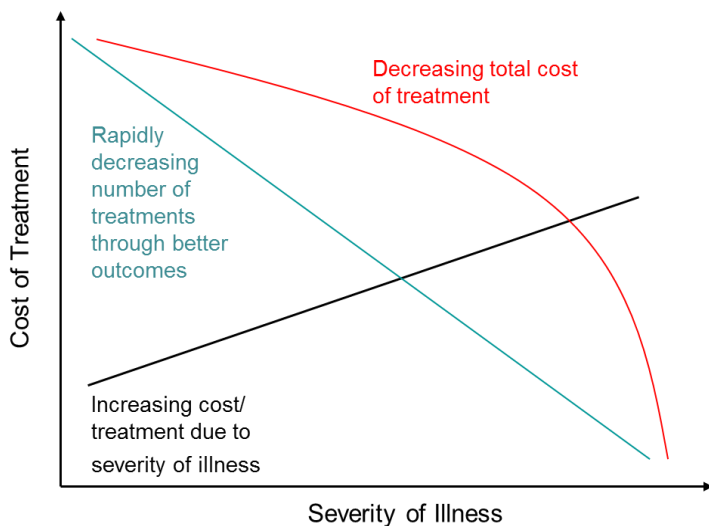


Figure 2 Cost of Specialist Care and Severity of Illness.

4. COORDINATION AND SYSTEM INTEGRATION THROUGH DUAL-TRAINED PHYSICIANS

In this paper we have focused on a proposed new model of health care service delivery with dual-trained physicians in rural hospital settings. However the overall delivery of health care services is much more complex and involves many disciplines and organisations making it important to pursue a coordinated and integrated approach for each local area.

➤ **Care Coordination:**

Care coordination is challenging for rural communities with many small, independent providers, scarce resources, and health care services that must cover vast geographical areas. Care coordination requires effective communication, referrals, and knowledge of where such services can be obtained.

Dual-trained physicians can play a major role on overcoming these issues through their generalist and whole of patient care skills. The range of specialty expertise they offer should be linked through local health networks to improve coordination of care. A linked group (consortium) of dual-trained physicians could shorten up communication and referral pathways by offering both general medicine and multiple specialties services beyond that of a single institution. This coordination of skill-mix and entities across a local health network will increase the region’s self-sufficiency in chronic disease management. This will also free up tertiary referral centres to deal with highly complex and rare illnesses.

➤ **Integrated Model - Stepped Care:**

The continuum of care includes all stages of health care – from the most basic to the more complex, from emergency and primary care to routine specialty, acute and long-term care. Although there may be some logical linear progression from one stage in the continuum to the next, people actually enter the continuum at different stages, and often move back and forth between stages. This care continuum model, as applied to rural residents, establishes the importance of focusing on the patient and their location^{ix}.

Adult internal medicine is an important specialty area for rural and remote general physicians as the bulk of the caseload for most rural or remote health services, both in hospital and community settings will be adult internal medicine presentations.

General physicians have a breadth and depth of knowledge and experience which makes them ideally suited to provide high quality specialist services across a spectrum of health and illness which is not limited by the boundaries of medical specialties. As a result they can manage many of the following conditions: ischaemic heart disease, myocardial infarction, atrial fibrillation, acute arrhythmias, resistant hypertension, abdominal aortic aneurysm, acute renal failure, chronic kidney disease, acid-base balance disorders, acute respiratory failure pulmonary embolus, acute asthma, gastro-intestinal bleeding, ischaemic bowel, inflammatory bowel disease, hepatitis and liver failure, connective tissue disorders, gout, diabetes management, thyroid disease, including acute thyrotoxicosis and thyroid crisis, uncommon endocrine disorders of adrenal and pituitary glands, epilepsy, Parkinson's Disease, stroke, severe cytopaenias, dementia and delirium.

These broad capacities place general physicians in an important and responsible position as both clinicians and teachers, particularly where problems are undifferentiated and complex, where there are issues which do not fall within the range of specialties and where the integration of interdisciplinary expertise may be required. General physicians have important linkages with colleagues in many disciplines including general practice, surgery and psychiatry and allied health.

6. IMPLEMENTATION - DEVELOPING TRAINING PATHWAYS

6.1 Current Advanced Training Pathways

Effective dual-training pathways will need to be considered to build a physician workforce that is tailored to population health needs. Developing a pathway that bolsters general medicine and facilitates specialty training directed at the needs of rural areas will be the next step towards achieving this.

The future service delivery model will depend on a model of training that forms the basis for dual-trained physicians that meet local needs. Existing training programs do not easily facilitate the proposed service delivery model. Currently, physician training in Australia consists of Basic Training, known as the PREP (Physician Readiness for Expert Practice) program, and Advanced Training. In total this takes a minimum of six years to complete.

	Duration	Curriculum	Completion
Basic Training	three years	<ul style="list-style-type: none"> • provides a broad –based general grounding in physician practice • introduces the specialties • enables the development of core skills, knowledge and attitudes. 	After completion of both the College Written and Clinical Examinations
Advanced Training	three or more years	<ul style="list-style-type: none"> • specialises in one (or more) of thirty different specialty areas. • develops the specialist knowledge and clinical skills gained during basic training • will have an Adult or Paediatric specific focus as applicable. 	Successful completion of objectives and requirements of specialty advanced training.

Trainees may undertake two Advanced Training Programs simultaneously, in a minimum of 48 months. This depends on how the chosen programs fit together. For example, General Medicine can be easily matched with another specialty such as Gastroenterology, where the trainee will have the majority of his or her time assessed simultaneously. Other specialties may have little overlap between their programs and will therefore take longer. Dual-training may also depend on whether integration of training is available at facilities and whether positions and rotations are available.

Specific dual-training pathways are not formalised. It is up to the trainee to choose which specialties he or she would like to undertake, based on personal preference, then navigate the training pathway within a variable timeframe.

6.2 Proposed tailored training pathway: locally-planned, dual-trained physicians.

To provide a fit-for-purpose service model for complex chronic disease and co morbidities within a local area, a tailored dual-training program is needed. Such a training model will provide for a tailored training pathway/package that the trainee will be specifically recruited for and include general medicine as a core and specialties that help to manage the complexities related to the four identified chronic diseases or the groups that are greatly impacted by them.

There is anecdotal evidence to suggest that trainees are interested and keen to participate in dual-training with generalism as the core specialty, within a rural area. This is provided there is the capacity to train physicians within the rural facility and there is a clear career pathway and program to follow. Increasing the capacity of rural clinical schools and training facilities as centres of excellence and linked to universities will support this proposal.

There is also evidence that basing General Medicine physician training in rural areas, or longer-term rural placements, attracts the trainee to the area^{xiii}. They are more likely to stay in the areas as a physician, providing the community with a sustainable and secure workforce.^{xiv}

It is anticipated that the trainee, having spent several years in the local area in a supported training program with rural incentives, will settle in the area into a guaranteed position. The assumed result will be rural-based General Medicine physicians with a mix of subspecialties that provide the skills to manage particular chronic diseases, as they become more complex, in a local area. Additionally, the capacity to train future physicians will grow as the rural physician workforce increases.

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