

The Australasian College of Dermatologists

**Submission to the House of Representatives Select
Committee on Regional Australia**

Inquiry into Regional Australia

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Submission of the Australasian College of Dermatologists

About the Australasian College of Dermatologists

The Australasian College of Dermatologists (ACD) is the sole medical college accredited by the Australian Medical Council for the training and continuing professional development of medical practitioners in the specialty of dermatology.

The College is the leading authority in Australia for dermatology, providing information, advocacy and advice to individuals, communities, government and other health stakeholders on dermatological practice in Australia.

As the national peak membership organisation, the College represents over 550 specialist dermatologist Fellows (FACD) and 100 trainees across the country.

Executive summary

More than 1.06 million people in Australia suffer from a long term condition of the skin. There is clear evidence of poorer outcomes for patients with dermatological conditions living in regional, rural and remote areas with limited access to specialist dermatology services being a key contributing factor.

This submission predominantly addresses two Terms of Reference of the Select Committee on Regional Australia's Inquiry into Regional Australia. In relation to:

- (a) Examining the effectiveness of existing regional service delivery and development programs we put forward that:
 - the effectiveness of existing regional dermatology healthcare delivery is challenged as a result of workforce maldistribution and insufficient investment in public dermatology services; and
 - the ongoing growth and sustainability of regional dermatology services will occur through continued government support for regional training.
- (k) Identifying the infrastructure requirements for reliable and affordable health, education, transport, telecommunications, clean energy, water and waste in a new settlement of reasonable size, located away from existing infrastructure, we put forward that:
 - infrastructure requirements for reliable and affordable health care should include a dedicated investment in technology-enabled models.

The ACD is committed to strengthening regional and rural dermatology services and addressing workforce maldistribution. By providing opportunities for registrars to train in regional areas and expanding our base of rurally located consultants, we are working towards a sustainable regional dermatology workforce. This can be achieved via both private sector expansion and increased

support from public hospitals, complemented with innovative technology-enabled models of care and training such as store and forward teledermatology. Dedicated and expanded funding for outreach is urgently needed to enable service visits and address the unmet healthcare needs of Australia's smaller towns and more remote and isolated populations.

Terms of Reference of the Inquiry

According to the Terms of Reference, the Select Committee on Regional Australia will inquire into and report on;

- a) Examining the effectiveness of existing regional service delivery and development programs;
- b) Examining the contribution and role of regional Australia to our national identity, economy and environment;
- c) Promoting the development of regional centres, cities, towns and districts including promoting master planning of regional communities;
- d) Promoting private investment in regional centres and regional infrastructure;
- e) Examine the key drivers for unlocking decentralisation opportunities for both the private and public sectors;
- f) Promoting the competitive advantages of regional location for businesses;
- g) Investigate the development of capital city size regional centres in strategic locations and the benefits this offers regional cities, capital cities, the Australian economy and lifestyle;
- h) Examine the potential for new developments, towns and cities to be built in regional Australia;
- i) Examining international examples of nations who have vast and productive regional areas, which are sparsely populated;
- j) Examining ways urbanisation can be re-directed to achieve more balanced regional development;
- k) Identifying the infrastructure requirements for reliable and affordable health, education, transport, telecommunications, clean energy, water and waste in a new settlement of reasonable size, located away from existing infrastructure; and
- l) Consider other measures to support the ongoing growth and sustainability of regional Australia.

This submission addresses:

- (a) Examining the effectiveness of existing regional service delivery and development programs; and
- (k) Identifying the infrastructure requirements for reliable and affordable health, education, transport, telecommunications, clean energy, water and waste in a new settlement of reasonable size, located away from existing infrastructure.

Introduction

The burden of skin disease in regional Australia

Dermatology is predominately a chronic disease specialty. More than 1.06 million people in Australia – over 4.5% of the population – suffer from a long term condition of the skin¹ and skin disorders rank sixth of all disease groups for non-fatal disease burden.² Melanoma and non-melanoma skin cancer rates continue to rise,³ as does the corresponding demand for surveillance, management and follow up. In 2017, the annual health system expenditure for melanoma alone was estimated at AU\$272 million.⁴ Access to specialist dermatology services leads to improved patient outcomes⁵ and drives efficiencies within the health system.⁶

The impact of rurality and Indigenous status on patient outcomes for skin disorders is evident in many clinical and health economic measures, including higher admitted patient expenditure⁷ and hospital admissions,⁸ and higher melanoma mortality rates in regional areas⁹. Furthermore, preventable skin infections such as crusted scabies¹⁰ and impetigo, the latter of which has a prevalence of up to 44.5% in children living in remote Indigenous communities, are a significant public health burden and may have lifetime consequences if left untreated.¹¹

Terms of reference a) Effectiveness of existing regional service delivery and development programs

The effectiveness of existing regional dermatology healthcare delivery is challenged as a result of workforce maldistribution and insufficient investment in public dermatology services

Workforce shortages and maldistribution

Dermatologists are medical professionals who have undergone postgraduate specialist training qualifications in the diagnosis, treatment and prevention of skin diseases and cancers⁶. Recent workforce modelling conducted by the Commonwealth Department of Health⁶ highlighted that the specialist dermatology workforce is in shortage, with 90 fewer dermatologists by 2030. This would be almost 15% fewer than required to meet the dermatological health care needs of the Australian population⁶.

Workforce maldistribution further reduces dermatology capacity in regional, rural and remote areas, with over 90% of dermatologists in Australia living and practising in major metropolitan centres. This results in inequitable access to services in regional and rural areas and this is reflected in poorer patient outcomes across several key health measures.

The ACD has recently undertaken a project with support from Zest Health Strategies to assess and better understand the needs of the regional, rural and remote dermatologist trainee and specialist supervisor workforce to inform a strategic approach to improve recruitment and retention to regional, remote and rural practice^{12, 13}. This submission draws on a number of the findings and recommendations from that project.

Addressing workforce maldistribution and shortages - strategies employed to date

Various strategies have already been employed to address the maldistribution of the dermatology workforce, such as rural origin registrars, regional training placements, and the use of innovative service delivery models such as telehealth. However, there is a continuing need to address this imbalance and promote best practice workforce development within these areas, in a manner which is sustainable and able to meet the needs of people in these communities.

In recognition of the need to address workforce shortages and maldistribution, the Australian Government Department of Health has developed a suite of policies and programs to promote recruitment and retention of specialists to rural and regional practice. Among these, there has been particular focus on emerging workforce needs through education and training. The overarching policy initiatives currently led by the Commonwealth include the National Medical Workforce Strategy, Rural Medical Specialist Training Summit held November 2018 and the Stronger Rural Health Strategy that seeks to provide doctors with increased opportunities to train and practice in rural and remote Australia.

The need for a collaborative, multi-organisational and multi-faceted approach

While the Department of Health has an important role to play in creating a conducive policy and financial environment to support increased recruitment and retention of the rural medical specialist workforce, the successful implementation of programs 'on the ground' relies on a collaborative, multi-organisational approach. This includes recognition of the complementary contributions of the Commonwealth and the states/territories to medical training, workforce planning, training and coordination^{14,15}.

The strongest evidence for effectiveness of strategies to address these barriers to recruitment and retention is for multi-faceted interventions that target multiple barriers at once, such as broad workforce strategies and 'bundled' incentives programs^{16,17}. Strategies addressing health workforce issues more broadly may include enhancement of the professional environment (through adequate infrastructure and staffing), regional training and support, provision of financial incentives and/or financial support, and meeting family needs¹⁸.

The improvement of recruitment and retention also requires the engagement of health service provider organisations and professional peak bodies. In particular, the medical specialist colleges have a vital role to play in supporting the training and continuing professional education of those who wish to train or practice in regional and rural areas¹⁹.

Insufficient dermatology services in the public hospital settings

A number of public hospitals in both metropolitan and regional areas do not have dermatology departments and in certain cases dermatology is not always appreciated as essential in the acute setting, with existing dermatology services introduced late in the patient care journey. In this regard, dermatology departments may struggle to show evidence of efficiency and effectiveness in key performance indicators relative to other departments. As dermatology is predominantly an outpatient service, inpatient data records may at best record a dermatologic condition as a comorbidity.

The public hospitals charter is to provide health care to the community. Part of this care is to provide training of specialists who then proceed to provide that care. Cost-based decision making by public hospitals in all states places constraints on both consultant dermatologists and trainee positions. A cultural change is needed across the public health sector to prevent marginalisation of dermatology

services, especially in the face of increasing numbers of infectious disease, cutaneous oncology, rheumatology, gynaecology, immunology or paediatric services that require the ongoing interaction with dermatology to maintain patient outcomes.

These challenges need to be addressed to ensure the future sustainability of the workforce and that people with dermatological conditions living in regional and remote Australia can access the care they need.

Investment in needs analyses

The geography and demography in Australia is broad and diverse, as are the dermatology requirements of different communities across the country. Applying tailored service provision models according to the needs of particular areas will improve patient outcomes. Outlining the different requirements for dermatology services and service models in regional, rural and remote communities will better allow workforce planning to prospectively meet these needs and it is critical that the government continues to support and invest in appropriate needs analyses to inform investments in infrastructure and service delivery models.

The ongoing growth and sustainability of regional dermatology services will occur through continued government support for regional training

The challenges to training and supervising the next generation of doctors

The sustainability of the specialist workforce relies not only on adequate funding for training placements but on sufficient numbers of clinical supervisors being available and willing to train and support the next generation of doctors²⁰. The number of consultants required to supervise and deliver the full dermatology training curriculum is a potential limitation on the expansion of the ACD training program into regional areas.

- At the level of the individual trainee, the training program usually consists of eight rotations (six-monthly rotations across four years). For each rotation, a minimum of three Clinical Supervisors are required, in addition to one hospital Head of Department (HoD) and one Supervisor of Training (SoT) for the institution/training network. Furthermore, College assigns one Director of Training for each State Faculty to co-ordinate all training across all sites.
- Assuming each rotation sits within a different hospital/training network, up to 41 consultants could be involved in delivering the full four year training program to one trainee. In actuality, this is considerably reduced due to multiple supervisory positions often being filled by one consultant, fewer consultants in regional/rural areas, and rotations being placed within the same hospital or training network reducing the number of SoTs and HoDs.

The challenges to training and supervising trainees are further increased in regional and rural areas as there are fewer to call upon, and those who do supervise must balance this role with delivering on an increasing demand for clinical services²¹.

Currently, dermatology registrar training is delivered in over 60 sites across Australia, of which approximately 30 percent are private hospitals or practices. Optimally, a considerable portion of training rotations should be rostered within a public hospital setting in order to gain clinical exposure to diverse and complex cases within a multidisciplinary model of care. However as noted, there are challenges in establishing new training positions within public hospitals often due to financial and logistical constraints at the state and local health service level.

Regional/rural background effect and exposure to rural placements

In Australia, a focus on education and training as part of the broader rural health workforce strategy has been led by the Commonwealth; supported by national policies and guidelines and significant financial investment¹⁹. The investment in education and training to increase regional and rural recruitment and retention has predominantly focused on professional entry education, which includes initial entry into medical school and as trainees to specialist programs¹⁹. This approach is supported by evidence which shows that trainees from rural and regional areas are more likely to have an intention to practice in rural settings than their urban counterparts (known as the 'rural background effect')^{19, 22}. It is also based on the assumption that individuals who spend time in a rural setting are more likely to pursue a regional/rural career upon qualification¹⁹.

The effectiveness of reliance on the 'rural background effect' is naturally limited by the number of trainees who originally come from a regional/rural background. Encouragingly, an emerging body of research suggests that exposure to rural placements and practice among trainees from urban areas has a beneficial effect on their intentions to practice rurally¹⁸.

Importance of the Specialist Training Program

In Australia, increasing opportunities to train in rural and remote areas has been supported through initiatives such as the Commonwealth-funded Specialist Training Program (STP) and the Integrated Rural Training Pipeline (IRTP). Both of these initiatives are intended to complement the funding provided through state and territory governments for medical specialist training, with the shared objective of enabling the conduction of training in expanded settings¹⁵. The STP has worked well to open up new training posts hitherto unfunded and this has greatly benefited the training program. ACD supports the maintenance and expansion of this program. While its long-term impact on maldistribution remains unclear, a 2017 review of the STP found that the program had increased the availability of specialist services in rural and regional areas¹⁵.

Challenges and enablers to a positive, high quality supervisor and trainee experience

As mere exposure to rural and regional training is not always sufficient to motivate future rural practice, evidence shows that there needs to be a parallel effort to ensure that the opportunity itself is viewed by the trainee as a positive, high quality experience²². It is recognised that positive rural experiences are critical at all stages of the training continuum, as evidence suggests that this has the potential to positively influence individual considerations on practising in rural and remote regions in the longer-term²³.

There is research evidence to suggest that there are several factors which can influence the development of a positive rural education experience. These include: perceptions of a rural and regional training practice, supervisor availability, adequate clinical exposure and case mix, access to appropriate infrastructure, provision of administrative and financial support, dedicated time and support for teaching and learning, and the opportunity to participate in continuing professional development (CPD).

- *Supervisor capacity*

Incremental increases in the number of training positions required to curb dermatology workforce shortages will necessitate a corresponding increase in supervisory capacity – this

is essential to guarantee a quality training program and prevent an untenable burden on the existing supervising workforce which is already stretched in regional and remote areas.

- *Administrative support*

The provision of administrative support to both supervisors and trainees is a key enabler to rural and regional training practice. For supervisors, participation in clinical supervision and in their own continuing professional development requires a system to engage locums and backfill their positions with appropriately qualified staff^{24,25}. The administrative burden can be compounded by the higher workload demands of rural and regional practice, which are well documented and include longer working hours and more on-call requirements, particularly in more remote areas of practice^{25,26}.

- *Financial support*

There is the need for continuing support for trainees to accompany consultants on their outreach services, to gain essential clinical experience and to encourage them to provide such services in future. The considerable out-of-pocket costs for supervisors as well as lack of convenient transportation and adequate housing can also prove a barrier to training within rural and regional settings⁶. Furthermore, specialists practising within these environments often have to cover a vast geographical area, and challenges associated with travel time, and the associated costs and resources can act as an additional barrier²⁷.

While in the past state funding may have covered these expenses, currently the servicing of regional and rural communities and the provision of training has been increasingly challenging. Financial support has also been provided to an extent through Commonwealth-funded initiatives (such as the previous Medical Specialist Outreach Assistance Program), however changes to these funding initiatives can impact on access to subsidised practice, which in turn, may increase the likelihood of likelihood of rural and regional practice.

- *CPD opportunities*

Evidence has shown that the lack of CPD opportunities in rural and remote locations does influence a clinician's decision to remain in rural practice^{17,18} and has the potential to be addressed through system level strategies such as providing adequate administrative support¹⁷ and ensuring the infrastructure to support technology-enabled learning.

- *Multidisciplinary settings to provide adequate clinical exposure and case mix*

The setting of training is a key consideration with respect to supervisory capacity:

- In order to gain experience across the four curriculum domains (clinical sciences and pharmacology; medical dermatology; procedural dermatology; and professional qualities) registrars should ideally be placed in rotations within both general dermatology and sub-speciality clinics, requiring supervision by consultants with relevant clinical expertise at these sites.
- Training of dermatologists requires exposure to consultant dermatologists with sub-specialist capabilities. Clinical subspecialties with dermatology include surgical, paediatric, allergy, occupational, cosmetic, dermatopathology, Mohs surgery and radiotherapy. There is therefore a need for some dermatologists to sub-specialise and for patients with complex needs to access sub-specialised services. By necessity most

sub-specialised services are found in major centres with the infrastructure and patient base to support them.

- Apart from clinical sub-specialties within the discipline of dermatology there are non-clinical roles which are filled by consultant dermatologists such as University research, corporate research, education, administration and policy. These roles may not directly service patients in the form of consultation and treatment but they support the health system that does. Ascertaining the requirements for, and providing, clinical and non-clinical sub-specialists dermatologists for our community is also a consideration in workforce planning
- Sub-specialisations within dermatology may further impact the number of consultants available to deliver a general dermatology training program. The effect of certain sub-specialisations cannot currently be deduced; for example, as cosmetic services are not represented in MBS utilisation data, it is difficult to determine the proportion of time spent performing these procedures, compared with medical and surgical services, across the profession. Ascertaining the skill set distribution will shed light on supervisory capacity in the future.

Government support for regional training

In recognition of these challenges and enablers, the National Medical Training Advisory Network stated in 2017 that jurisdictional support is urgently required to expand public hospital services, incorporating both qualified dermatologists and trainees, into new teaching hospital units in outer metropolitan and regional/rural areas where there are associated medical school clinical teaching units.

The ACD is working with jurisdictional health departments and health services/districts to identify locations appropriate for expansion or establishment of dermatology departments and strategies to better support of trainees and Fellows in regional, rural and remote Australia through a focus on education and training.

Increasing training in the private practice setting might also represent a possible solution to expand capacity of the program. Already there are several College-accredited training positions in private practices. There are a growing number of large private facilities with multiple general and sub-specialty clinics which might have capacity to take on a training role. But even in the largest practices, some cases will be referred to hospital clinics as their complexities are unable to be managed in the private setting. Private practice training should not be considered as directly substitutable for public hospital training but suitable as an adjunct.

There are limited dermatology trainee positions in regional and rural areas as there are fewer dermatologists in these locations. Ensuring longevity and sustainability of training in regional settings may require additional resource allocation, not only to ensure that the quality of training matches that of major centres and that trainees are exposed to a diversity of clinical cases, but also to improve consultant retention. The case mix, workload, responsibility, on call, continuing medical education and unpaid work related time in some provincial consultant positions can provide challenges to recruitment and retention. Due to the lack of administrative and clinical support in regional centres, there may be considerable differences in the consultant job description which can negatively impact retention in the long term.

The ACD's rural challenges are to work with the ageing rural workforce to ward against collapse and loss. The system is extremely fragile. Even larger regional centres outside of metropolitan areas face

possible future workforce depletion unless they too can be eligible for new streams of funding and support. As these regional centres have substantial rural catchments they are the frontline in rural service provision for a speciality profession with a small workforce like dermatology.

Maintaining the strength and sustainability in these larger regional centres is critical and needs to occur in parallel with service and training delivered to more rural towns.

Terms of reference k) Identifying the infrastructure requirements for reliable and affordable health, education, transport, telecommunications, clean energy, water and waste in a new settlement of reasonable size, located away from existing infrastructure

Infrastructure investments for reliable and affordable healthcare should include a dedicated investment in technology enabled models

Teledermatology using store and forward technology, described in further detail below, has the potential to positively, sustainably and effectively expand the availability of specialist dermatology services and improve the experiences and therefore retention of the workforce in regional, rural and remote communities. These technology-enabled models can only work if the requisite technology and infrastructure, such as reliable internet connections, is in place and accessible.

Teledermatology to improve access to dermatology services in underserved areas

To complement the various workforce strategies described above, the ACD is also looking at innovative technology-enabled service delivery models to ensure all Australians can access specialist dermatologist services.

Due to the chronic nature of many dermatological conditions, patient management often requires long term treatment approaches and follow up to ensure optimal outcomes and prevent disease recurrence. For delivery of specialist care, patients in non-metropolitan areas must travel to urban centres or attend outreach clinics serviced by fly-in fly-out specialists. Both options are a cost burden and are impractical for ongoing care, driving the likelihood of treatment lapses and emergency department admissions. Telehealth services are one mechanism for supporting healthcare closer to home.

Dermatology is a visual specialty, highly suited to the use of digital images for diagnostic and disease management purposes²⁸. Teledermatology using Store and Forward technology is an innovative technology based model for service delivery, whereby a patient's digital images and clinical data are captured by their general practitioner (GP) or other medical specialist and securely forwarded to a specialist dermatologist for assessment, diagnosis and therapeutic recommendation. The service provides an alternative pathway to the traditional face-to-face specialist consultation for patients deemed clinically suitable, including those with inflammatory skin conditions, skin infections and skin lesions.

This model has been trialled longitudinally in Australia in several settings, demonstrating clinical effectiveness, safety, acceptability, reduced waiting times and out-of-pocket costs, and high patient-reported satisfaction.²⁹ The technology is supported by international evidence and guidelines, and the ACD has worked with the Centre for Online Health at the University of Queensland to develop Practice Guidelines for Teledermatology.

Technology to augment specialist training

This technology can also be used for remote clinical supervision, augmenting the capacity of specialist training within rural and regional settings.

The quality of training depends on adequate exposure to a diversity of clinical cases⁶, breadth and depth of experience as defined in the curriculum³⁰, and access to opportunities to apply and consolidate clinical learning. To support this, the capability of supervisors to teach trainees across a broad variety of clinical cases is paramount, especially in dermatology given the increasing trend of sub-specialisation⁶.

Experiences in Australia and internationally have demonstrated that participating in store and forward teledermatology consultations can also be a useful educational tool for both dermatologists and other health providers, who can send an image of a difficult rash or lesion to a more experienced dermatologist colleague for diagnostic assistance and instruction.³¹ Results from several recent studies from the United States and the United Kingdom support the use of Store and Forward as a teaching tool in medical education and specialist dermatology training^{32,33}.

Research into technology-enabled clinical supervision within the remote and rural context in Canada and Australia found that remote supervision of general practice trainees was generally viewed positively and effectively increased retention of the rural and remote workforce during and after training. However, this approach relies on adequate access to technology and infrastructure including a stable internet connection³⁴.

In addition, the expansion and sustainability of technology-based services such as 'derm-telehealth' models requires that trainees on rural and regional placements or participating in rural outreach are able to gain clinical experience and technical expertise in this modality of treatment⁶.

Developments in e-learning more broadly, such as web-based seminars, forums and online modules, are also allowing for distance education, enhanced communication with peers and cross-disciplinary interaction. These may be of particular benefit to trainees outside major centres.

Ensuring ongoing and expanded experience of trainees with technology based services such as telehealth allows the renewing dermatology workforce the tools to augment the services to rural and remote areas. If training in rural settings is to increase, access to this communication infrastructure is vital.

Building the evidence base for an MBS item for Teledermatology using Store and Forward technology

Regional training of registrars supported by Store and Forward technology will not only expand the specialist dermatology workforce and the skills of referring clinicians, it will improve patient access to dermatology services outside of metropolitan centres. However investment needs to be made in piloting, and putting in place the necessary financial and infrastructure supports, to roll out these innovative service delivery models.

Digital communications technology is already utilised by Australian dermatologists to assist their patients in rural and remote areas to access specialist health care services with a Medicare Benefits Schedule (MBS) item providing access to specialist video consultations. However videoconferencing alone is often inadequate for effective dermatology consultations due to the low visual quality of live streaming. Accompanying high quality digital images, most commonly provided by the patient's GP via Store and Forward technology are frequently required but there is currently no reimbursement

mechanism for this component of the consult - neither for the GP capturing the images nor for the dermatologist providing the analysis – and this is impeding uptake nationally.

The ACD has attempted to address this deficiency by applying to have Teledermatology using Store and Forward technology listed on the MBS through two applications to the Medical Services Advisory Committee (MSAC) in November 2014 and April 2017. MSAC has sought additional clinical evidence on safety, effectiveness, diagnostic concordance and diagnostic accuracy between Teledermatology using Store and Forward and its comparators (face-to-face consult and videoconference). MSAC has also requested further effectiveness and utilisation data on the existing Telehealth services in dermatology.

The ACD strongly supports the need for a feasibility study of Teledermatology using Store and Forward technology for the remote delivery of specialist dermatology services to regional, rural and remote areas of Australia, and to collect the additional clinical evidence sought by the Medicare Benefits Schedule. The ACD has scoped such a pilot study and is seeking Government funding for this project to proceed.

Such a pilot would enable the benefits of this innovative service delivery model to be proven in a real world environment, with the potential to significantly improve access, in a relatively short period of time, to specialist dermatology services for patients living in regional Australia.

Conclusion

It is critical for the ongoing growth and sustainability of regional dermatology services that the government continues to support and invest in the infrastructure for reliable, sustainable and affordable healthcare. Dedicated and expanded funding for outreach is urgently needed to enable service visits and address the unmet healthcare needs of Australia's smaller towns and more remote and isolated populations. Investment in innovative models of care such as store and forward teledermatology will improve access to care, driving better and more equitable skin healthcare outcomes.

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