Australian Society of Plastic Surgeons

GUIDE TO ESTABLISHING A REGIONAL OR RURAL PLASTIC & RECONSTRUCTIVE SURGERY SERVICE

A PROJECT FOR ASPS REGIONAL AND RURAL PORTFOLIO

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EXECUTIVE SUMMARY

The Australian Society of Plastic Surgeons (ASPS) has commissioned a number of projects as part of its Regional and Rural Strategy. Together, these projects comprise the ASPS Regional and Rural Portfolio. This guide is but one of the projects forming the portfolio. Consultations with Members who have recently worked to establish a new plastic and reconstructive surgery (hereafter, P&RS) service in a regional or rural area were conducted in order to identify the steps needed to start and progress a new service. Through consultation and desktop research, the collaborations, enablers that can be harnessed, and barriers that may need to be overcome were explored and explained.

The basic premise of this guide is based on the broad steps discussed in Section 3. These are:

1. Plan

2. Prepare

3. Implement

4. Maintain

The guide first establishes the background or reasons as to why an increase in support and workforce in regional and rural areas is needed. The stark difference between workforce distribution between metropolitan and non-metropolitan regions is evidence enough to illustrate that a more robust and numerous regional workforce is needed.

In conducting consultations for the guide it became clear there were common barriers and enablers but also that many of these are specific to any one location or even unique to that individual or their professional networks and experience. There is no one-size-fits-all approach in health service provision and delivery so this guide has attempted to provide a general overview so that each individual user can apply unique and specific factors to their own project.

A primary take-home from the project has been the recognition that data on community need for plastic and reconstructive surgery services is required in order to appropriately identify and develop a service that can meet the needs of rural and regional communities.

The author would like to thank the participants for their invaluable insights and for sharing so generously their experiences. Without their input this guide would not exist. Their dedication and commitment to sharing their experiences in the hope of supporting colleagues in the future is greatly appreciated.

The Royal Australasian College of Surgeons (RACS) body of work forming the Rural Health Equity Strategy has also provided instrumental information for this guide. These four policy documents being: *Select for Rural*; *Train for Rural*; *Retain for Rural*; and *Collaborate for Rural*.

OVERVIEW

Section 1: Introduction and mapping

This section provides an overview of what we know from the literature about regional and rural health services generally, and plastic & reconstructive surgery services in particular. In this way we are setting the scene for regional and rural P&RS services.

The proportion of clinicians and population as well as the distribution of clinicians will then be provided to illustrate the issue of maldistribution of P&RS services generally and to highlight the need for more regional and rural representation in an effort to provide more equitable access for regional and rural communities.

Section 2: Unique considerations for regional and rural-based services

Here, a brief overview of some of the factors and characteristics unique to regional and rural health settings will be discussed.

Section 3: Broad steps involved in establishing a rural or regional P&RS service

This section firstly recognises that there is no one-size-fits-all approach when it comes to surgical services. A successful service in a major metropolitan area may have very different characteristics to a successful service in a regional area. Similarly, a service that works well in one regional area may be completely ill-fitted to another regional area. We therefore present some of the broad thematic steps involved in establishing a service and describe how each may look. Specific steps for Specialist International Medical Graduates (SIMG) will also be discussed in this section.

The Guide has been developed on the basis of a stepped approach.

Step 1:	PLAN	*Researching where to go and under what conditions*
Step 2:	PREPARE	*Building the networks and skills*
Step 3:	IMPLEMENT	*Testing viability*
Step 4:	MAINTAIN	*Being flexible, agile, responding and reflecting*

Section 4: Barriers

Some of the common barriers Members have faced when establishing a new service in a regional area will be discussed. Under applicable points, some broad suggestions will also be provided for how to overcome these barriers.

Section 5: Enablers

Drawn from consultations with Members, this section will describe some of the enablers and collaborators Members in existing services have noted and reflected on. Factors that have supported a P&RS service to become a successful service will also be listed.

Section 6: Models of care

Here, a brief summary of the types of models of care a Member might like to consider in order to meet patient and community need in a regional area will be provided. These are largely based on specialist outreach principles.

Section 7: Case studies

Using data from consultations and other projects as part of the ASPS Regional and Rural Portfolio, this section will summarise a handful of case studies of models of care in newly established P&RS services in a regional or rural area.

1. INTRODUCTION

Despite 29.7% of the Australian population living in regional or rural areas (MM 2 – MM 7) only 9.9% of Specialist Plastic Surgeons work in these areas.[1] Irrespective of community need and whichever way one looks at this, there is a large discrepancy between the metropolitan and regional & rural P&RS workforce. This is not unique to the P&RS workforce however. There is a longstanding recognition that the regional and rural health workforce must be better supported, better encouraged and better retained in order to ensure regional and rural communities are not disadvantaged when compared with their metropolitan counterparts.

This section is intended to provide an overview of distribution at the Primary Health Network (PHN) level. The purpose of this is to assist readers to identify which areas may be over-serviced and which may be under-serviced according to clinician to population ratios. It is important to remember that this does not reflect *community need* and only reflects workforce distribution. In order to wholly address health inequity, we need to balance and scrutinise patient need first, then build services around that need; not the other way around. However given there is little to no data available on community need for plastic and reconstructive surgery services by geographic area, the below distribution analysis is the best place to start.

CURRENT WORKFORCE DISTRIBUTION

This section describes the distribution of P&RS services and the workforce across Australia according to remoteness, and by Primary Health Network.

As would be expected, attempting to establish a surgical service in an over-serviced location would bring very different challenges to establishing a service based on community need or in order to improve access to services for a given population. The maps provided therefore present data according to the proportion of population and the proportion of plastic surgery workforce. This is a snapshot in time and may have shifted and changed by the time this guide is being used. However, given the longstanding consistent challenges of rural medical workforce maldistribution, it is unlikely any substantial changes would arise.

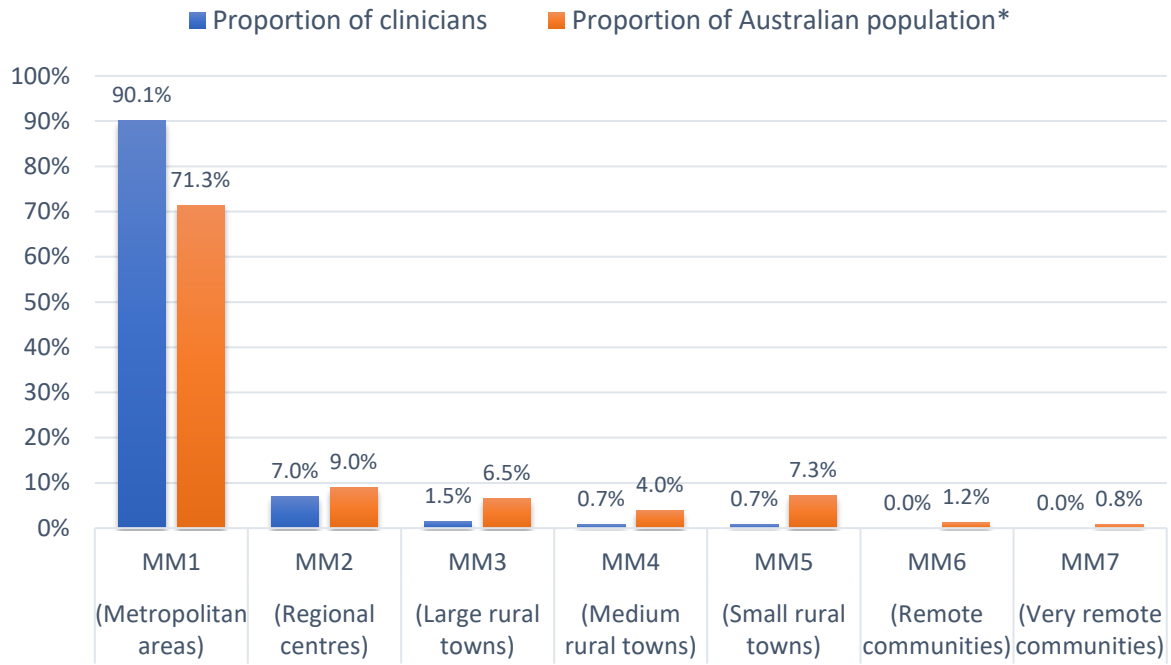
It's ok to note the distribution across Australia and each State or Territory but does this tell you which particular location could benefit from your services?

Look specifically!

The more geographically defined the data, the more accurate an idea you will get of how much your services are needed – think PHN or LHD-level

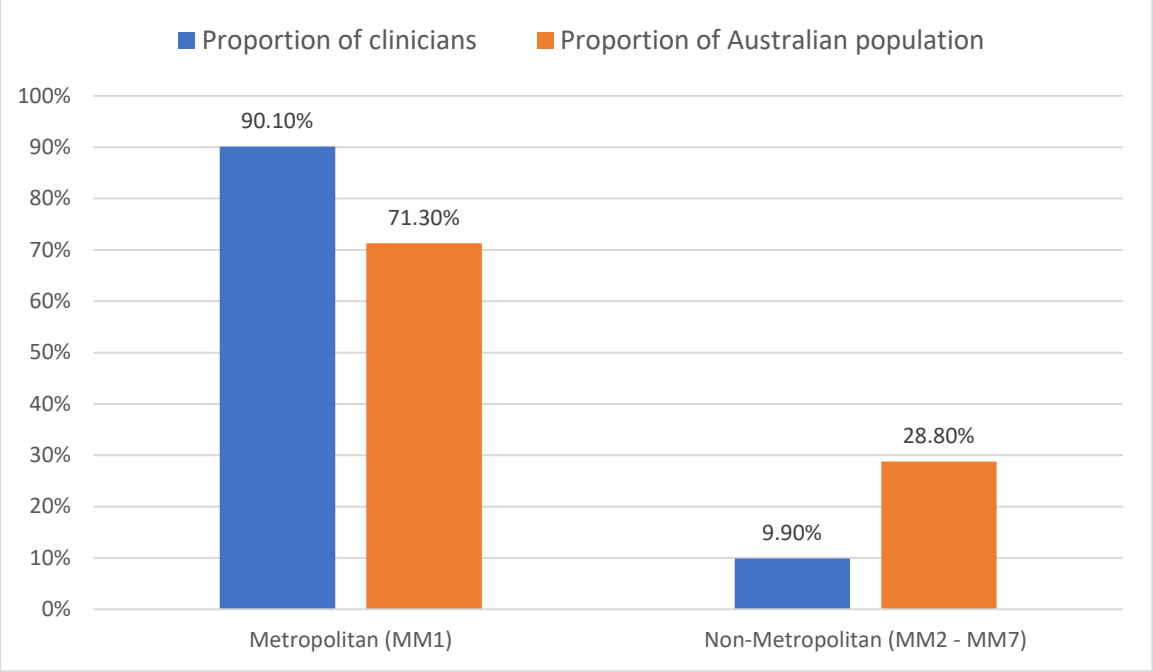
PROPORTION OF CLINICIANS AND POPULATION BY REMOTENESS

In order to understand why there is a focus on supporting and encouraging regional or remote health care services through projects such as this guide, we need to look at the data which demonstrates the current - and historical - maldistribution of the Specialist Plastic Surgery workforce according to remoteness.



What this shows is that metropolitan areas (MM1) are comparatively over-serviced given the proportion of clinicians exceeds the proportion of the population.

If we group the classifications into metropolitan (MM1) and non-metropolitan (MM2 – MM7) we see the issue more clearly highlighted:

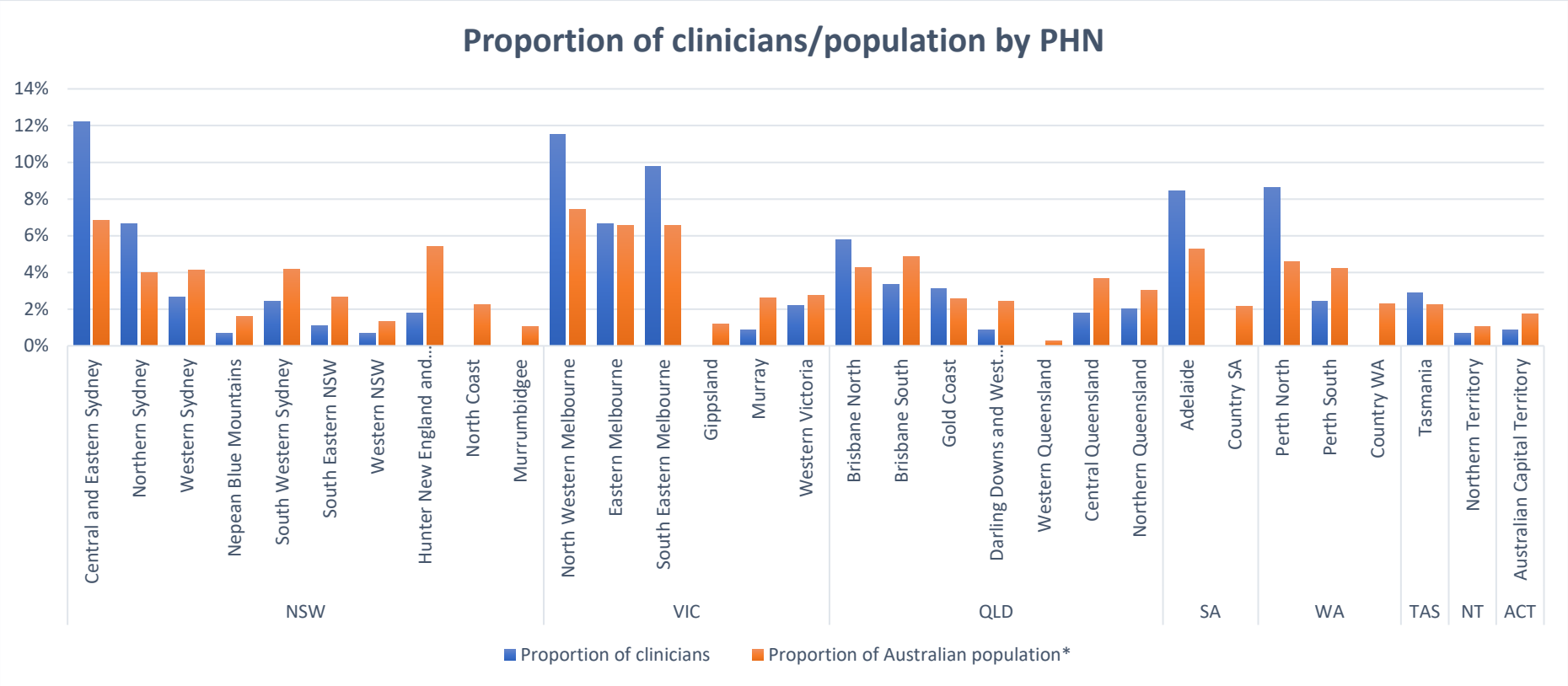


Based on these figures alone and not taking into account variation in surgical needs, one can only deduce that the spread of Specialist Plastic Surgeons according to remoteness is such that communities in non-metropolitan areas **do not have the same level of access** to plastic surgical services as those in metropolitan areas. This is a real issue in terms of health equity of access. In simple terms, we need more Specialist Plastic Surgeons in regional and rural areas and have the capacity to reduce the number of clinicians in metropolitan areas.

PRIMARY HEALTH NETWORK (PHN) WORKFORCE DISTRIBUTION

Distribution by Primary Health Network (PHN) provides a more detailed picture of where there is a potential shortage or over-supply of Specialist Plastic Surgeons compared with proportion of the population. The purpose of this section is to allow users to identify which PHN's may be more in need of plastic and reconstructive surgery services. Figures are based on 2020 data.

The data relied on is solely based on clinician numbers and population numbers and does not take into consideration patient/community needs or types of plastic surgery services being delivered. It is therefore not an accurate reflection of whether that particular PHN is *actually* well-serviced or not as patient need and service type may vary across each PHN.


Proportion of clinicians/population by PHN
14%
12%
10%
8%
6%
4%
2%
0%
Central and Eastern Sydney
Northern Sydney
Western Sydney
Nepean Blue Mountains
South Western Sydney
South Eastern NSW
Western NSW
Hunter New England and...
North Coast
Murrumbidgee
North Western Melbourne
Eastern Melbourne
South Eastern Melbourne
Gippsland
Murray
Western Victoria
Brisbane North
Brisbane South
Gold Coast
Darling Downs and West...
Western Queensland
Central Queensland
Northern Queensland
Adelaide
Country SA
Perth North
Perth South
Country WA
Tasmania
Northern Territory
Australian Capital Territory
NSW
VIC
QLD
SA
WA
TAS
NT
ACT
Proportion of clinicians
Proportion of Australian population*

PHNs in which the proportion of clinicians is considerably higher than the population or vice versa are listed below. This provides an overview only of where the number of plastic surgeons may be sufficient and where additional surgeons may be required. The two sections below provide only each end of the workforce spectrum and those PHNs where there is a relatively equal proportion of clinicians compared with the population are not listed.

As is raised above, these figures do not take into consideration actual patient need by PHN or the types of services being delivered in that PHN. In practical terms this could mean that a PHN which is seemingly well-serviced according to numbers may in reality be the opposite if the surgeons all predominantly perform breast reconstruction, for instance, but the majority of patients require hand surgery.

HIGHER PROPORTION OF CLINICIANS TO POPULATION

Where there is a higher proportion of clinicians to population, the assumption is that that area is well serviced. The PHNs where there is a higher proportion of clinicians than there is population include (in descending order):

PHN	State	Percentage (%) difference
Central and Eastern Sydney	NSW	5.4% more clinicians than population
North Western Melbourne	VIC	4.1% more clinicians than population
Perth North	WA	4.0% more clinicians than population
South Eastern Melbourne	VIC	3.2% more clinicians than population
Adelaide	SA	3.1% more clinicians than population
Northern Sydney	NSW	2.7% more clinicians than population
Brisbane North	QLD	1.5% more clinicians than population
Tasmania	TAS	0.6% more clinicians than population
Gold Coast	QLD	0.5% more clinicians than population

All of the above (except Tasmania) are considered **Metropolitan PHNs.** This confirms that workforce shortages are not generally seen in the metropolitan areas and are usually a regional or rural phenomena.

Highest proportion of P&R surgeons = no additional clinicians required

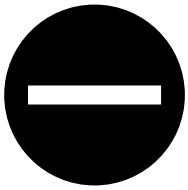
Central and Eastern Sydney (NSW)

LOWER PROPORTION OF CLINICIANS TO POPULATION

Where there is a lower proportion of clinicians to population, the assumption is that that area is potentially under-serviced or in the least less serviced. The PHNs where there is a lower proportion of clinicians in comparison to population include (in descending order). The higher the percentage of difference, the more under-serviced the PHN.

PHN	State	Percentage (%) difference
Hunter New England and Central Coast	NSW	3.6% more population than clinicans
Country WA	WA	2.3% more population than clinicans
North Coast	NSW	2.2% more population than clinicans
Country SA	SA	2.2% more population than clinicans
Central Queensland	QLD	1.9% more population than clinicans
South Western Sydney	NSW	1.8% more population than clinicans
Perth South	WA	1.8% more population than clinicans
Murray	VIC	1.7% more population than clinicans
South Eastern Sydney	NSW	1.6% more population than clinicans
Brisbane South	QLD	1.6% more population than clinicans
Darling Downs and West Moreton	QLD	1.5% more population than clinicans
Western Sydney	NSW	1.4% more population than clinicans
Gippsland	VIC	1.2% more population than clinicans
Murrumbidgee	NSW	1.1% more population than clinicans
Northern Queensland	QLD	1% more population than clinicans
Nepean Blue Mountains	NSW	0.9% more population than clinicans
Western NSW	NSW	0.6% more population than clinicans

The top 4 PHNs with the lowest proportion of clinicians compared with population are **Regional PHNs.** This confirms that workforce challenges are most pronounced in regional or rural areas.



Lowest proportion of P&RS = requiring additional clinicians

Hunter New England and Central Coast (NSW)

FTE TO POPULATION RATIOS

Another way to look at workforce distribution is to look at the number of full time equivalent (FTE) clinical positions as a ratio (per 100,000 population). Again, this can be done by PHN and provides us with a more graspable way of considering where services may be better placed (or conversely where FTEs exceed community need). This is because a headcount of clinicians as described in previous sections is not necessarily indicative of the **coverage** of surgical services for that population. As an example, a PHN with a high headcount proportion of clinicians may actually only be comprised of clinicians working minimal hours. Patients in that area therefore, may not have adequate access to surgical services in reality. Conversely, an area which has a lower proportion of clinicians by head count may actually be well-serviced in reality if all clinicians in that area work long hours.

The data from the table below has been developed as part of one of the projects forming ASPS Rural and Regional Portfolio. An 'ideal' plastic surgeon to population ratio has been posited in previous publications for the New Zealand plastic surgery workforce, with a minimal acceptable ratio of 1:60,000.[2] Data for some PHNs was unavailable.

The **national average** for Australia was 1.75FTE which equated to an FTE to population ratio of **1:57,118.** This means that on average, across Australia, there is **one Specialist Plastic Surgeon for every 57,118 people.**

The PHN's in the below table have been sorted in descending order. The least serviced area being North Coast NSW with one plastic surgeon servicing over 177,000 people.

PHNs that sit in cells above the national average line indicate that additional FTE is required to meet the ideal plastic surgeon to population ratio of 1:60,000.

State	PHN	Clinical FTE	FTE to population ratio
NSW	North Coast	0.56	1:177,980
QLD	Darling Downs and West Moreton	0.65	1:153,490
NSW	Hunter New England and Central Coast	0.71	1:141,559
NSW	South Western Sydney	0.82	1:121,715
NSW	Nepean Blue Mountains	0.91	1:109,933
NSW	South Eastern NSW	0.91	1:110,284
VIC	Murray	0.92	1:108,399
QLD	Central Queensland	0.97	1:103,311
NSW	Western NSW	0.97	1:103,464
WA	Perth South	1.14	1:87,408
NSW	Western Sydney	1.18	1:84,804
NT	Northern Territory	1.22	1:82,048
ACT	Australian Capital Territory	1.32	1:75,681
QLD	Northern Queensland	1.37	1:72,978
QLD	Brisbane South	1.39	1:72,166
VIC	Eastern Melbourne	1.44	1:69,516
VIC	Western Victoria	1.55	1:64,685
National Average 1:57,118			
QLD	Gold Coast	2.09	1:47,859
VIC	North Western Melbourne	2.28	1:43,939
VIC	South Eastern Melbourne	2.51	1:39,863
QLD	Brisbane North	2.54	1:39,392
TAS	Tasmania	2.55	1:39,187
SA	Adelaide	2.73	1:36,569
NSW	Northern Sydney	3.35	1:29,886
NSW	Central and Eastern Sydney	3.46	1:28,867
WA	Perth North	3.86	1:25,911
NSW	Murrumbidgee		
VIC	Gippsland		
QLD	Western Queensland		
SA	Country SA		
WA	Country WA		

Data from this table has been sourced from the NHWDS Health Workforce Data Tool and the Australian Bureau of Statistics 2020. It includes public and private practitioners.

As at the time of publication, the below PHNs require additional FTE in order to reach the 'ideal' ratio.

NSW	North Coast
	Hunter New England and Central Coast
	South Western Sydney
	Nepean Blue Mountains
	South Eastern NSW
	Western NSW
	Western Sydney
QLD	Darling Downs and West Moreton
	Central Queensland
	Northern Queensland
	Brisbane South
VIC	Murray
	Eastern Melbourne
	Western Victoria
WA	Perth South
NT	Northern Territory
ACT	Australian Capital Territory

2. UNIQUE CONSIDERATIONS FOR REGIONAL AND RURAL-BASED SERVICES

Despite there being no 'one' regional or rural surgical service model, there are some common considerations that feature more consistently across regional or rural based services when compared with metropolitan surgical services.

INFRASTRUCTURE AND AVAILABLE RESOURCES[3]

Rural and regional areas will more commonly be resource-limited settings. Things that may be impacted by limited resources and therefore should be considered as part and parcel of a regional or rural practice are discussed below. This is in no way an exhaustive list but does provide some broad issues to be mindful of:

- Smaller facilities and more limited range of staff
- Junior staff can be helpful to reduce waitlist times
- Service provision is to a more dispersed population
- Multidisciplinary care more common given the available range of resources
- Less infrastructure and locally available specialist services
- Conducting clinical assessments and knowing when to seek advice or transfer a patient
- Being aware of the logistic challenges of patient transfers, such as duration for transfer of patients, bed availability in tertiary hospitals, and so forth.[4]
- Being aware of equipment available to you (and equipment not available to you)
- Utilising technology where available to improve communication amongst a multidisciplinary team
- Utilising telehealth,[5] including secondary telehealth consultations (surgeon to surgeon) where suitable
- Focus on patient accessibility to technology – can the patient access any rebates for phone telehealth where videoconferencing is not available?
- Consider availability of anaesthetists and other surgical team members.
- Shortage of medical administrators

Rural and regional services have comparatively less resources and infrastructure than metropolitan services.

SCOPE OF PRACTICE

Generally speaking, rural surgeons will be required to perform a broader scope of practice than their metropolitan colleagues.[6] Some may view this as an opportunity to diversify their skill set; some may see this as a selling point to present to hospital or local health district administration in order to show the benefits of having P&RS services in that location. Whichever way one looks at it, being aware of the fact that a rural plastic surgeon may need to display or develop skills to perform a broader scope of procedures is a factor to be considered.

ASPS conducted a rural and regional workforce survey on models of care which found that respondents working in regional or rural areas performed a broader range of surgery categories than their metropolitan counterparts. When grouped into metropolitan vs regional/rural public appointments, regional/rural respondents indicated that more of their workload was comprised of the following categories of surgery:

- Hand surgery
- Trauma surgery
- Burns surgery

Skin cancer surgery also comprised a broader range of a respondent's workload in regional and rural areas.

Rural Generalists & narrowing sub-specialisation

With the narrowing sub-specialisation of surgical specialties, it is no surprise that specialists practicing in rural settings are required to practice a broader scope of practice than their metropolitan colleagues. Whilst this narrowing sub-specialisation is fine for elective surgery and in metropolitan settings, it is detrimental for the delivery of care in rural settings where there are comparatively less resources.

Whilst in most cases a broadening of skills is entirely feasible, there may be times it is not. In such instances, it may be worth considering whether a particular surgical service in a regional area (such as minor skin cancer removals) could be provided by specially trained GPs. Recalling that surgical practitioners can include nurses and GPs as well as specialist surgeons.

Plastic and reconstructive surgeons based in regional settings will usually need to demonstrate a broader scope of practice than their metropolitan colleagues.

SPECIALIST INTERNATIONAL MEDICAL GRADUATES (SIMG)

The Royal Australasian College of Surgeons (RACS) conducted a rural workforce survey in 2010 in which it found that 50% of rural surgeons entering practice in the previous 5 years were international medical graduates.[7] SIMG's play a vital role in providing regional and rural surgical care. Regional models of care are therefore heavily reliant on the international medical workforce in order to meet patient and community need as well as filling rural workforce gaps from domestic graduates. There is a general recognition[8] that the SIMGs should be better supported in order to prepare and pass required examinations to enable them to continue to contribute to the health of Australia's rural population. There are, however, a couple of major challenges that present for an SIMG:

- **'The 10 year moratorium'.** International medical graduates are subject to section 19AB of the *Health Insurance Act 1973* which requires that non-GP SIMGs must practice in an area of need for 10 years before they may access Medicare benefits. In practice, this means that an SIMG with a family (or even without) who is only appointed a limited public FTE may be unable to justify living and working in Australia as there is no option for supplementary income through private practice.
- **Scope of practice.** Whilst a SIMGs scope of practice may not align well with the nine RACS specialty areas, it often does align well with community need. This means there may be difficulties in terms of examination requirements being identified. Alternatively, it also means that SIMGs may be able to offer more tailored and aligned surgical services to a local community, which provides an opportunity for local examination committees to facilitate improvements in meeting community need.

Regional and rural services rely heavily on international medical graduates. More targeted support is needed to allow SIMGs to continue to fill the regional workforce gap.

ON CALL ARRANGEMENTS

Traditionally, surgeons were continuously on call in rural areas. This was arduous and unsafe and is generally being accepted as no longer sustainable. Nowadays it is generally accepted that surgeons should be expected to work no more than 1 in 4 on call shifts. This means a slightly different model for emergency versus elective surgery may be required in rural areas (think outreach etc). Although it is agreed that the 1 in 4 ratio is ideal, in reality it is not necessarily the case.

The ASPS survey on models of care found that the average number of on call shifts is 16% higher in the regional and rural workforce. The range of shifts between the regional/rural versus metropolitan workforce is notable and indicative of the issues rural and regional Specialist Plastic Surgeons are facing. The maximum number of on call shifts metropolitan respondents completed per month was 5, compared with the maximum for regional and rural respondents being 30.

By ensuring a limit on the on call arrangements, patient and practitioner wellbeing can be addressed. It also allows for practitioners to secure adequate rest, holidays, and professional development opportunities. If a clinician is on call continuously, their opportunities for professional development are reduced which is also one of the factors that may deter a potentially regional-based practitioner from relocating.[9] Having heeded such warnings, there is a predicament for those looking to establish a new service. As will be discussed later, being available for on call continuously has been described as one of the main enablers to a new services success. In this way, striking the right balance between over-working and picking up opportunities must be found.

Regional and rural practitioners complete more on call shifts than their metropolitan counterparts. This is despite there being an acknowledgment that 1 in 4 is the upper threshold of a safe and sustainable on call arrangement.

PRIVATE PRACTICE

Regional areas do not have the same level of demand for private practice as in metropolitan settings. Additionally, fewer P&RS practitioners based in regional areas have a private practice. In the ASPS survey on models of care, it was found that 70% of metropolitan based respondents worked only in private practice, compared with 27% of regional and rural respondents working only in private practice.

In addition to the general public/private distinction between regional/rural and metropolitan practitioners, there are also a number of factors that contextualise the reduced private-only practice in regional areas:

1) Community need for elective or aesthetic surgeries offered through private practice is reduced in regional settings;
2) Given SIMG's make up a notable proportion of the regional and rural workforce, and the fact there is a 10 year moratorium on SIMG's practicing privately, there is reduced opportunity for regional-based surgeons to open a private practice; and
3) Anecdotal evidence suggests that regional/rural community perceptions of plastic surgery services presents a challenge for establishing plastic surgery services in regional areas. In simple terms, the value of plastic surgery may not be fully understood and is, in fact, often misunderstood as cosmetic.

Regional or rural-based surgeons are less likely to practice privately. In the least, a public appointment may comprise the bulk of their workload.

THE PATIENT'S SURGICAL JOURNEY

The surgical team in any patient's journey where surgery has been performed is more than just the surgeon. In a metropolitan setting this may include nurses, anaesthetists, technical staff, medical doctors. A regional and rural setting may require additional health professionals as a standard. For any one patient procedure there may be the 'baseline' surgical team plus, for instance, professionals involved in patient transfer including Care Flight, Royal Flying Doctors Service, and others. If the aim is to provide as much care as close to home as possible, there are additional regional-specific services and providers that will be involved in a patient's journey, particularly in terms of transport and other logistic factors.

Considerations that might be specific to a regional setting, particularly a remote or resource-limited setting, can include:

- When to transfer
- Multi-disciplinary, inter-disciplinary, or cross-disciplinary teamwork
- Flexibility in process, particularly as resources are more limited
- Travel needs for transfer and appointments
- Is telehealth an option?
- Thinking outside-the-box in terms of post-operative care
- When to seek second opinions or advice
- Patient considerations:
    - Travel required
    - Accommodation
    - Financial
    - Impact on family and employment
    - Restricted choice in providers

Any patient undergoing surgery in a regional or rural area may require additional services or surgical team members in an effort to ensure as much care is provided as close to home as possible. This is mainly in relation to travel requirements and distance and may impact on a patient's ability to commit to elective surgery.

PERSONAL FACTORS

There are some generally accepted universal factors that increase rural recruitment and retention:

1. Rural origin
2. Rural medical school experience
3. Positive postgraduate rural work exposure[10]

Perhaps one of the strongest deciding factors for any medical practitioner considering a rural or regional practice is the personal factor. It has been suggested that the most successful strategies for retention of rural physicians and surgeons include strategies that take into consideration the following:

- Social context
- Family and lifestyle influences
- Living conditions
- Work-life balance
- Community, family, professional support systems[11]

Although broad, the above factors provide us with an indication of what one may benefit from thinking about if considering making a move from a metropolitan to a regional or rural area. Specific considerations may include:

- Acknowledgement of the sense of isolation one may experience if they are the only surgeon in an area. If that is the case, it is difficult to bounce ideas off a colleague on the ground.
- A lot of one's success in establishing a P&RS service depends on personality.
    - Perseverance may be required in order to meet community need.
    - Making the move to rural is a conscious choice one makes.
- Accessibility to children's schools, partners' work, accommodation are also distinct to metropolitan areas.
- Remuneration in rural locations is not as lucrative. There may also be additional costs related to family needs so thinking about longer-term funding and budget, not just the finances for startup, is required.

Despite the above perceived challenges, there are things that make working rural particularly **appealing** and **rewarding.**

- The patient-doctor relationship may be stronger and more meaningful
- Better housing affordability
- A more sustainable work-life balance due to the relaxed lifestyle
- More opportunities for outdoor activities
- Stronger relationship with nature
- More meaningful sense of community than in larger cities
- Skills shortages and high demand for certain jobs

Personal factors such as lifestyle and family functioning may look different in a rural or regional setting. Accommodation, schools and other factors will need to be considered in conjunction with any professional factors.

3. BROAD STEPS INVOLVED IN ESTABLISHING A REGIONAL OR RURAL PLASTIC SURGERY SERVICE

Whilst there is some consistency and conformity in terms of the administrative steps or requirements involved when setting up a service, there are also wide-ranging differences that are specific to the location, population, practitioner, political landscape, and priority given to various health and medical needs. Providing a step-by-step guide on how to establish a plastic surgery service is therefore difficult to do except in general themes only.

STEP BY STEP

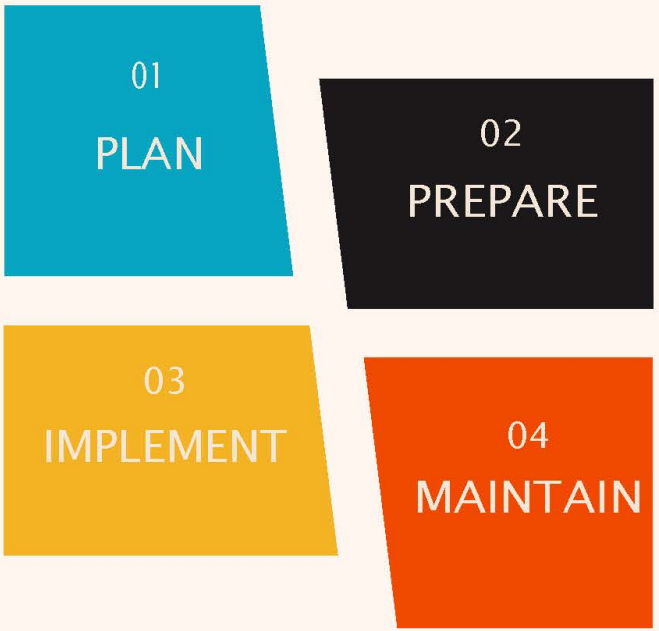
REGIONAL OR RURAL PLASTIC SURGERY SERVICE

Plan

Researching location–specific factors such as community need, existing services and resources, and well–suited models of care, are vital before embarking on any major move. Also think about personal factors.

Implement

Test your preparation and give it a go. Bolster infrastructure and regional or rural resources.



Prepare

Build networks and start scoping for collaboration. Broaden your scope of practice and expand on skills. Start looking at particular administrative requirements. Start tackling any barriers.

Maintain

Continue to support and encourage collaboration and communication with administrators and networks. Support and participate in educational opportunities and improvements..

STEP 1: PLAN

Researching where to go and under what conditions

Researching location-specific factors such as community need, existing services, available resources, and matching models of care are vital before embarking on any major move into a regional area. Personal factors also need to be considered.

In order to adequately research these things, having access to accurate and current data is required. It is recognised that such data has not previously existed in relation to the plastic and reconstructive surgical workforce, and whilst this is largely true, there are some projects emerging which seek to capture and collate this vital information to inform any workforce strategy or plan. ASPS intend for multiple projects which form their rural and regional workforce portfolio to provide such a foundation. Below provides a brief explanation of what to research and where you may find that information in carrying out the **planning** stage of your journey.

COMMUNITY NEED

In order to improve access to surgical services in remote areas we need to first look at the specific needs of the people living there. Access should not be contingent on the level of remoteness. As we have seen in Section 1 this is unfortunately the reality.

There is also a general consensus from a policy perspective that one of the aims of rural health is that surgical care should be in response to, and appropriate to, community need.[12] This is the core question – where are services even needed, and what specific services are needed? It would be fruitless to establish a plastic surgery service where there is no community need for it. A major part of any planning stage for those intending to establish a plastics service in a regional or rural area should **focus on local need**. In the absence of existing primary data to illustrate community need, there is a healthy amount of anecdotal evidence which can be considered as highlighting community need in rural areas. In general terms, procedures relating to **trauma, skin cancer, breast reconstruction, and hand surgery** have been raised as areas of need in rural communities. Conversely, yet importantly, cosmetic surgery is generally not looked upon by local rural populations as a service that will benefit the community.

EXAMPLE 1: Hand Surgery

In rural areas where agriculture is a primary source of income a hand injury to a farmer of labourer could be career-ending. Plastic and reconstructive surgery services could provide a vital role to help people get back into the workforce through surgery.[13]

EXAMPLE 2: Breast Reconstruction[14]

It is widely acknowledged that rural women are often excluded from accessing breast reconstruction treatment by virtue of their rurality. This should not be the case. In rural and regional locations there may simply not be a surgeon with a special interest in reconstructive breast surgery. The impact of this is that rural women recovering from breast cancers are disadvantaged when compared to their metropolitan sisters.

EXAMPLE 3: Farm Injuries[15]

RACS have developed a specific position paper on the management of farm injury trauma. This includes some considerations around chain saws, quad bikes, guns, dog bites, burns and other injury types that may be more prevalent or common in farming communities.

Questions to ask yourself

- Could P&RS offer a service that might fill a gap in the area I am considering setting up a service? For example, is there a lack of surgeons who perform post mastectomy breast reconstruction? Is that something I could offer?
- Do I know any contacts working in that area who may shed some light on the **gaps in services**?
- Am I prepared to expand my existing skills and scope of practice to respond to community need?

Where to find information

There is little to no existing data on community need for plastic and reconstructive plastic surgery services. It is therefore necessary to rely on anecdotal evidence and the experiences of others in order to identify an area of need.

ASPS have aimed to fill this gap by commissioning a project whose aim is to collate available data to map P&RS workforce distribution *and* analyse community need for P&RS services. This report aims to respond to the following points:

1) Identify which Primary Health Networks (PHNs) or Statistical Areas of Need are under-serviced or over-serviced to inform any decision regarding establishing a service; and
2) Identify community need for plastic and reconstructive surgery.

EXISTING SERVICES

Similar to community need discussed above, it would likewise be fruitless to establish a P&RS service in a geographic location which is over-serviced. It is therefore recommended that individuals and families wishing to make the move to rural and regional practice research the intended area to determine if it is satisfactorily serviced or not.

Section 1 of this guide has been developed to provide this information for you. Bear in mind this is imperfect data and should be considered as indicative only.

Questions to ask yourself

- What location am I considering moving to? What does the current distribution of workforce look like in that area?
- Should I look at plastic surgeon headcount or FTE, bearing in mind any given location may have multiple surgeons but each may hold minimal hours? In that case, is that location actually being well serviced or could there be a need for more plastics services?
- Interrogate the data. Ask questions about it. As is evident from the only recent work collating and analysing data on the plastic surgery workforce there is still a lot to learn in this regard.
- If you planned to live in one location which, after research, does not need additional plastics services, could you look to nearby locations for your service and adapt an outreach model of care (or other model of care)?

Where to find information

Basic information related to the distribution of the plastic and reconstructive workforce is provided in Section 1 of the guide. It is important to note that the material contained in Section 1 is current only at the time of publication. As is mentioned previously ASPS may also have some material which maps the distribution of the plastic surgery workforce which is largely taken from the Australian Institute for Health and Welfare, Australian Bureau of Statistics, National Health Workforce Dataset.

MODELS OF CARE

'Model of care' broadly defines the way a health service is delivered. It might outline best practice care and services for a population group, patient cohort or individual as they travel through the various stages of an injury, condition or event.[16] It may also include clinical pathways, patient journey, and clinical guidelines.[17] Some of the planning activities that will relate to identifying the most suitable models of care in your chosen location may also be carried out in **Stage 2: Prepare.** That being said there will be tasks and activities you can commence during these early stages in order to plan for the development of a model of care. These may include:

- Scope the problem and issues specific to that location
- Identify and summarise the existing models of care, not only in surgical services but also in terms of primary healthcare and other health services that are likely to interact with a P&RS service
- Look at what has worked well in other rural or regional settings
- Consider what is feasible in the circumstances for you individually as well as the community

Examples

Below is a list of some of the successful models used in rural and regional settings to date. These will be discussed in more detail in Section 6. It is important to note that the model of care you land on should be in response to the identified community need. In other words, wrapping the model of care around the local conditions and needs rather than trying to fit community need into a pre-determined model of care. The ideal is to have surgeons who reside in a given location to also provide care but where this is not possible, the below may be considered.

- Fly-In-Fly-Out (FIFO)
- Outreach
- Hub-and-spoke
- Specialist Outreach Services

Questions to ask yourself

Factors that will need to be considered when planning for the model of care include:

- Patient transfers where the service is a non-tertiary teaching hospital:
    - Will transfer to a tertiary hospital be required? If so, how and at what stage will this occur?
    - How can local surgical services be encouraged or supported to undertake common elective and emergency surgical cases to minimise transfers to tertiary hospitals?
    - What services are available to the patient as close to home as possible?
- Access to other health staff and services:
    - Is there adequate access to anaesthetists and other surgeons?
    - Is there appropriately trained staff?
    - What equipment is available?
    - Is there appropriate accommodation for patient's family or carers?
    - In the event of surgeons taking leave are locum services arranged by the hospital or is the resident surgeon expected to arrange locums?
- Post-operative care:
    - Is there a process for referral or follow-up that ensures patient-centered practice?
    - Is there sufficient resourcing to ensure post-operative care is safe, affordable, and adequate for the patient?

- Size and population of the area you seek to practice in:
    - Are you intending to fly into a rural or remote location or base yourself there?
    - Is a multidisciplinary model suitable? If so, think about whether a Specialist Outreach Service is suitable.
    - Do you intend to establish a 'hub' or 'spoke' service in a network of existing services.

Where to find information

There is a wealth of information on models of care – in academic as well as professional college material. Many focus on a particular patient group or clinical setting. When looking into any model of care be sure to factor in the patient groups you may encounter and what primary health care services look like in that area. RACS Position Paper on *Rural and Regional Surgical Services* (2014) is an excellent place to start.

PERSONAL AND LIFESTYLE

Personal and professional support have been identified as one of the primary factors for retention of a rural health workforce. This applies to the *retention* of a surgical workforce, but what factors must be considered and applied whilst an individual is *planning* to set up a surgical service rurally?

Section 2 addresses the personal considerations that might be made when setting up a surgical service in a rural or regional area. In addition to those considerations, there are things that can be researched in preparation for the move.

Below provides a brief list of some of the factors and areas that you may need to look into:

- Accommodation
- Education for yourself and family
- Work-life balance
- Career and development opportunities
- On call demands
- Public FTE and salary
- Lifestyle generally
- Climate
- Available resources and local facilities
- Rural is not as lucrative and may incur additional costs related to family needs such as travel and schooling
- Finances for longer-term funding and budget, not just start up
- Are any financial incentives available?

STEP 2: PREPARE

Building the networks and skills – collaboration at the forefront

Once you have researched where you plan to establish your service and what that service might look like, the next step is preparing for the move. This is when you might start to build the requisite networks and skills in the hope of maximising your services chances of success.

PREPARING AND HARNESSING ENABLERS

We know that having access to networks and peers can be one of the major factors which supports a service in a regional or rural area. Building networks in the early stages therefore provides a vital lifeline for any health service in a regional or rural setting, even years after being established. By establishing partnerships and networks early in the process you are giving yourself the best chance for success. What does preparation for networks and collaboration look like?

Collaboration

Firstly, **scoping for collaboration** is an important preparatory step, particularly if you intend to establish a model of service delivery which relies on a multidisciplinary team or even a surgical team. RACS have produced a number of policy papers on a regional surgical workforce: Select, Train, Retain, and **Collaborate.**

You may wish to collaborate with another practitioner with the intention of establishing a new service together, or you may wish to collaborate with a team or individual practitioner who is already servicing that location. Either way, start the conversation early as it may lead you in different directions.

Networks

Secondly, **drawing on your existing networks** for mentorship as well as **drawing on newly created networks** will prove invaluable. Many case studies raise the importance of learning from colleagues when facing the challenges of setting up a new service in addition to the specific challenges in setting up a rural or regional service. It is not only about learning from colleagues but also collaborating with them to determine the best way of moving forward.

As is mentioned above, the value in collaboration cannot be understated. Where you have been successful in developing a network of P&RS colleagues, colleagues from other disciplines, or colleagues at the site you intend to establish a service, you may find that you will regularly draw from each other's experience, expertise, knowledge and lessons learnt.

PREPARE FOR POTENTIAL BARRIERS

Some of the common barriers are explained in Section 4. Where applicable and possible, it may be worth turning your attention to those barriers in an attempt to start tackling them sooner rather than later. You may discover that some of these barriers can be addressed and overcome prior to the service being established. In many ways these barrier preparations can be classed as philosophical in nature or operational in nature. The philosophical barriers might include things like community and decision-maker misconceptions about the place and role of plastics. An operational barrier may include certain administrative steps required to set up a new service.

OPERATIONAL: Look into any administrative requirements. In order to overcome any administrative barriers you may need to contact the local health district, hospital management, or local staff to ascertain what some of the administrative requirements may be in order to establish a new surgical service. Depending on the governance or function of the service, certain administrative requirements may need to be completed early on. It might also be

worth looking into any supportive legal and credentialing frameworks that may sustain your practice during its more mature phase.

Use this time to complete those tasks to avoid any unnecessary delays further down the track.

PHILOSOPHICAL: Prepare your arguments to illustrate the value of plastic and reconstructive surgery. Anecdotally, rural and regional populations are not immune from misunderstanding what plastic and reconstructive surgery can offer. The general misconception that P&RS is cosmetic surgery may unfortunately be all too common. This is where you might find data on community need for plastic surgery will prove invaluable. Using examples or case studies that relate to some of the surgical needs of a rural population is a good starting point.

- **Hand surgery –** hand surgery may be life-saving for a rural farmer who sustains a hand injury. It may mean the difference between being able to support a family or having to find an entirely new vocation.
- **Breast reconstruction –** rural and regional women do not have the same access to post-mastectomy breast reconstruction as their metropolitan peers. Focusing on the value of P&RS in breast reconstruction may illustrate this point well.
- **Skin cancer surgery –** Australia is a sunburnt country. Focusing on the benefits of skin cancer removal procedures that can be performed by a plastic and reconstructive surgeon may be unknown yet invaluable to a rural community.
- **Trauma** – illustrating some of the trauma procedures that might be commonly seen in a rural or regional setting may assist in breaking down the misconceptions about P&RS. As with previous categories, there may simply be a lack of awareness of what P&RS does.

Meyerson et al[18] suggest that:

> *"Hospital administrators generally lack an understanding of a plastic surgeon's impact to the medical care of their patients and their hospital's financial success. We must first begin by educating hospital administrators through support from our plastic surgery societies and leaders in the field. Second, we need to encourage and inform our residents and plastic surgeons around the country of the numerous opportunities of rural plastic surgery".*

In this way, by first preparing arguments and data to present to decision makers (i.e. the 'philosophical' elements) you may then create the space to fight the more practical battles such as those related to the implementation of your service model and delivery.

BROADENING SKILLS

Plastic and Reconstructive Surgeons based in regional settings will usually need to demonstrate a broader scope of practice than their metropolitan colleagues. This is discussed in Section 1. In terms of steps involved in establishing a rural or regional P&RS service, commencing training or preparation for a diversification in one's surgical repertoire is recommended.

Scope of Practice

Depending on individual experience and knowledge, diversifying one's scope of practice may be required when moving from a metropolitan setting to a rural setting. For reasons discussed in previous sections, rural and regional plastic and reconstructive surgeons are typically required to practice a broader range of procedure types than their metropolitan counterparts. Starting to familiarise oneself with some of the techniques and types of surgery likely to

be performed in rural settings will allow one to feel better prepared in making the move. RACS have described this as 'location specific scope of practice'.

Data on the types of surgery performed by remoteness or by location is difficult to obtain. However, such information would prove invaluable when considering what skills to further develop or fine-tune according to where the surgical service will be delivered. The hope is that community need data in relation to plastic and reconstructive surgery services will become available over time and can be used to inform a practitioner's widening scope of practice.

A local example of a widening scope of practice can be seen in the Alice Springs model whereby General Surgeons have an extended scope of practice which includes trauma, vascular surgery, and cancer surgery.[19]

This wider scope of practice is also evident in the United States where plastic surgeons practicing in rural areas may perform wound care, breast reconstruction surgery, orthopaedic trauma, oncology, upper extremity conditions, dermatological disorders, maxillofacial trauma, carpal tunnel, amongst others.[20]

Skills and education

In addition to preparing for expanding technical skills through a broader scope of practice, it may also be appropriate to prepare for the educational and training components in relation to rural and regional plastic surgery services. Will you or any colleagues require supervision and if so, who may be an appropriate supervisor? Given the challenges in rural workforce, you may need to think outside the box in terms of who a suitable supervisor or mentor may be. An example might be to consider interdisciplinary training both in terms of training for you as well as you training rural specialist GPs, for instance.

Continuing on this point, such preparation might also apply if you yourself are the intended supervisor. Will you be able to provide the training and supervisory services required for more junior surgeons hoping to go rural in the future? Or for rural GP's looking to expand their surgical skills in order to meet patient need?

Similarly, if continuing training, it may be worthwhile considering whether your training needs can be met at your chosen location or if this may need to take place in another location. If the latter applies, you might consider exploring how those training needs might fit into your planned service schedule.

STEP 3: IMPLEMENT

Testing viability and building in evaluation

This stage is relatively straightforward in that the bulk of the work goes into preparation and planning. In terms of implementing your plan for a rural or regional plastic surgery service, there is little guidance to be given as each service will vary and hold unique characteristics that will not necessarily become visible until they are put to the test.

In this way, the only advice is to **give it a go and don't give up.** It will not be perfect and the only certainty is that you will encounter new and unprecedented challenges (and rewards) along the way. As will be discussed throughout this guide there are ways to minimise the challenges but not to eliminate them. Building infrastructure and resources that suit your service and respond to community need are the closest things you can do to minimise any potential challenges. Collaborating with partners and colleagues is another approach that should be practiced.

Throughout the process of implementation it is also worth considering the ways you can capture any lessons learnt to share with networks or base any reflections on. Any good service delivery design ensures that **evaluation** is built into the design. In this way, making space to capture any experiences or information that may be used in any formal or informal evaluation further down the track is worth at least considering at this stage.

STEP 4: MAINTAIN

Being agile, adjusting, responding and reflecting

Once you commence providing services to the community, focus will shift to assessing how the service is running. A major factor in this is determining how the community is being serviced. It is only once your surgical service is implemented that any gaps in service, areas for improvements, and systemic issues will become exposed. This is not to be interpreted as a negative experience but should rather be viewed as an opportunity to consider and plan for any quality improvement activities.

COLLABORATION, PARTNERSHIPS AND NETWORKS

The key to delivering safe and quality surgical care is to harness a **team approach** which ensures the patient remains at the centre of their care. In a rural and regional setting, there is the additional backbone of '**for rural by rural'**. Maintaining and encouraging ongoing collaboration and partnerships amongst surgical team members is vital, particularly in rural settings where workforce shortages are a serious issue. Depending on the model of care you function within this may mean encouraging ongoing collaboration between surgical staff, resident/locum staff, nursing staff, GPs, allied health services, transport workers, carers and family, and a multitude of other health or community workers. This may also cross sectors or disciplines to include collaboration between the health, housing, employment, and agricultural sectors.

Living in a community and becoming familiar with **key stakeholders** over time is the most effective way of identifying who to collaborate with. It is in this space that you can think creatively about who to partner with beyond surgical colleagues. Some umbrella organisations (including academic) you might consider contacting or referring to in the first instance might include:

- National Centre for Farmer Health
- National Rural Health Alliance
- National Aboriginal Controlled Community Health Organisation
- National Farmers Federation
- Australian Journal of Rural Health

Through maintaining and encouraging collaborative partnerships it allows for a more robust mechanism to identify any **gaps in service** and plan for how to fill those gaps. It also provides opportunity to ensure patient needs are being met. Once a gap has been identified, it is encouraged to work in partnership with other key stakeholders to determine the most appropriate way to adjust the service to ensure patient needs are being met as they are intended to.

Consider the following example. You have started a role at a small regional hospital which acts as a 'hub' for some of the more common trauma injuries and subsequent surgery performed in that area. After some time there you notice that a lot of the patients being transferred to your service happen to be farmers from surrounding areas. Many of them present with injuries that are a direct result of their farming work and involve hand injuries. After speaking with a general surgeon you often work with, you both decide to begin a dialogue with the National Centre for Farmer Health. This will gain you a better understanding of some of the labour that may be undertaken by farmers in that region. You can use this information to develop and fine-tune your own skills to tailor hand and trauma surgery to the common injuries you need to perform.

Here we see an example of collaboration across sectors (farming and surgical) as well as adjusting your service to suit the needs of the local community (broadening scope of practice).

EDUCATION OPPORTUNITIES

It may also be worth considering and planning for educational opportunities for yourself as well as training of future fellows once your service is relatively stable and functional.

A list of some of the education and training factors that might be worth considering are listed below. This is not an exhaustive list by any means.

- Consider advocating for rural specific accreditation standards
- Remote supervision and mentoring where local supervision is not an option
- Establishment of educational facilities and systems
- Suitability of rural rotations
- Rural fellowships
- SIMG supervision and support
- Use of IT in clinical education in remote areas
- IT accessibility (online tutorials, study groups, remote supervision)
- Study leave availability
- Continuing professional development
- Positive rural exposure in early postgraduate years – how can you contribute to this?
- Value in interdisciplinary training, such as training GPs in certain surgical skills (or nursing staff)
- Sustainability of any education or training opportunities
- Flexibility for trainees
- Mentoring SIMGs for examination preparation
- Access to research facilities and mentors

OPPORTUNITIES TO GROW

Somewhat related to educational opportunities is the ability to identify and create opportunities to grow your service if community need requires this. As with other headings in this section, this can be built on collaboratively and may involve partnerships and drawing on networks you have developed. It may also involve creating the space and resources to adequately support and encourage trainees (particularly SIMGs) who could potentially stay to expand the rural and regional workforce.

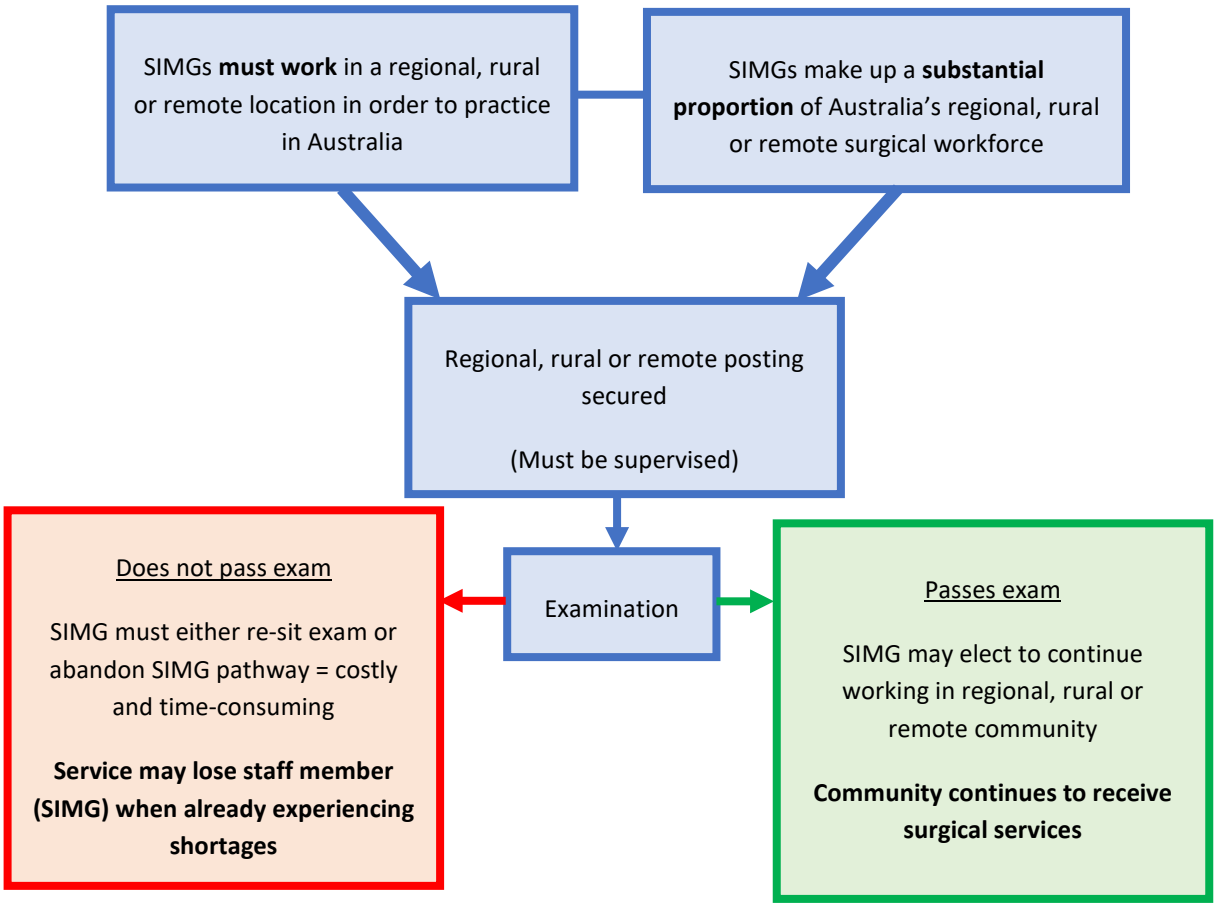
RACS Rural Health Equity Strategy 2021 provides two policy papers which focus specifically on 'Train for Rural' and 'Retain for Rural'. Within these there are some invaluable recommendations and suggestions for how to better support existing and upcoming rural surgical practitioners in an effort to meet patient need. It is suggested that these two papers are read when considering any opportunities to expand and better support a local workforce.

SPECIALIST INTERNATIONAL MEDICAL GRADUATES (SIMG)

An individual who has obtained their medical degree outside of Australia may work in a regional, rural or remote community as part of the pathway to gaining registration in Australia through RACS Fellowship and formal recognition of prior qualifications and experience. SIMGs are required to work in designated locations set out by the Australian Government as areas of need, or Districts of Workforce Shortage (DWS) as part of their pathway to registration in Australia.

The RACS 2010 Rural Workforce Survey found that 50% of rural surgeons entering practice in the previous 5 years were International Medical Graduates (IMGs).[21] The survey also found that there would be continued reliance on IMGs to maintain the rural surgical workforce until at least the year 2020. This is a cohort that must be tapped into in any rural or regional workforce strategy due to this heavy reliance on SIMGs to fill the rural and regional workforce gap.[22]

Although SIMGs make up a substantial proportion of the rural and regional surgical workforce, there is a longstanding recognition that SIMGs are not afforded adequate support to pass examinations which enable them to continue to contribute to the rural workforce. The reason more support is needed is simple when considered as a sequence of events:



As has been simplistically depicted in the flowchart on the previous page, supporting international medical graduates through their SIMG pathways is in the best interests of Australia's regional, rural and remote communities. Without adequate support, we may be losing precious staffing resources unnecessarily.

The ***DoctorConnect*** website provides information to international medical graduates and their employers by explaining where IMGs and SIMGs can work, steps required to work as a doctor in Australia, and restrictions on Medicare billing.

STEPS FOR INTERNATIONAL MEDICAL GRADUATES

The broad steps outlined in this section may be slightly varied for international medical graduates.

Step 1: PLAN

In many ways, the entire list of considerations for Step 1: Plan will be largely completed on behalf of the SIMG – the 'where to go and under what conditions'. This is because IMGs are required to work in designated locations set out by the Australian Government as areas of need, or Districts of Workforce Shortage (DWS) as part of their pathway to registration in Australia. There are also a number of restrictions and conditions on their working arrangements.

A DWS is an area where people have poor access to specialist medical practitioners. Researching community need, existing services and other factors may still be helpful to undertake prior to arriving in Australia however these will not be determinative factors for an IMG. In other words, SIMGs are recruited to fill an already identified gap in service.

Similarly, there will be little need to consider the models of care that may suit the location and community given SIMG jobs are likely to be pre-existing roles within an established service.

Where an SIMG may be required to follow the steps outlined in this guide is in relation to the personal and lifestyle factors that should be considered prior to making a move. In this regard, depending on the job offer extended to an SIMG there may be more pronounced considerations to be made where a public FTE appointment is for minimal hours only.

Step 2: PREPARE

Building skills and networks is a step an IMG may be in a position to undertake prior to accepting a position through the SIMG pathway. This is particularly in relation to building networks and scoping for collaboration. Given an SIMG position will be under supervision this 'networking' may be somewhat redirected towards the supervisor-trainee relationship in the first instance.

Interestingly, RACS have noted that the SIMG scope of practice may not align well with the established 9 RACS specialties, but it *may* align well with community need. This may be even more applicable in regional and rural settings where the scope of practice is generally broader. This has been relied on as a rationale to support arguments recommending a realignment of the scope of practice component of any SIMG assessment or examination to be assessed by a local examination committee.

Step 3: IMPLEMENT

Testing and building in evaluation may not be applicable for an SIMG commencing in a pre-existing role.

Step 4: MAINTAIN

Whilst an SIMG may not be required to reflect and adjust the service they are providing, they can continue to reflect and respond to the educational opportunities that present or that they may contribute to.

This stage for an IMG may turn more clearly towards **examination preparation and support** in place of collaboration for the surgical service itself. In this regard, the onus of responsibility is shifted from the individual providing the surgical service, to the surgical community providing support to the SIMG community in an effort to improve access to surgical services for rural Australians.

RESTRICTIONS ON MEDICARE BILLING: THE '10-YEAR MORATORIUM' EXPLAINED

In addition to restrictions (or conditions) on *where* an IMG may work in Australia, there are also restrictions on how IMGs may bill patients under Medicare. In order to access Medicare benefits when working in Australia, an SIMG must work for at least 10 years in a Government-classed District of Workforce Shortage (DWS) in accordance with section 19AB of the *Health Insurance Act 1973*. This is called the '10-year moratorium' and is often considered a barrier to SIMGs maintaining a posting (and service) in regional or rural communities.

In practical terms this means that SIMGs may be restricted to public appointments only as they are restricted from providing services covered by Medicare rebates during the 10-year period. Where a public appointment is for a minimal number of hours, an SIMG may face financial obstacles as they may be unable to substitute their income through private practice. This has been reported as one of the more difficult barriers or obstacles when considering whether to work in Australia, and in some instances could act as a deterrence. The impact of this barrier is that rural and remote communities may lose surgical services that could otherwise be provided.

Exemptions to section 19AB

As with any legislative processes, there are exemptions and ways to circumvent how section 19AB applies to you.

1) The 10-year moratorium can be reduced through scaling[23]

The more remote the location you are posted, the more credits you earn to reduce the 10-year restrictions on Medicare billing.

2) Exemptions[24]

There are a number of exemptions that a specialist may apply for in order to circumvent the 10-year moratorium. These generally relate to the remoteness of the job posting as well as community need, or personal circumstance.

Plastic and reconstructive surgeons are considered a specialty in acute shortage. This exemption grants the specialist access to Medicare benefits in any location if they are registered with AHPRA as a specialist in one of the listed specialties.

There are other exemptions which can be found on the Doctor Connect website and the Department of Health and Ageing website.

FURTHER INFORMATION

The following websites provide authoritative information for international medical graduates looking to work in Australia. The links are current as at August 2022.

Australian Government Department of Health and Ageing

District of Workforce Shortage:

https://www.health.gov.au/health-topics/rural-health-workforce/classifications/dws

Section 19AB explained:

https://www.health.gov.au/health-topics/doctors-and-specialists/what-we-do/19ab

Section 19AB exemptions:

https://www.health.gov.au/health-topics/doctors-and-specialists/what-we-do/19ab/exemptions

Medicare billing:

https://www.health.gov.au/initiatives-and-programs/doctorconnect/about-working-in-australia/medicare-billing-restrictions-for-international-medical-graduates

Doctor Connect

DoctorConnect provides information to international medical graduates and their employers. It aims to help international medical graduates understand the steps required to work as a doctor in Australia, where they can work and restrictions on billing patients under Medicare.

https://www.health.gov.au/initiatives-and-programs/doctorconnect

Royal Australasian College of Surgeons (RACS)

Specialist International Medical Graduates:

https://www.surgeons.org/SIMGs/Key-information

4. BARRIERS

After consultation with ASPS members who had established or continued an appointment in a service in a regional or rural area, it was identified that there were some common barriers as well as some unique barriers each participant described. Below is a list of these barriers. Where possible, some suggestions have been made for how to overcome that barrier however it is important to note these are suggestions only and may not apply to your unique circumstances. In this way, this section should be referred to only as an indication of what one *may* encounter, not what is necessarily likely to occur. It is also not an exhaustive list of the barriers one may encounter, just as it is not a list of experiences all will encounter.

Following each point and where applicable, some broad suggestions have been written in blue text.

PHILOSOPHICAL BARRIERS VS OPERATIONAL BARRIERS

Whilst reading each of these, it is also worth considering whether it might be a '**philosophical**' barrier or an '**operational**' barrier. Depending on which of these categories it best sits under, you may find the solutions to overcoming that barrier may vary, or they may not. The philosophical barriers might include things like community and decision-maker misconceptions about the place and role of plastics. An operational barrier may include things like administrative steps required to set up a new service.

The below diagram seeks to provide a visual demonstration of what tools you may employ in overcoming certain barriers. The inner circle describes the category of the barrier, and the outer circles list some tools that may be used to overcome those barriers.

LIST OF COMMON BARRIERS

Lack of support

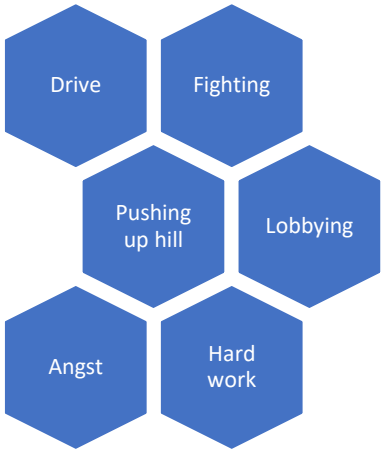
Participants explained that rural or regional postings can bring a sense of isolation – both technically and personally. There are few formal support networks or arrangements available to rural plastic and reconstructive surgeons. In addition to the difficulties in receiving support, there are also the challenges associated with having to prove oneself to other surgical specialties, hospital administration, and the community.

In terms of informal support, many felt that the option to call a colleague for advice on a certain case was unavailable to them, particularly where they are the only plastic surgeon.

Having assistance in establishing an informal network could improve skills and patient outcomes as colleagues can share experiences, lessons learnt and techniques.

Persistence

This may also be considered an enabler. However, many participants explained that they had to be persistent in order to secure support (financial or other) from government, health, hospital management and other major players. Terms used to describe this barrier include:



An example of where persistence has resulted in a positive outcome can be seen in one of the case studies. Here, the provider lobbied to State and Federal Health departments for breast reconstruction services in a regional facility. It required a great deal of 'fighting' but eventually, persistence paid off and a breast reconstruction service was funded. The ultimate result is that rural women now have access to a service that was previously unavailable to them.

One respondent has stated it can be tiring to fight the system without fully understanding the system.

Don't give up after encountering your first obstacle. Seek support from colleagues who have encountered challenges in establishing their own services; or other rural/regional colleagues. It is likely there will be shared frustrations along the way.

Financial risks

Establishing a plastic and reconstructive surgery service can bring risks financially. Growth of that service can also pose a financial risk. This is due to common elements in any health service set-up but also relates to characteristics specific to P&RS.

A component of the risk is that it first requires advocacy efforts to justify and convince hospital administrators and management that P&RS can be financially viable for the hospital as a tier 2 service. There are also the following financial elements which may pose a barrier:

- Given the possibility that public appointments may only be for minimal hours, many rural surgeons may find that they have to establish a private practice to subsidise their income.
- Even within public appointments there may be reduced or no funding for on call P&RS coverage. As will be seen in Section 5: Enablers, this is problematic as one of the ways to build buy-in is to be on call around the clock so plastics becomes recognised for what it can offer.

Consider whether establishing a private practice to subsidise public income is a viable option for you and your family. If you are an SIMG, are there any areas of work you may participate in such as motor vehicle accidents or workers compensation that enable you to respectfully *circumvent the 10-year moratorium restrictions.*

Available resources

It is generally accepted that rural surgical teams have less access to resources. Resources can be human or non-human such as facilities, funding and technology.

Human Resources

This point requires little explanation. The rural and regional workforce shortage is well documented and increasingly well understood.

Staff numbers are comprised of supervising and training surgeons. So where a service requires expansion or growth, it may need to rely on training registrars or non-training registrars. However, if there are no available supervisors (which may be the case in many rural settings) there will be no chance for the community to be adequately serviced. Given we know there are barriers to training surgical specialists and retaining specialists, [25] it is vital that we begin with targeted retention strategies in order to grow a P&RS service.

Funding

A barrier for any regional service may be the way in which funding is received and allocated by State or Territory Health. If funding is allocated by **activity** in metropolitan areas, but in blocks for regional/rural services, there are inherent challenges associated with workforce issues and patient outcomes. Whilst **block funding** may be helpful in some respects, it also restricts the provision of surgical services (and patient outcomes) to the discretion of hospital administration at that time. In this way it can be argued that community need fails to be considered in the provision of services. By focusing funding on patient need there is more chance of an outcomes-based approach being recognised.

Turn to data to validate your argument. Where appropriate, lobby government health departments or hospital administrators to consider what the best funding model may be for that service and that community.

Another funding consideration is in relation to timing of funding. There is argument for funding to be more focused on the longer-term budgets in addition to start-up costs and project-based funding. In other words, ensuring funding is sustainable.

Equipment

Some technical resources such as operating or diagnostic equipment may be limited in rural or regional areas as a result of the limited number of plastic and reconstructive surgeons in the facility. This may mean that surgeons who establish a service (or build one) may encounter some challenges in their efforts to ensure patients have access to adequate resources.

Example of operative microscopes

One respondent explained that the CEO of the private hospital they worked for was generally supportive and purchased an operative microscope for their clinic. However, securing an operative microscope in their public unit was much harder, requiring the team to independently fundraise in order to purchase one.

Another respondent explained that the microscope available to the unit on arrival was relatively old. Hospital administration stated there was no funding for purchasing a newer one. The unit approached a cancer centre who had a strong philanthropic arm and secured the finances to purchase a new microscope which is available to cancer patients.

These examples illustrate that whilst there may be some challenges in terms of resources there are creative ways to overcome those challenges. Think 'outside the box' when problem-solving.

Gaps in data availability

There is limited data available on community need, local characteristics in relation to plastic surgery needs, and the plastic and reconstructive surgery workforce. Such data would be invaluable for overcoming some of the barriers listed here as it could provide a basis from which to demonstrate the value in supporting a P&RS service to health service decision-makers. With time and awareness, such data may become available and can be drawn from in developing resources to present to decision makers.

Contact ASPS or conduct literature reviews regularly in order to obtain important data that can be used to demonstrate your request or argument. Health Departments rely on data, so don't be afraid to use it when trying to get your point across.

Getting local buy-in

There may be a preconceived notion of what P&RS does as being largely cosmetic. This misconception can be in terms of cosmetic procedures but it can also relate to a misunderstanding of what plastics can offer: hands, cleft lip, breast reconstruction, free flaps and so forth. So on the one hand there is the challenge of having to prove what plastics does *not* do (it is not purely cosmetic); whilst on the other it is about explaining what plastics *can* do.

To get around any misunderstandings of what plastics can and does do, try focus on patient need when presenting a case with hospital or local health district decision-makers. Procedures such as trauma, skin cancer, burns, hand, breast reconstruction and craniomaxillofacial are some key examples.

Surgical colleagues from other specialties may also believe that P&RS clinicians 'cherry-pick' the more interesting surgeries or there may be perceived threat that plastics will encroach into specific types of surgeries usually

performed by general surgeons or orthopaedic surgeons, who are generally more established in regional areas. In order to overcome this barrier, participants have explained that they dedicated much of their initial time to being available around the clock to be the 'band-aid' surgeon. Over time, and as they performed more of a range of surgeries they gradually secured more local buy-in. Many participants also described the need to 'prove [them]selves'. This approach to gaining local buy-in has been described as reflecting a problem whereby hospitals are not calling out "we need you" to surgeons, but rather, surgeons are having to approach hospitals stating "you need me" and subsequently having to prove themselves and their service as indispensable.

Over time, show the hospital you are indispensable. If you can demonstrate the value in plastic surgery (as distinct from other surgical specialties) and you are willing to make some sacrifices or compromises along the way, decision-makers are more likely to show support for a P&RS service.

Availability of anaesthetists

Participants described difficulties in forming a complete surgical team where anaesthetists were in shortage. This has been identified as a problem during initial appointment as well as in continued service provision. The impact of this means that P&RS services are unable to meet patient need due to an incomplete surgical team.

This point illustrates the importance of collaboration in surgical teams. A surgical team is not only comprised of one surgical specialty. So where we are attempting to address a single workforce shortage (in this case, P&RS) we need to consider the role of key collaborators.

On call requirements

On call demands have been explored in previous sections of this guide. Generally speaking there is an understanding that on call arrangements for rural and regional staff may exceed what has been considered a safe 1:4 ratio on average. In this way there is a need to recognise that a move to a regional or rural location may require you to be on call more than is ideal.

In relation to on call requirements posing a barrier to establishing a service, there are two distinct (and incompatible) ways in which this arises:

(1) Excessive on call demands

Some respondents have explained that they were initially on call 1:1 or 1:2 in order to gain the exposure to procedures necessary to demonstrate the value of P&RS further down the track. Whilst this can be a requisite for building a service, it can also be a barrier for the individual surgeon and their family as the work-life balance tips.

(2) Lack of funding or support for on call

Somewhat contrary to the excessive demands of rural and regional on call is the experiences described by some respondents whereby host hospitals refuse to fund any on call arrangements for the P&RS service.

Hospital administration

A common barrier relates to the many functions of hospital administration and the way in which plastic surgery services are supported or restricted. Hospital administration is often placed in a difficult position of balancing patient need, funding requirements, clinical governance demands, and competing professional priorities. Nevertheless, there are a number of P&RS-specific issues that have been raised in discussions about barriers to establishing a service:

- Differing priorities and allocation of funding across various surgical specialties. Specifically in relation to the cross-skills between general surgeons, plastic and reconstructive surgeons and orthopaedic surgeons.
- Declining to fund any on call P&RS services.

- General misconception that plastics is not a financially viable option for hospitals.
  Use data. Also, focus on the surgical areas of need such as breast reconstruction, craniomaxillofacial, hands, trauma, burns.
- Claims that hospital administration consistently decline any plans for expanding plastics units.
  Persistence. Don't be deterred by one 'no'.
- Variation in priorities set or decisions made by hospital administration based on the political landscape at any given time.
  Persistence. Don't be deterred by one 'no'.
- Placing restrictions on the types of procedures a Specialist Plastic Surgeon can or cannot perform.
  Example: one service states the plastic and reconstructive surgeons cannot perform cleft lip procedures despite having over a decade of experience in this area. Another service stated that the initial surgeon could only perform skin cancer and 1 day trauma.

Transfer of patients as a gap-filler

In some of the larger regional centres, the inefficiencies of transferring patients to metropolitan hospitals for services that can be performed in the regional centre has been mentioned as a barrier on two fronts. Firstly, there are the inefficiencies placed on the patient in terms of a delay in treatment and costs associated with the transfer. This may be in addition to other factors for patients who have come to that regional centre from a surrounding area. In those cases there are two transfers being undertaken.

Secondly, the transfer of a patient to a metropolitan service may mean that funding is also being transferred away from the larger regional centres to the metropolitan services. In the context of a diminished and struggling rural and regional health system, the funnelling of money away from the areas of need is problematic and may actually hinder any future efforts aimed at demonstrating rural and regional need for certain services.

Barriers for SIMGs

As we know, SIMG's face a number of standalone steps and requirements by virtue of being overseas trained. This situation presents its own unique barriers to establishing a service in a regional or rural community:

- Examinations may be difficult to pass without preparation support from peers.
  A possible solution to this could be creation of SIMG "Welcome Packs" from relevant surgical societies which includes information on how to access support and services for rural postings.
- Where a specialist surgeon does not pass an examination as part of their SIMG pathway, there will be a deficit in staffing. This can also pose a problem where there is an anaesthetist SIMG who has not passed their examination, or other non-plastic and reconstructive surgical specialists.
  SIMG support should not be limited to support within a surgical specialty. Consider whether mentors/supervisors may be secured from a different specialty.
- The 10-year moratorium acts as a barrier to retaining an SIMG in a regional or rural posting as part of their accreditation pathway. Where this applies and no exemptions or circumventions are available, if an SIMG is given an 8-hour per week public role, for example, and they are restricted from setting up a private practice because of the 10-year moratorium, they may find it difficult to support a family.
  At this point in time the only possible solution to overcome the moratorium is to apply for an exemption or scaling in accordance with section 19AB of the Health Insurance Act 1973.

Although many of these barriers can create unique challenges for rural health services, they can also provide **opportunity for innovation.** Multidisciplinary care, new technology use in diagnostics and care, training opportunities, expansion of scope of practice, and professionally satisfying and interesting work. The intention of this section is not to scare readers into thinking there is no chance a service can be established; it is intended to provide a glimpse into some of the challenges others have faced so that readers can begin to problem-solve and consider whether any potential challenges can be overcome through innovative ideas.

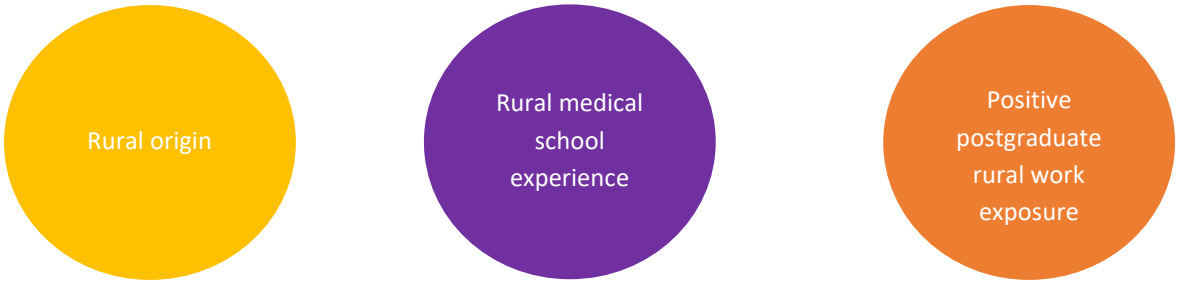
5. ENABLERS

One of the most valuable tools any individual can take with them on a new venture is the experience of others. Having just considered some of the barriers that may present when establishing a P&RS service in a non-metropolitan area, we now turn to some of the common enablers. Recognising that to every challenge there may be a lesson or opportunity to improve, this section aims to highlight that although the challenges involved in setting up a service may seem insurmountable, they are in no way prohibitive.

Again, these are common enablers and should not be taken as an exhaustive list, but rather a broad representation of some of the more encouraging elements in a regional or rural practice. Additionally, this section covers some of the 'pull factors' for working regionally recognising the unique and positive experience many practitioners express.

BENEFITS OF RURAL AND REGIONAL PRACTICE

Research has suggested that specialists working in rural areas are just as satisfied as metropolitan counterparts in relation to variety and responsibility at work.[26] If we turn to the factors that contribute to retention of a rural workforce, we can gain insight into possible enablers worth exploring. It is well established that the following three factors increase rural recruitment as well as retention in health services:[27]



To take this trifactor further, we could argue that having had rural exposure allows individuals to appreciate first-hand the benefits and opportunities it can offer and therefore bring these positive learnings to continue in rural practice and to share with colleagues.

Some of the **professional benefits** of working in a rural or remote area might include:

- Higher degree of autonomy and responsibility
- More opportunity and the variety that comes with working in a multidisciplinary team
- A more diverse patient mix
- Access to professional development and support networks to build skills and encourage leadership
- Career progression opportunities
- Strong workplace relationships and the opportunity for meaningful collaboration
- Specific allowances or incentives associated with regional or rural practice

Example of hub-and-spoke model

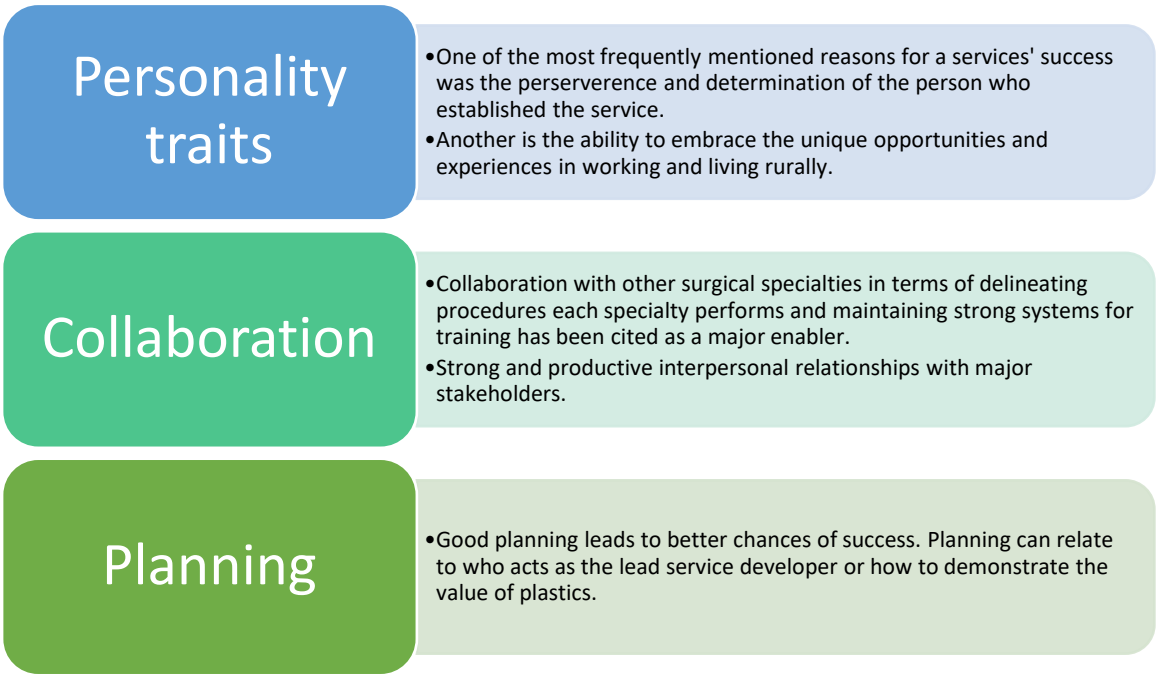
During consultation in relation to the hub-and-spoke model of care, it became clear that the appeal in this model was in the opportunities offered to travel around the state and to see parts of the country that might otherwise never be seen. Given an individual practitioner may be based at the 'hub' but may also travel to the 'spokes' on a rostered or fly-in-fly-out model, it exposes that practitioner to a broader variety of facilities, services, communities, and patient presentations that might otherwise be missed if based in a single metropolitan service. Additionally, it allows for the practitioner to really focus on patient and community need as the context surrounding any given presentation becomes a determinative factor in that patients' treatment journey.

In addition to the above occupational benefits and those outlined in Section 2: Personal factors, the below list outlines some of the personal benefits to living regionally:

- **Work-life balance.** Regional areas tend to be more relaxed and create a sense of value in maintaining a healthy work-life balance to allow you to focus on those other areas of your life.
- **Sense of community.** Not only are regional and rural communities very welcoming, there is also opportunity for contributing to a strong sense of community. This is often a major 'pull factor', when considering a move out of the city.
- **More affordable lifestyle.** The cost of living in regional and rural areas is substantially less than in a metropolitan area.
- **Peaceful commute.** The hustle-and-bustle of the morning commute and traffic jams is absent in a regional commute. Furthermore, parking is accessible and inexpensive.
- **Living with nature.** Fresh air, clean water, stunning landscapes, abundant wildlife and endless outdoor activities. What more needs to be said.

ENABLING CATEGORIES

From the various consultations it was clear that there are 3 key categories of enablers:



PERSONALITY TRAITS

- Persistence – both in personality and in terms of interactions with hospital administration.
- Negotiation and advocacy skills.
- Don't give up - when you see a brick wall, you may need to either knock it down or go around it.
- Lobby and network with people of influence.
- Support from colleagues – initially as well as continued.
- Openness to collaborate between surgical specialties.
- Depending on personal preference, remoteness may be a 'pull' factor in terms of lifestyle.
- Understanding the politics behind how public hospitals work.

COLLABORATION

- Working in close collaboration with other surgical specialties – for instance, taking some of the more complex cases off other specialties. Examples include: skin cancer, hands, and injuries not covered by other specialties.
- Having the support of the professional society (ASPS) to assist with administrative navigation.
- Where a plastics supervisor may not be available, linking trainees with supervisors who are not from the same sub-specialty. Where there are workforce shortages, this is a reasonable solution that enables growth in the workforce.
- Entering a service after another provider has paved the way. This is helpful particularly in terms of laying the groundwork with hospital administration.
- For a SIMG, having a surgeon go out on a limb to provide advice and support prior to arriving in Australia – for examination practice and support.
- In terms of recruitment, thinking outside the box. For instance, could a P&RS position be partly funded by orthopaedics?
- The hub-and-spoke model requires collaboration and partnership between smaller, more rural services and larger hubs in order to wrap the service around the patient/community need. This requires good administrative support and allows those involved in care and treatment to focus on clinical and support needs.

PLANNING

- Positioning oneself to become the first on call point of contact in some of the cases that may be done by general or orthopaedic surgeons. How? By being available on call all the time so exposure to the more complex procedures is increased and you can show hospital administrators the value of plastics.
- Where possible, run a private hospital initially to fund lifestyle while a public list grows.
- Appointing a data officer may be helpful to collate available data in the planning and initial phases to demonstrate need to funding parties.
- When initially meeting with hospital administrators, establishing a clear expectation that interest in the role is contingent on the Executive being fully supportive of a P&RS unit.
- Having one surgeon move into the area initially to demonstrate a need for P&RS and conduct the 'ground-work'. Progress to employ trainees and more staff. Incremental growth rather than expecting a full unit immediately.
- It has been suggested that this 'scoping' person should be a more senior consultant as sending a junior consultant would be placing unreasonable pressure and expectation on a comparatively less experienced individual.

- Identifying opportunities and harnessing them – for example, if you are aware of a gap in service and the local health district's position regarding this gap being exposed, approach the district to commence discussions about community need.

BROAD RECOMMENDATIONS

- Good relationship with hospital administration.
- Good relationship with surgical colleagues.
- Willingness to work across specialties – collaboration rather than competition.
- Increased support for trainees and registrars.
- Financial and other incentives to boost the domestically trained workforce interest in rural and regional practice.
- Enjoy the lifestyle!

6. MODELS OF CARE

This section describes some of the general characteristics of some models of care that are common in rural and remote settings. Focus is on the logistic or practical considerations rather than conceptual considerations. As with other sections in this guide this is not an exhaustive list but rather provides a general overview in the hope that readers may be able to select what suits their circumstances best.

Whilst these models may hold distinct names or labels, many of the features are indistinguishable from the next model. They are all, however, tied to a common aim – **improving access to specialist services for rural and remote community members by removing some of the common barriers to accessing care and treatment.**

> *"The goal is a national system of team based surgical care, starting with patient and place rather than practitioner. This means care is provided by the practitioner closest to the patient with the appropriate skills"*
>
> [RACS Collaborate for Rural, p4]

Outreach

Characteristics and Features	Things to Consider
Outreach specialist services may be used to cover a variety of different service delivery models, and arguably captures a range of distinct models such as FIFO and hub and spoke. Outreach services are intended to reduce access barriers for rural and remote communities such as transport barriers, economic hurdles, and cultural safety barriers. Generally speaking, outreach services are visiting services and aim to send/bring a specialist to the community that requires the service. This may also be via telehealth, where appropriate.	68% of all outreach specialists come from metropolitan areas.[28] Where will funding come from? Private (MBS) or public health? What is the most cost-effective way to deliver services without compromising on patient outcomes? Administrative support may prove vital to ensuring a specialist outreach service is operational. How will staff rostering be implemented? Rotational roster? Surgeon by day of the week?

Fly-In Fly-Out (FIFO)

Characteristics and Features	Things to Consider
A FIFO model is where a surgeon who resides in a metropolitan or large regional area travels to a rural or remote location in order to perform surgical services in the absence of a resident surgeon. It is a form of outreach.	Given the FIFO surgeon is required due to an absence of a resident surgeon, the FIFO surgeon must ensure continuity in post-operative care. This means they should maintain responsibility for the patient in coordination of pre- and post-operative care.

Hub and Spoke

Characteristics and Features	Things to Consider
The hub and spoke model refers to a network of services which includes a primary service, or 'hub', offering a full array of surgical services which is complemented by secondary services, or 'spokes', which offer a more limited range of surgical services. Patients are directed to the hub if they require more intensive services. Hub and spoke services are best considered partnerships, not franchises.	Although known for its efficiency, the hub and spoke design will only work where there is a sufficient network of services in the region. Risks: • Congestion at the hub site • Spoke staff dissatisfaction • Overextension of spokes • Disruption or difficulties in transportation between hub-spoke or spoke-spoke.

Specialist Outreach Service Centres

Characteristics and Features	Things to Consider
SOS's are a multidisciplinary service which are located in a rural or remote location. There are usually a set number of funded positions such as obstetricians / gynecologists, general surgeons, and so forth, each of which may operate from that outreach service any number of days a week. An administrative assistant and coordinator are usually also funded. The idea is that a patient may attend that service for any given condition or health need and various specialists will be available for consultation or procedures on certain days of the week.	Given inpatient services are not usually available in SOS, it is essential that there is a hospital base to manage inpatients for continuity of care. Some surgeons feel that outreach does not make good use of their time and resources and can be vulnerable if staffing is not robust. Specialist outreach usually only applies to minor procedures rather than major surgery.

CONCEPTUAL CONSIDERATIONS

Irrespective of the logistics of a model of care, there remain the more conceptual factors.

Building the service around an identified need

The more successful models of service delivery have been those that **build around an identified patient or community need**. Case studies where **multidisciplinary** and interdisciplinary care work well in this regard include: trauma, cancer, and paediatric. These case studies have been created and built around an identified need. What this tells us is that the development of these multiple models of service delivery are **suited to the patient and place**. The model is built around the patient and community need; not imposed upon a community based on perceived need.[29]

Patient transfer or surgeon outreach?

Another factor to consider is **patient transfer** and how this may fit into a model of care or how a model of care may work around it. The outreach models described above are about taking the surgeon to the community or patient. However, this is not always possible and, in many circumstances, it will be the patient who is taken to the surgeon.

Whilst this is generally accepted as a less ideal arrangement given the cost in transport and delays in treatment, many still report that patient transfer is occurring even where there is a suitable surgeon in the more remote location. Such transfers are not efficient by any means.

7. CASE STUDIES

The following case studies have been collected from ASPS members who have kindly agreed to participate in consultations for the purposes of ASPS Rural and Regional Portfolio. In order to maintain anonymity, each case study has been classed according to its Modified Monash Model (MMM) classification rather than its geographic location.

Some basic analysis will be provided at the end of this section as there are some interesting trends that can be drawn out from the group of case studies. This relates to the characterises of each case study according to the remoteness of that service.

Case Study 1: LARGE AND SMALL RURAL TOWNS – "*Dr A*"

Dr A has established services in **large rural** (MM3) and **small rural** (MM5) **towns.** Dr A attributes the current success of the plastic and reconstructive surgery services to motivation and persistence, particularly as the first P&RS service in those locations.

Barriers

The following points reflect some of the more difficult issues that were required to be tackled in order to build and strengthen the workforce and P&RS service in this case study:

- **Initial insufficient public hours.** Dr A was required to establish a private practice in addition to working in the public system in order to generate enough income to make the move sustainable both personally and professionally.
- **Demonstrating P&RS's place in the public health system.** As is described above, much of the work that may usually be performed by a plastic and reconstructive surgeon may be unfamiliar to or misunderstood by non-metropolitan residents and decision-makers. Dr A therefore embarked on the challenging journey to demonstrate plastic and reconstructive surgery is not just about 'boob jobs'; it can actually service the community well particularly in cases of trauma, skin cancer, microsurgery, and so forth.
- **Hard work, fighting and sacrificing.** Dr A described a great deal of hard work and motivation to overcome the challenges presented by hospital administration, government, and health departments. Given these services were the first in the area, Dr A had to not only educate these decision-makers around the benefits and place of P&RS, but also had to negotiate and advocate for some of the operational barriers to be removed or at least reduced.
- **Reduced access to equipment and facilities.** Dr A and team embarked on a fundraising venture to raise money for a microscope that was unavailable to them otherwise.

Enablers

Dr A believes that the following enablers have contributed to the current success of their practices:

- First and foremost, **hard work and perseverance**.
- Establishing a **private practice** alongside a public appointment – this enabled Dr A to balance public and private patients and rooms; as well as subsidising public income whilst working through the barriers in the public system.
- Making oneself indispensable to the hospital and patients by being available **on call** 24/7 to perform the more complex procedures that may not be performed by the other surgical specialties.
- Recruiting **registrars** to build the service.

Key take-home

Whilst there are still some ongoing challenges such as expanding the training program, Dr A provides the following reflections: whilst there is a need to 'go hard and smart' in order to establish a new service, remember to nurture professional relationships during the early stages. Another key lesson has been to be prepared for sacrifices such as being available on call 1:1 whilst building the service. Dr A attributes the success of their services largely to on call availability and therefore becoming the first point of contact for specific presentations.

Case Study 2 – REGIONAL CENTRE – "*Dr B*"

Dr B responded to a job advertisement in a **regional centre** (MM2) public hospital and, after accepting an offer, moved to Australia as an overseas trained plastic surgeon. Dr B was not the first plastic and reconstructive surgeon at the facility. However, after a difficult and long journey (an 'uphill battle') the unit grew to a point that patient need and workforce shortages were being addressed more effectively.

Barriers

The following points reflect some of the more difficult issues that were required to be tackled in order to build and strengthen the workforce and P&RS service in this case study:

- **Demonstrating the need for P&RS.** Despite Dr B filling an advertised job, there was still a great deal of demonstrating to hospital administrators what plastic surgery can offer. Dr B described the need to show professionalism, high standards of service, and gaining the respect of peers in order to secure hospital administration support.
- **Insufficient public hours & the '10 year moratorium'.** International medical graduates (IMGs) are subject to section 19AB of the *Health Insurance Act 1973* which requires that non-GP specialist IMGs must practice in an area of need for 10 years before they may access Medicare benefits. In this case, the surgeon was solely dependent on the public FTE appointment which was only 8 hours/week initially. Where the surgeon has family needs to meet, a restricted public appointment may be a major deciding factor in declining an opportunity.
- **Availability of anaesthetists**. In this case, there was and continues to be a shortage of anaesthetists. Having a reduced surgical team can be a major barrier to ensuring patient needs and workforce issues are met.
- **Lack of support.** IMGs are required to undergo multiple examinations. Failing the first few attempts is not uncommon and in this case, the surgeon ultimately passed the exams only after receiving some support from a colleague interstate. A lack of support in preparing for examinations can result in regional areas suffering unnecessary and avoidable workforce shortages.

Enablers

Dr B believes that the following enablers have contributed to the current success of their practice:

- Interpersonal relationships and support through informal **networks** with interstate colleagues.
- **Support with examinations** via mentorship and exam preparation.
- Sheer **determination and perseverance** to demonstrate the need for plastics to hospital administration.
- Administrative and personal **skills** acquired through previous experience in running a practice.
- **Negotiation and management** skills to tackle some of the barriers faced along the way.

Key take-home

Given Dr B's experience as an overseas-trained plastic surgeon, many of the take-homes relate to improving support for specialist international medical graduates to enable them to remain in regional areas and continue to support local communities. These have been discussed in previous sections.

Dr B has also described the benefits of having a broad scope of practice. Whilst much of Dr B's broad scope of practice was a result of their overseas training and experience, there are always ways to continue to expand one's practice.

Case Study 3 – REGIONAL CENTRE & SMALL RURAL TOWN – "*Dr C*"

Dr C replaced a retired colleague in a **regional centre** (MM2) and also practices in a **small rural town** (MM5). Dr C is the sole plastic and reconstructive surgeon in the catchment area. Following the previous surgeon's retirement and prior to Dr C commencing, all patients were being transferred to the closest metropolitan centre. Part of Dr C's journey included expanding the reconstruction side of service as the previous surgeon largely focused on hands only.

Barriers

The following points reflect some of the more difficult issues that were required to be tackled in order to build and strengthen the workforce and P&RS service in this case study:

- **Hard work.** Dr C describes a difficult road in building the service up to a place that community need is being met. As with other case studies, Dr C has explained that there is a lot of 'pushing, angst, and storming up to administration to ask what is going on'. A component of these challenges is also the work-life balance. Dr C initially took on long hours due to demand.
- **Isolation.** Dr C is a relatively new Fellow. Despite having strong collegiate networks, Dr C has described the difficulties in being the only plastic and reconstructive surgeon in the area on the ground.
- **Private FIFO model.** A private surgeon comes to the region as a FIFO specialist, but only performs privately. Whilst Dr C appreciates the additional service, FIFO is a model that should be approached with caution as it may (or may not) be what the community need. Dr C explains that this service can pose a barrier to reaching their goal of having more enthusiastic, committed consultants and registrars who are interested in long-term regional work.
- **Funding.** Whilst hospital administration is supportive of the unit, there are some roadblocks encountered in terms of funding. This is particularly in relation to establishing an outpatient clinic.

Enablers

Dr C believes that the following enablers have contributed to the current success of their practices:

- **Interpersonal relationships** and support through informal networks with interstate colleagues and peers who practice other surgical specialties. Dr C feels they can call a friend whenever they need.
- Dr C demanded **support from hospital administration** prior to commencing. Whilst recognising this is likely luck of the draw, Dr C has explained that they made it clear to decision-makers they would only be on board if the decision-makers fully committed to supporting a P&RS unit.
- Openness and willingness of other surgical specialties to **work together** and an active decision not to work against each other.

Key take-home

One of the more appealing aspects of Dr C's work is the collaboration between surgical specialties. Dr C has described the appreciation the general surgeons expressed when Dr C spearheaded the head & neck and breast reconstruction services in that area. Dr C is also regularly contacted by their general surgeon peers when complexity and presentations require.

Whilst the service is still in its infancy, there is a clear vision for the future growth of the service which is focused on community need. Dr C believes this is the only way to build a service. Dr C stresses the importance of having formal acknowledgment and encouragement for unaccredited registrars via a points system for SET training. This would encourage P&RS registrars to take on rural or regional rotations early in their career, which may lead to longstanding rural and regional commitment.

Case Study 4 – METROPOLITAN WITH REGIONAL CENTRE OUTREACH – "*Dr D*"

Dr D is based in a **metropolitan area** (MM1) but set up a locum service in a **regional centre** (MM2) some years ago. The current case study relates to the establishment of the locum service and showcases a more positive and encouraging experience in establishing a new service. The model of care established was a hub-and-spoke model with the 'hub' being based in the metropolitan location and one of the 'spokes' being in a regional centre. Dr D provides a glimpse into the experience of the FIFO practitioner.

Barriers

The following points reflect some of the more difficult issues that were required to be tackled in order to build and strengthen the workforce and P&RS service in this case study:

- **Lack of administrative support.** After attempting to take the successful hub-and-spoke model to a more remote location, Dr D reflected that its success is largely dependent on having good administrative support. Having travel arrangements, theatre lists, accommodation, junior staff rostering organised by an administrative team (preferably from the host service) enables the FIFO worker to maximise their time and energies towards clinical aspects. Dr D has found that things run smoothly when there is a theatre list ready to go upon arrival at the 'spoke'.
- **Demonstrating the value in P&RS.** Similar to other case studies, Dr D explained that local buy-in activities were initially required. Dr D therefore became the 'band-aid' surgeon so as not to give the impression of selecting the more interesting surgeries only.
- **Reliance on junior staff.** This point has been described as both an enabler and a barrier. On one hand, having junior staff to boost the workforce and reduce waitlists has been invaluable. However on the other, having a large volume of junior staffers may result in 'too much efficiency' and therefore reduce the data available to demonstrate need.

Enablers

Dr D believes that the following enablers have contributed to the current success of their practices:

- **Government support.** Dr D described having State Health support when establishing the locum service and in subsequent efforts to take the hub-and-spoke model elsewhere. This support meant any systemic barriers were minimal.
- **Flexibility with base hospital.** Dr D explained the importance of having colleagues step in at the 'hub' service when Dr D is working from one of the 'spokes' as contributing to the services' success. In simple terms, having support from the main hospital to allow regular and frequent absences.
- **Good administrative support.** As outlined above, having good support in arranging theatre lists, travel arrangements and rostering allows for more efficient and productive FIFO service delivery.
- **Rural experience.** Dr D described having worked rurally throughout their medical career and provided this as a factor which has allowed them to appreciate the value and opportunities in this space. Dr D particularly felt that past experience moving around the state has helped.

Key take-home

A key message from Dr D's experience is the value of flexibility – both of the individual practitioner and the various services they function within. This case study highlights the particular appeal of a FIFO or hub-and-spoke model where conditions are right. As Dr D described the model was not as successful in separate location largely due to the lack of administrative support, and what this also highlights is that each location is unique. Dr D's locum service has grown and shown that successful outcomes are achievable when approached carefully and analytically.

Case Study 5 – METROPOLITAN IN REGIONAL PHN – "*Dr E*"

Dr E practices in a **metropolitan area** (MM1) within a **regional PHN.** Although it is a metropolitan location funding is allocated according to regional funding principles. Metropolitan funding is activity-based whereas block funding is usually given to smaller rural and regional hospitals. In this case study, a metropolitan hospital is given regional block funding.

Barriers

The following points reflect some of the more difficult issues that were required to be tackled in order to build and strengthen the workforce and P&RS service in this case study:

- **No on call P&RS.** There is no funding allocated to on call arrangements for plastic and reconstructive surgeons. Dr E describes this as a major concern particularly given these services include a paediatric and trauma service. An additional concern is that free flap work is not covered as there is no on call funding.
- **Funding structures.** One of Dr E's main challenges is the funding structure. As described above, this case study receives regional funding (block funding) but is a metropolitan-based service. Whilst this influences how money comes in, it also impacts how money can be spent. As a result of this funding structure, Dr E's services encounter difficulties arguing for SET trainees as a regional centre, despite being a major tertiary teaching facility. In general terms, the service is treated as regional under some systems or processes and metropolitan under others. This inconsistency can result in inefficiencies and disincentives.
- **Lack of funding for certain types of surgery.** Dr E describes the hospitals refusal to fund (or minimal funding for) paediatric plastics, burns, free flaps, breast reconstruction, and melanoma's under plastic and reconstructive surgery.
- **No GP referrals into hospital.** All activity for plastic and reconstructive surgeons is by secondary referral as there is a restriction on GP referrals to the unit. Given many case study participants have described on call availability as being a key to securing support and success for plastics this restriction acts as a major barrier to establishing (or growing) a plastic surgery service.
- **Incompatible model of care.** This service should be considered a large regional centre (or a 'hub' amongst 'spokes'). However given the restrictions on what plastic surgeons can (and cannot) do, many patients such as burns patients who are transferred from more remote surrounding areas ('spokes') may again be transferred to a different metropolitan hospital some hours away. This results in time inefficiencies and potential delays in treatment. Many of the resources to make this location function as a 'hub' do exist but are not being utilised. Recognising this location as a hub could ensure funding, patient care, and resources are not being diverted further away from the patient or community than is necessary.

Key take-home

Dr E's experience raises some particularly challenging issues. In this case study, many of the barriers remain in place. Despite the clear challenges, Dr E believes the following ideas may be incorporated to any plan moving forward in an effort to solve Case study 5's predicament:

- Funding according to the size of the hospital and the area or population it serves.
- Expand a regional outreach model into surrounding areas. These rural and regional areas are currently being serviced by other major metropolitan-based surgeons but could more efficiently be serviced by surgeons in this location.
- Encourage GP referrals to ensure equity of access for patients.
- Establish an on call service, including major trauma services.

Each of these case studies present unique and distinct experiences. The hope is that a broad enough selection of case studies according to geographical remoteness can provide a representative sample of some of the factors and characteristics one may encounter in non-metropolitan areas.

COMMON THEMES

Hours of public work and economic factors. Participants describe various reasons for, and impacts of, insufficient public hours and income or funding.

- Insufficient public hours may require supplementing income through private practice.
- For an overseas-trained plastic surgeon, private practice may not be an available option, making it difficult to recruit in the absence of other incentives.
- Funding structures may dictate (and restrict) how community need can be met through P&RS.[30]
- Some hospitals have placed a limit on P&RS FTE's irrespective of surgeon skill and experience. This can impact a patient journey as travel times may be extended and unnecessary transfers may be carried out.

Perseverance and hard work. No case study omits these factors. It is abundantly clear that perseverance and hard work are required when establishing or expanding a plastic surgery service in a regional or rural area. This is largely due to having to convince decision-makers of the value of plastics during the initial stages as well as in maintaining operational resources once the service is established.

On Call rostering is needed. Whether around-the-clock on call is offered and proposed by the surgeon in an effort to increase exposure and recognition, or is an unintentional requirement due to demand, it is clear that an arduous on call roster is a prerequisite to gaining hospital recognition for the value of a plastic and reconstructive surgery service. In those instances where hospitals refuse to fund any on call arrangement for P&RS, it can be incredibly difficult to demonstrate what plastics can offer, particularly due to general misconceptions about P&RS and in the absence of specific data on community need for plastics procedures.

Collaboration and support. One of the more notable common enablers is collaboration across surgical specialties and support from plastics peers. Additionally, support and productive relationships with local health districts and administrators appears to be a clear enabling factor and one that is strongly encouraged.

ENDNOTES

[1] This data has been collated as part of an ASPS Rural and Regional Portfolio project.

[2] Estimates of ideal P&RS surgeon to population ratios are based on publications for the New Zealand plastic and reconstructive surgery workforce and UK and Republic of Ireland Plastic Surgery Workforce report. Peacock A, Adams B, Tan S. "New Zealand plastic and reconstructive surgery workforce: update and future projections", in *Australasian Journal of Plastic Surgery,* (2020), 3(2), pp3-10; and British Association of Plastic Reconstructive and Aesthestic Surgeons. "Plastic Surgery Workforce UK and Republic of Ireland Profile and Analysis" (2020).

[3] For more detail on regional-specific characteristics see the *National Strategic Framework for Rural and Remote Health* (2011). Available at https://www1.health.gov.au/internet/main/publishing.nsf/Content/national-strategic-framework-rural-remote-health.

[4] Dobson, Hannah, Werenka Ranasinghe, K. B., Matthew K. H. Hong, Liliana N. Bray, Manivannan Sathveegarajah, Fatima Vally, and Francis J. Miller. "Waiting for Definitive Care: An Analysis of Elapsed Time from Decision to Surgery or Transfer in a Rural Centre." *Australian Journal of Rural Health* 23 (2015): 155.

[5] For a commentary on the use of telehealth in rural settings, see Tam, Alec, Amy Leung, Cara O'Callaghan, and Narelle Fagermo, "Role of Telehealth in Perioperative Medicine for Regional and Rural Patients in Queensland" in *Internal Medicine Journal* 47 (2017): 933.

[6] This is also the case in the USA where rural plastic surgeons also perform a wide scope of practice. See Mealke, J. D., Sean Cantwell, Andrew Mills, Kuldeep Singh, Steven Moran. (2020). "Is Rural Plastic Surgery Feasible and Important?: A Survey and Review of the Literature", in *Annals of Plastic Surgery,* 84(6), 626; and Meyerson, J., Vial, N., Pearson, G., Nguyen, V., & Manders, E. (2017). "The Rural Plastic Surgery Residency Rotation: Rising to Meet a National Crisis" in *Plastic and Reconstructive Surgery Global Open,* 5(9), e1467.

[7] Royal Australasian College of Surgeons. *Position Paper: Rural and Regional Surgical Services*. 2014.

[8] This has been raised by RACS in multiple policy documents, position statements and other literature. For similar conclusions see the *National Strategic Framework for Rural and Remote Health* (2011) and O'Sullivan, Belinda, Matthew McGrail, and Deborah Russell. "Rural Specialists: The Nature of Their Work and Professional Satisfaction by Geographical Location of Work." *Australian Journal of Rural Health* 25 (2017): 338, amongst others.

[9] O'Sullivan et al [ibid].

[10] Royal Australasian College of Surgeons, *'Select for Rural: Rural Health Equity Strategy'* (2021).

[11] Kumar, S., and Clancy, B. (2021) "Retention of physicians and surgeons in rural areas – what works?" *Journal of Public Health* 43(4), e689.

[12] Royal Australasian College of Surgeons, *Position Paper: Generalists, Generalism and Extended Scope of Practice*. 2015.

[13] For more information in relation to farming and agriculture industries and health, see the National Centre for Farmer Health. https://farmerhealth.org.au/

[14] For further information, see BreastSurgANZ's Australian Access to Breast Reconstruction Collaborative Group's Position Statement on *Access to Post-Mastectomy Breast Reconstruction Information and Services in Australia.* Available at: https://www.breastsurganz.org/breast-reconstruction-position-statement/

[15] For more information on farm injuries, see Royal Australasian College of Surgeons, *Position Paper: Farm Injury Trauma Prevention (2017).*

[16] Government of Western Australia, Department of Health (2012) [from Understanding the process to develop a model of care in the ACI']

[17] *National Strategic Framework for Rural and Remote Health* (2011)

[18] Meyerson, Joseph, Jessica Suber, Tyler Shields, Ian Valerio, Ernest Manders, and Garrett Vangelisti. "Understanding the Impact and Misconceptions of Rural Plastic Surgery." *Annals of Plastic Surgery* 82, no. 2 (Febrrary 2019 2019): 135.

[19] Royal Australasian College of Surgeons, *'Train for Rural: Rural Health Equity Strategy'* (2021), p 11.

[20] Meyerson, Joseph, Jessica Suber, Tyler Shields, Ian Valerio, Ernest Manders, and Garrett Vangelisti. "Understanding the Impact and Misconceptions of Rural Plastic Surgery." *Annals of Plastic Surgery* 82, no. 2 (Febrrary 2019 2019): 133.

[21] Royal Australasian College of Surgeons, *Position Paper: Rural and Regional Surgical Services* (2014).

[22] See: *National Strategic Framework for Rural and Remote Health* (2011) and O'Sullivan, Belinda, Matthew McGrail, and Deborah Russell. "Rural Specialists: The Nature of Their Work and Professional Satisfaction by Geographical Location of Work." *Australian Journal of Rural Health* 25 (2017): 338.

[23] See Department of Health and Ageing: https://www.health.gov.au/health-topics/doctors-and-specialists/what-we-do/19ab/moratorium

[24] See Department of Health and Ageing website: https://www.health.gov.au/health-topics/doctors-and-specialists/what-we-do/19ab/exemptions

[25] See Royal Australasian College of Surgeons, *'Train for Rural: Rural Health Equity Strategy'* and '*Retain for Rural'* generally.

[26] O'Sullivan, McGrail, and Russell, n22.

[27] Royal Australasian College of Surgeons, *'Select for Rural: Rural Health Equity Strategy'* (2021).

[28] O'Sullivan BG, Joyce CM, McGrail MR. 'Rural outreach by specialist doctors in Australia: a national cross-sectional study of supply and distribution'. *Hum Resour Health* 2014; 12: 50. doi:10.1186/14784491-12-50

[29] Royal Australasian College of Surgeons, *'Collaborate for Rural: Rural Health Equity Strategy'* (2021).

[30] Further information on funding can be found at the National Health Funding Body website: https://www.publichospitalfunding.gov.au/public-hospital-funding/funding-types.