Remote and Rural Medicine

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Chapter 1
Introduction
Ever considered a career in remote/rural medicine? If I’m perfectly honest it hadn’t really crossed my mind until this summer. The thought of pursuing a career in general practice had crossed my mind a couple of times, but in amongst the hustle and bustle of hospital medicine that thought had become a background noise – one of those noises that you hear but often ignore, such as a passing car or mild tinnitus.

Even if you have never considered a career in remote/rural medicine or general practice- don’t stop reading yet. Like me, you may be pleasantly surprised at what remote/rural medicine can offer you- in terms of geography, lifestyle and the type of practice and specialty most suited to you.

This summer I have spent the past 5 weeks traveling around Scotland, observing practice in areas of varying rurality. This iBook offers an insight into remote/rural medicine, as well as practical advice on pursing a career in this specialty and some pretty pictures. If you’re reading this in preparation for beginning your 5th year rural placement – this article will also highlight some things you might be involved with during your time on placement and some important things to know about remote/rural practice so that you might get off to a good start with your supervisor.
Where did I go?

The interactive map on the right the locations of the practices I visited. By tapping on each name, you will see more about that practice.

Why were these locations chosen?

These locations were initially chosen based on the URcat scale, or the Urban Rural Classification. The Scottish Government first published the Urban Rural Classification in 2000, to further help address the inequalities in health, transport and education in remote/rural areas of Scotland. The classification is based mainly around number of inhabitants of a particular area versus the distance to the nearest settlement with extensive medical facilities. The following link is to the 2010 publication of the Scottish Government Urban Rural Classification document:


I was however informed on several occasions that the URcat scale is not entirely representative of the rurality of a location, and in practice is not often used. Dr. Tregaskis, a consultant physician at Belford hospital in Fort William challenged the definition of remoteness in an article commissioned by the Royal College of Physicians. He spoke of remoteness in geographical terms, in professional terms (i.e professional isolation, difficulty updating skills) and psychological terms. The scale did however provide some sort of indication of the types of places I would be visiting, to help ensure some variation.
Table 2.2 below from the Scottish Government Urban Rural Classification document defines the urban rural classifications.

**Table 2.2: Scottish Government Urban/Rural Classification, 8-fold**

<table>
<thead>
<tr>
<th>Class</th>
<th>Class Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Large Urban Areas</td>
<td>Settlements of over 125,000 people.</td>
</tr>
<tr>
<td>2</td>
<td>Other Urban Areas</td>
<td>Settlements of 10,000 to 125,000 people.</td>
</tr>
<tr>
<td>3</td>
<td>Accessible Small Towns</td>
<td>Settlements of between 3,000 and 10,000 people, and within a 30 minute drive time of a Settlement of 10,000 or more.</td>
</tr>
<tr>
<td>4</td>
<td>Remote Small Towns</td>
<td>Settlements of between 3,000 and 10,000 people, and with a drive time between 30 and 60 minutes to a Settlement of 10,000 or more.</td>
</tr>
<tr>
<td>5</td>
<td>Very Remote Small Towns</td>
<td>Settlements of between 3,000 and 10,000 people, and with a drive time of over 60 minutes to a Settlement of 10,000 or more.</td>
</tr>
<tr>
<td>6</td>
<td>Accessible Rural Areas</td>
<td>Areas with a population of less than 3,000 people, and within a drive time of 30 minutes to a Settlement of 10,000 or more.</td>
</tr>
<tr>
<td>7</td>
<td>Remote Rural Areas</td>
<td>Areas with a population of less than 3,000 people, and with a drive time of between 30 and 60 minutes to a Settlement of 10,000 or more.</td>
</tr>
<tr>
<td>8</td>
<td>Very Remote Rural Areas</td>
<td>Areas with a population of less than 3,000 people, and with a drive time of over 60 minutes to a Settlement of 10,000 or more.</td>
</tr>
</tbody>
</table>
STUDENT TASK

Using the URcat scale on the page 6, complete task 1 in the workbook provided.
STUDENT TASK

Before commencing my placements, I had a think about what to expect from remote/rural practice. I have written my thoughts in the following pages, and after my experiences I was able to compare my preconceptions with the reality.

Using the workbook provided, write down a few ideas of your own for task 2.
As previously mentioned, I’ve never put a great deal of thought into remote/rural medicine. Being ‘brought up’ in the surroundings of an urban hospital environment is certainly practical, but like children we become accustom to our surroundings and culture in which we live. Children look for role models to aspire to or learn from, as do we – even if it’s subconscious.

So if we are raised as Tomorrow’s Doctors in an urban environment, are we likely to aspire to work in a rural setting over the comforting familiarity of inner-city medicine?

I think it’s down to preconceptions. As I write this, I currently have limited experience of rural medicine. I come from a small town in Scotland, approximately 40 miles away from Ninewells Hospital and 17 miles away from Perth Royal Infirmary. We have a well-sized medical center with 11 partners between two practices, serving a population of 11,000 in a 10 mile radius. Next door we have a small cottage hospital with a 44-beds and a minor injuries unit, as well as physiotherapy, occupational therapy and X-ray facilities. If I phone my GP I can always get an appointment within the next day or two, and there is a pharmacy 100 yards from the practice. Yet it surprised me to learn that my hometown is actually ranked as a 7 on the URcat scale. We’re less than an hour away from Dundee, Edinburgh and Glasgow, with fairly good roads and an excellent medical practice. Surely that doesn’t warrant a 7? Then the thought occurred to me- I’ve never been that unwell, that 35 minutes is the difference between living and kicking the oxygen habit.
So back to preconceptions. I’ve thought about what I expect from my rural placements over the upcoming weeks. A small part of me had fantasies along the lines of thrilling helicopter rescues, dramatic boat rides, abseiling down cliff faces... I've started to realize that this may not be the case, especially as my supervisor told me to ask permission before so much as considering stepping onto a ferry. Let's take it down a peg. Now I'm picturing two doctors in tweed playing tabletop football, in a tiny practice surrounded by nothing but rolling hills and sheep, waiting room empty. The phone rings- it’s the receptionist. “You’ve got an appointment next Thursday, Dr. Smith.” Maybe that’s a bit extreme. But truth be told- I’m not entirely sure what to expect.
Chapter 2

History
Despite tremendous advances in medical practice over the past few centuries, the fundamentals of practice in rural areas have remained much the same. While history was never a strong point (nor a favourite) of mine, a knowledge of the history of remote rural medicine is important to practice today.

The practice of medicine in Scotland between the 16th and 20th Centuries was extremely variable. For example, the Royal College of Physicians was formed in Edinburgh in 1505 after formal collaboration with the Barber Surgeons, whereas medicine out with the major cities remained very much as unique as the Clans in which it was practiced. (Donovan and Bain, 2000; Douglas, 2009) More often than not a single doctor or single nurse was the only unit of medical care for several hundred square miles. As you can imagine, without the luxury of 21st century communications tools and transport systems, single-handed medical practice truly was single-handed. After the Battle of Culloden in 1746, the churches took increasing responsibility for social organisations, with some even providing food and housing to doctors willing to come and work in their area. (Donovan and Bain, 2000)

Following the foundation of the BMA in 1832 and the GMC in 1858, government began to take an interest in how medicine was practiced throughout Scotland. It was in 1905 the Dewar Commission into Medical Attendance in the Highlands and Islands was set up. Shortly after its’ establishment the committee carried out research in the form of questionnaires across Scotland to determine the state of medical provision, and provide recommendations for future practice. This report was known as the Dewar Report, published in 1912 and named after the Chair of the aforementioned committee, Sir John Dewar. The report recommended:

- Better training for rural doctors
- Better use of transport and technology
- Guaranteed minimum levels of service, despite geographical location.

This report was arguably the biggest turning point to provision of medical care in remote rural areas, and even helped shape NHS Scotland, which would be founded some 36 years later. This year marks 100 years since the publication of this report. Even today the Dewar Report still provides a foundation upon which to base current medical provisions and standards, to ensure good practice as well as equality.

In 1933, one of the first air ambulance flights was made to a single-handed practice on North Uist. This journey was to transfer a terminally ill priest from Glasgow Western Infirmary back to his home on the island, so that he may be allowed to die at home. I believe this summarises the values that remote rural medicine still hold today.
What makes remote and rural medicine so different in practice? This chapter will highlight some of the practical differences between urban and rural practice.
Emergency cases can be difficult to manage at the best of times. However even a straightforward emergency case could present with added complications in rural areas, in terms of getting to the patient or casualty and then transferring them to the nearest hospital for potentially life-saving care. For example, a critically ill or injured patient at the western shore of Loch Rannoch may not be reached by the local GP for 45 minutes or more, and an ambulance traveling from Pitlochry (provided it’s available and not on another call) may be up to
an hour and a half reaching this location. An air ambulance may be available but is it safe to land there? And what about adverse weather conditions? All of the above factors further increase the pressures within the so-called Golden Hour.

Each location has different practicalities in terms of transferring patients to the most appropriate secondary care. However the general rule of thumb is: the more remote the location, the greater the need for the GP to be specialised in emergency medicine. It is for this reason, many injuries or conditions that would be sent to the local A&E in an urban setting are managed either in the practice or at the local cottage hospital. One particular example that springs to mind was the case of a 45-year old gentleman who had drilled through his hand with an electric drill. He phoned for an emergency appointment and arrived with his right hand and arm completely covered in blood and dust from where he’d been working. Had this happened in Dundee, the patient would either have taken himself directly to A&E, or his GP would have referred him there straight away. In a location where secondary care is not as easily accessible, this patient was cleaned up and sutured in the GP surgery.

The most important decisions the doctor can make when assessing situations are: whether or not the patient can be managed locally; whether they need specialist secondary care and how quickly they need medical attention. Some places are accessible by roads within an hour, however others may be two ferries from the mainland followed by a three-hour drive to the nearest district general hospital. It is thought that to call an air ambulance out for patient costs in the region of £10,000. Again another important decision to be made is whether or not this is the best use of resources.

One example of decision making I heard about on my placements was the case of a patient with chest pain. This patient was within the catchment area for Kinloch Rannoch Medical practice (see

![Sandpiper bag](Gallery 3.1 Sandpiper bag)
map on page 5) and was assessed by the duty doctor, who decided that the patient should be flown immediately to the nearest appropriate facility, in this case Ninewells Hospital in Dundee. This was an RAF helicopter, which was en-route back to Inverness where it was based. Unfortunately the helicopter didn’t have enough fuel to fly the patient to Ninewells hospital and before returning to base, and as a result the patient was flown 85 miles north to Raigmore Hospital in Inverness. The patient was discharged the following day with a diagnosis of ‘indigestion’.

Some of the practices I visited made use of SandPiper bags, one of which is pictured in the gallery on the previous page. (Swipe images to see alternate views). These kits are provided by the SandPiper Trust, a Scottish charity, and can be applied for by healthcare practitioners. They contain a range of emergency medical equipment and typically cost over £1000 each. Some surgeries hold training sessions with all members of staff as to how to use the equipment and where it can be located.

If emergency medicine is your thing, there’s ample opportunity to be involved in remote rural areas. This will be discussed further in the specialisation and career chapters.
In a city, outpatient appointments are a routine part of patient care. For elderly or immobile patients in remote or rural areas however, attending an outpatient appointment is a completely different story. Let’s say the main hospital is 2 hours away. If our elderly patient is relying on the ambulance service for transport, this means a very early start, long hours of travel delayed by collecting other patients, waiting for their appointment, waiting for others to finish their appointments, a long travel home, another delay dropping off fellow patients before finally returning home mid-evening. For the sake of a 20 minute outpatient appointment – many patients find this...

**STUDENT TASK**

What impact do you think distance to travel has on patient care? Complete task 4 in the workbook.
unnecessary, and opt for no treatment over the hassle of leaving home. And this is only for a single appointment – if a patient was receiving weekly or fortnightly care, is this travel feasible? In one particular case, a patient with lung cancer and possible pulmonary emboli decided he did not want to leave his hometown for treatment and decided to let nature take its’ course. Would this patient have opted for treatment had he lived in Perth?

An American study looking at distance to travel to receive radiation therapy for breast cancer identified that patients are 50% less likely to receive radiotherapy following breast cancer surgery if they lived in a county with no radiotherapy facilities. (Lazovich et al 1991). Now while this may not be entirely be the case for this country today, it is still a factor which must be considered during workforce and resource planning. To combat this issue, consultants often travel to semi-rural or rural areas to run clinics or carry out minor procedures. While this is of significant benefit for patients, there are often long waiting times to see a specialist due to availability, and patients may still have to travel a considerable distance to make the appointment.

This situation also poses problems for family of the patient. The Ambulance Service can provide transportation for patients requiring hospital admission, but what about visiting family? Let’s say 89 year-old Mr. Smith lived with 87 year-old Mrs. Smith on the Isle of Skye. Mr. Smith has become increasingly unwell, and requires an extended stay at Raigmore Hospital in Inverness. How would his wife visit him? This could potentially have huge psychological consequences for the patient and their families.
For me, home visits in rural locations added a whole new level of excitement to remote and rural practice. In Dundee, driving 5 minutes down the road to assess the mental state of 90-year old Mrs. Jones may be a fairly mundane part of the daily work of a GP. However, if Mrs. Jones lived on an island within the catchment area of a rural medical practice only accessible by boat - a home visit is different story. This is exactly what happened when I visited Easdale Medical Practice on the west coast, just south of Oban. After a morning of local visits, we had to visit a patient on the Isle of Luing. After a 15 minute drive we reached the ‘ferry terminal.’ This was in
effect a ramp leading into the Cuan Sound that separated the Isle of Seil and the Isle of Luing. With only 200 inhabitants, the ferry operates every 30 minutes during the day time. However, as the ferry can only take 3 cars each crossing, you may have to wait for the following ferry before you can cross. This was the case for us, and as a result we had to wait for 45 minutes for a ferry that would take us. If you zoom in on the picture on the right, you will notice that the ramp for the ferry is resting on the concrete peer. During the day when the ferry is operating, they don’t moor the ferry to the peer. Instead, the driver just manoeuvres the ferry as close as he can to the peer while you aim to drive your car onto the moving platform.

Fortunately my driving skills were not put to the test and the GP comfortably negotiated his new BMW onto the moving barge without second thoughts. After 90 seconds we had crossed the 200m channel and arrived safely on the Isle of Luing, although this time with the added fun of disembarking the ferry in reverse.

As the island is only 6 miles long, we had arrived at our patient’s house within 5 minutes of leaving the ferry. Here, we assessed the mental state of our elderly patient and had a brief chat with the family. Following the short visit we were back on the road to the ferry stop where we had to wait another 20 minutes for the boat to arrive. All in all, this patient visit took us around 2 hours, despite the fact she was in effect only 4 miles away.
STUDENT TASK

Before reading this chapter, consider some of the practical differences in terms of practice set-up between a remote and rural practice and a GP surgery in Dundee. How does it differ? Complete task 5 in the workbook.
Tests/Biochemistry

Something I had not considered before beginning placement was the logistics of getting samples to the laboratories from the practice. The logistics varied between practice, however the more remote the location, the less frequent the collections for the laboratory. For example, some practices would only have collections twice a week, meaning that tests and appointments would have to be scheduled to fit in with collections. In other places, if a patient was heading to the nearest town they were occasionally asked to take their sample with them and drop it off en-route.

Dispensing Practices

Many of the remote rural practices I visited were dispensing practices, meaning that they were in effect also operating as a pharmacy and distributing medication to the patients as well as prescribing. This is for obvious reasons- there are no local pharmacies! In some cases the GP would be in charge of dispensing the medication after the consultation, in others the practice manager would be in charge of dispensing and some even had a team dedicated to managing the built-in pharmacy. If a medication was required that wasn’t in stock, it would be ordered and would arrive any time from the next day to seven days later depending on location. The dispensing practices liked this set-up, because they said they felt it gave them more control over managing prescribing and costs.
There was also a difference in the prescribing in these areas. More often than not patients would be given larger quantities of medications so that they would have to make less trips to the GP. On another occasion I noticed that a patient was prescribed antibiotics to be taken ‘if symptoms persisted’, again as the patient had to travel a sizable distance to reach the practice.

**Appointment Times**

One of the luxuries of remote rural practices is the option of longer appointment times. Here, we’re used to busy surgeries, with 10 minute appointment slots and a full waiting room. In many of the places I visited, consultations were mostly by default 15 minutes or longer. If the practice was a dispensing practice, the extra 5 minutes was to allow the doctor time to organise the prescribed medications to give to the patient. In other places however, the 15 minute appointments were simply a luxury of less patients and less demand. In surgeries where they had a walk-in appointment policy with no set times, there may only be 3 patients in a day, and so these consultations were very relaxed and often lasted 25 minutes or more.

**Phone Signal**

Despite living in the 21st Century full of wonderful technology, many of the practices I visited over the past few weeks have had either very limited or in some cases absolutely zero mobile phone reception. While this could pose problems in an emergency
situation, patients in these areas are used to not having phone signal and so most contact is made by landline or a visit to the surgery if they are close enough. Most of the practices I visited recommended either Vodafone or O2 for the best chance of coverage.

The Team

The multidisciplinary teams within these practices were also different to an extent. For example- in one practice there were 2 GP’s, one district nurse, one practice manager and one part time receptionist. While these were the official titles on paper, due to the nature of the practice each member took on more responsibilities and sometimes different roles to ensure smooth running of the practice. In this particular practice, the practice manager was also a receptionist and dispensed medication. The receptionist took on many of the management duties, as they both worked only part time.

Cottage Hospitals

GP practices in rural areas are commonly attached to a local cottage hospital, where the GP will either be on duty for the day or make regular visits to manage patients, depending on the size of practice and hospital. Cottage hospitals vary greatly in size and facilities. For example, Aberfeldy had a cottage hospital with 10 beds, as was used primarily to manage older patients with a known diagnosis. Patients from the area could also be transferred to the cottage hospital for post operative care, and there were side rooms and facilities available for family members of patients requiring palliative care. On the other hand, Dingwall community hospital has 9 beds (although previously 24) and facilities for physiotherapy, X-ray and dentistry. It also had a community funded hydrotherapy pool, and is currently where the only DEXA bone scanner for NHS Highland is kept. Many patients say they

Movie 3.1 Dr. Barkham, Easdale Medical Practice

Dr. Miranda Barkham discusses the management of emergencies from Easdale and surrounding islands.
prefer the cottage hospitals as they can be closer to home and their relatives, but also for the less ‘clinical’ feel to their stay.

**On-Call**

Many remote practices these days have an opt-in system for accepting on-call shifts, and where there is no on-call GP then care is diverted to NHS24, which may be based 100 miles away. In many instances, where the GP is such a prominent figure in the local community, patients will go directly to the GP’s house in the event of an emergency.
As seen in previous sections, rural medicine is pretty different. Not only in terms of geography and practice set-up, but the inhabitants and therefore the patients in these areas differ to patients in urban settings.

One GP described the patients in rural areas as much more ‘resilient’ - and as a demographic tended to keep better health and only attend the GP if absolutely necessary. He went on to explain that patients in these areas very much value the services available to them, possibly more so than those in urban areas.

“Without a sense of caring, there can be no sense of community.” - Anthony J. D’Angelo
The Doctor in the Community

In this type of small community, the doctor plays a major role. In some single-handed practices, the doctor is not only the medical professional for that area, but will quite often take up other roles in the community such as fire officer or member of the coastguard or mountain rescue teams. As a result of these tight-knit communities and small practices, the GP will quite often get to know his patients and their families very well, and may in fact know more about his patients than his urban counterpart. Toby Tattersall, a GP in Llandrindod Wells in Wales, discusses why he enjoys being such a big part of the community in the following article:

http://careers.bmj.com/careers/advice/view-article.html?id=20006822

Patient Demographics

Despite the range of conditions that the patients in rural areas will present with, the demographics of the patients across rural areas are very much the same. That is to say that the populations in rural areas are predominantly older patients, as many people move to the countryside to retire. The graph on the following page shows the age distribution of patients at Easdale Medical Practice. There are some families with young children, however come school-leaving age, most young adults choose to move to bigger towns or cities to begin their careers or families.

Something else I noticed was the number of patients with terminal illness in rural areas, as these patients and their families choose to move to a peaceful location away from the stress of a city to be with their loved ones during their remaining days.

Another interesting difference I noted in terms of patient demographics was the number of temporary residents attending the surgeries. On the Isle of Skye for example, the population rises each summer from around 11,000 to 44,000 with the influx of tourists. Naturally the added population size will increase demand for medical attention. This is usually in the form of minor illness, accidents or forgotten prescriptions, which was all too common.

Presenting Complains

As with any medical practice, there would be variation in terms of the cases presenting each day, however common things would still be common. This is equally true for rural areas, however the cases commonly presenting are quite often different to those presenting in an urban practice. As previously mentioned, tourists registering as temporary residents for forgotten medication is common. In some areas during the summer, tic bites are especially common as are hillwalking injuries. Some more unusual presentations included: a patient with an injury to his thigh following impalement by the horn of a ram; a hillwalker requiring a check-over following a night on Schiehallion after getting lost and a patient who had fired a 4 inch nail into his thigh with a nail gun.
Image 3.2 Graph showing age distribution of patients at Easdale Medical Practice

Place two fingers on the image and move apart to zoom in on the graph. Note the higher proportion of elderly patients in this community.
While many of the responsibilities discussed in this chapter apply equally to doctors within urban practices, there are some differences that will be highlighted in this chapter.
STUDENT TASK

Consider some of the ethical implications of being a practitioner in a small community. Complete task 6 in the workbook.

Maintaining Skills

Maintaining skill level is important in any branch of medicine, although particularly important in remote rural medicine. In many instances, rural practitioners will be skilled across many specialties - hence general specialists. Leo Murray, a rural practitioner on the Isle of Skye summarised the situation by saying:

“You don’t practice ‘good’ remote rural medicine. You practice good medicine, remotely.”

By being specialised in many areas, up-skilling is important. It is for this reason that rural practitioners often spend around 4 weeks per year in a larger hospital to maintain skill levels, often in trauma medicine or paediatrics. Practitioners are also allocated 10 days per year for periods of study.

As important as it is to maintain skills, it can be logistically very difficult to achieve, especially in single-handed remote practices. It may cost a GP around £3000 per week to hire a locum to cover, making it an extremely expensive process. There are also limited or no local training courses or conferences, therefore some practitioners are more at risk of professional isolation.

Decision Making

As previously discussed deciding whether or not to transport a patient to a secondary care facilities is one of the most important
decisions a rural practitioner can make, and may make all the
difference to morbidity or mortality of that patient. While making a
decision to refer a patient to secondary care is a responsibility
also held by inner-city practitioners, the consequences of a poor
decision may be more detrimental in a remote environment.

Professionalism

Imagine you’re a doctor working at a single handed practice on
an island with 200 patients. You are there with your family,
perhaps a husband/wife and a couple of kids. With only 200
inhabitants on the island, you will quickly get to know everyone
well, either within a professional context or as part of the
community. Yet if all of the inhabitants are registered with your
practice- how do you socialise? Who treats your family members
if they become unwell? Who treats you if you fall unwell? These
are problems commonly faced by single handed practitioners.

It is at this point, professionalism must be mentioned. Whether
you’re a GP on the aforementioned island or you’re a GP serving
500 patients across a geographical area of 200 square miles,
maintaining a professional attitude is still imperative. As
previously discussed, the doctor will play a major role as a
member of these small communities. Yet in such a small
community, you will be in contact with your patients every time
you go grocery shopping, or play golf, or even go to the pub.
While professional behaviour extends beyond the clinical setting
for practitioners in any setting, it is even more essential in such a
small community as lapses in professionalism could have potentially detrimental consequences for the entire community as opposed to a single family.

Being a practitioner in a remote area as well as a focal point of a small community adds a significant amount of stress and pressure to that GP. While maintaining a professional front is essential to the image of the doctor, the boundaries are significantly less clear-cut in remote and rural areas. It’s almost as though a different form of professionalism is adopted by rural practitioners. Many of the doctors I spoke to agreed that patients were generally very respectful of their private lives, and so they felt as though they were able to have social evening with friends (who may equally be patients) or even a drink at the local pub.

**Equality**

This term is a basic principle underpinning the NHS, and as outlined by the 1912 Dewar Report should be equally applied to remote and rural areas. Although, there is an argument to say that patients in these areas are becoming too demanding. For example in outback Australia, a patient will happily travel 4 hours to visit a doctor for care, whereas many patients here feel that 30 minutes is too far to have to travel for care. In a world where the money/power battle is everything, where do we draw the line between centralising services to reduce costs and possible improve services over the sacrifice of locality of care and the sense of community? Just food for thought.
Specialisation

To specialise or not to specialise? This is one of the big challenges facing remote rural medicine today...
A hospital by definition is a web of interconnected specialists. When we speak of being ‘remote’ or ‘rural’, we refer to being remote from this web. As a result, more emphasis is placed on local management by general practitioners.

Over recent years, the increasing trend for specialising across professions has become a threat to the future of remote and rural medicine. The drive to centralise care to regional centres of excellence has resulted in the downgrading of rural hospital services. In urban secondary care, there is no recognisable specialism in generalism, yet this is essentially what is required to meet the challenges and demands of urban practice.

In Australia, rural general hospitals focus on promoting the concept of generalism as opposed to the super-specialised hospitals here in Scotland. Not only does this improve patient care in remote rural areas, but it is also a valuable educational resource for both students and qualified healthcare professionals.

So why are generalist specialists so important? An Australian study by Hays et al (1994) surveyed 311 rural practitioners and 142 urban practitioners, and found that doctors who were more than one hour or 80km from the nearest hospital were more likely to practice a greater range of clinical and practical skills. In isolated areas there will still be a requirement for hospital based services such as: obstetrics; surgery; anaesthesia; emergency medicine; paediatrics and psychiatry. As a result, rural practitioners often come into contact with some or all of the
above specialties throughout their careers, albeit from a ‘generalist’ perspective.

How are specialist skills maintained amongst generalists? In some areas of Scotland, medical education is provided in managed clinical networks by the means of joint operating sessions between specialists and rural generalists to maintain skills. Some rural practitioners also attend 3-month anaesthesia training at hospitals such as Raigmore followed by a series of exams. This qualification allows practitioners to safely anesthetise a patient for transport by air ambulance to a major trauma centre if necessary. As mentioned in the previous chapter, there are also designated ‘study days’ each year, and practices are often notified of additional training days in specialties from obstetrics to acute care.

So what am I trying to say? If you have a specialty in mind and don’t feel that remote rural medicine is for you, you may be surprised. The subject of specialisation is almost a double-edged sword in rural medicine. On one hand, early specialisation can limit remote rural career options and is currently threatening the future of remote rural medicine. On the other hand however, rural general practitioners have to be competent in several different specialties to effectively manage any case which may come through the door.
Chapter 6

Lifestyle and Leisure

Evening kayak in Oban
There are many aspects of remote rural medicine I find enticing in a professional context, but one of the most obvious differences I noticed on my time on placement was the difference in lifestyle.

In many remote practices, the workload is quite often reduced compared to that of an inner-city practice. This is a result of a combination of fewer patients to manage in a more resilient population. The ratio of general practitioner to patient may also be significantly smaller in remote rural areas, for example the Isle of Jura has one doctor to serve a population of 200. A patient population of this size certainly has many disadvantages (maintaining skills, boredom, socialising) however many of the practices I visited had a steady combination of a good patient load without over-exertion. This alone has almost a calming effect on the daily routine of some of these practitioners.

When I consider the differences between rural and urban practice, I picture the full inner-city waiting room with screaming babies, an endless list of calls to respond to, paperwork to the ceiling, all accompanied by the background noise of passing traffic, telephones and the odd siren. I then considered some of my time spent in rural areas, where we were able to have two or three tea breaks throughout the morning, spend longer with our patients and really get to know them, go out for lunch with the whole team or even just take some time for yourself on the shores of the loch. I don’t know about you, but I definitely know which of the two I prefer.
As for leisure, if you’re one for outdoor activities then rural practice is definitely for you. In the short time I spent away I was able to experience kayaking, sailing, hillwalking, a cattle auction, a famous distillery and local music. These are just a few things on the endless list of possibilities. In Rosie Donovan’s (2000) book Single Handed, GP’s describe their involvement in other activities such as gaelic choir, bird watching and research, community enterprise, sailing, skiing, camping, country dancing, golf, gardening, shooting, bowling, drama and many more. In one of the communities I visited, the GP was involved in building a boat with other members of the community that could be raced against a boat being built by a neighbouring village.

Although working hours are normally quite regular, the unpredictable can still happen. However, general practitioners in these areas, both single-handed and as part of a slightly bigger practice assured me that they generally have plenty of time for such pursuits, or even just spending time with the family.
Chapter 7

The Future of Remote Rural Medicine
Recruiting and retaining rural healthcare physicians is one of the biggest problems facing the future of remote and rural medicine. A recent article in the WHO bulletin attributes the shortage of rural physicians to factors such as: medical education, practice conditions, community, personal, family and financial considerations to name but a few. (Rourke, 2010) Curran and Rourke (2004) systematically reviewed international literature to identify key strategies for recruitment and retention of rural physicians. One of the significant findings in this review was that medical students from rural areas are up to 4 times more likely to pursue careers in rural practice.

STUDENT TASK

From what you’ve read so far and your own personal opinion, what do you think puts people off pursuing careers in remote and rural medicine? Complete task 7.
compared to their urban peers. Conversely, students from rural areas are under-represented at medical schools in many different countries as a result of geographical and experiential differences. (Curran and Rourke 1994; Rourke, 2010). By taking into account these differences during the student selection process and promoting medicine as a career in remote and rural areas, more rural students could be recruited into medicine and hopefully into careers in rural practice.

Undergraduate medical education itself is also a widely discussed topic in the literature. While medical education is largely universal to an extent, it is also quite dependent on the context in which it is taught. For example, the health status, disease and illness patterns and barriers to treatment will be different for those in urban areas compared to those in rural areas. (Rourke, 2010) Therefore, a curriculum which integrates rural content and experiential learning is more likely to give students a broader understanding of the topic as well as stimulate further interest in the career itself. It has also been shown that exposure to rural medicine at undergraduate level increases the likelihood of students pursuing careers in rural medicine. (Rourke, 2010;)

As previously discussed in the responsibilities chapter, maintaining skills and keeping up-to-date is a difficulty faced by many rural practitioners. The literature as reviewed by Curran and Rourke (2004) suggests that by involving rural practitioners in education on a regular basis, they will be encouraged to maintain their skills and knowledge. Regular educational conferences to bring rural physicians together to share knowledge and experience has also been suggested to be useful.

This is all very well you might say, but what about locum cover for such conferences or even holidays? In South Australia, particular efforts have been made in supporting leave and locum requirements to reduce the pressures of professional isolation amongst its' rural practitioners, and to help retain the professionals currently working in these areas. (Wilkinson et al 2001.) A study by Heany and Hall (2005) from the University of Aberdeen in collaboration with RARARI (Remote and Rural Areas Resource Initiative) found that 74% of rural services rarely used locum services and 55% reported that locums were either difficult or very difficult to find. While on placement, one of the GP’s I met said that locum cover for a week could cost around £3000, which would have to be paid for by GP himself in a single-handed practice. Before considering other holiday/travel expenses, it’s extremely expensive just to have a week off!

At present the Northern Western Isles is a lead partner for the North Periphery Programme, working on a project called ‘Recruit and Retain’. This project aims to survey around 4000 practitioners around Northern Europe to help identify and address key issues surrounding recruitment and retention of rural practitioners. More information can be found via the following link: http://www.recruitandretain.eu/news/
Telemedicine, otherwise known as telehealth or telehealthcare is defined as the provision of healthcare or services at a distance using a range of digital technologies. (NHS, 2012) This could include mobile telephones, internet services, digital televisions, video conferencing and self-monitoring equipment.

Telemedicine is not a new concept. Telecommunication for medical purposes first emerged in the 1950’s, and was also used by NASA in the 1960’s to monitor biomedical or physiological properties of astronauts in space. (Debnath, 2004) In the UK, telemedicine first
emerged in the early 1990’s and its use has been growing steadily since. The University of Aberdeen pioneered the use of video link in 1992 to provide support and advice for paramedics working on the oil rigs in the North Sea. (Debnath, 2004) This concept can then be transferred to day-to-day practice for remote rural physicians, to provide care for patients at a distance.

The following link shows a video of an example of telemedicine in practice. This patient had a TIA at his home in Orkney, and needed to be assessed by specialists in the neurovascular clinic at Aberdeen. [http://www.sctt.scot.nhs.uk/sandy.html](http://www.sctt.scot.nhs.uk/sandy.html)

Telemedicine is not however limited to patient consultations. Other uses of telemedicine include education, practice meetings, MDT meetings, patient monitoring, sharing clinical imagines or simply to provide a network of support for the single-handed practitioner to reduce the effects of professional isolation.

In reality, I have found the use of telemedicine to be extremely variable between practices. Some practices used video-conferencing to hold weekly practice meetings with all staff, who may be spread over a large geographical area. Other practices did not have such facilities set up, and said that they did not feel the need to invest in telemedical equipment given the geographical location and practice set up. Other practices embraced the idea of telemedicine and videoconferencing, but as a result of their location they didn’t have a fast enough internet connection for the videoconferencing to work. On the whole however practices were keen to adopt new means of communicating, and as technology develops hopefully we will see further utilisation of such facilities to enhance patient care and education.
In this chapter we look at remote and rural secondary care medicine, the challenges that it offers and how working in a rural hospital environment differs from larger district general and teaching hospitals.

By Pip Marson, 5th year student
Included in the following pages is an account of my experiences of working at Lorn & Islands hospital Oban. It covers some of the pros and cons of life and work in a rural hospital. You will also find some video clips of the medical and surgical staff giving their thoughts on rural careers and what to expect as a junior doctor working in a rural place.

Welcome to Lorn & Islands

Having visited Oban for my 4th year surgical block in January I came back in the summer for part of my elective placement. What a contrast from a cold and damp January; the town has come to life, there’s a sailing regatta and the shore line is filled with boats. The streets are buzzing with tourists and the sun is shining creating a festival atmosphere. I’m surprised to find that Oban doesn’t just cater for silver haired tea-room tourists, there are all ages and nationalities, land lovers, sea lovers, thrill seekers and island hoppers all enjoying what the west coast has to offer.

Whilst Oban may not seem like the most exotic of elective destinations I’m still excited to be here. I’ve made grand plans to explore the outdoors, visit some islands, climb some mountains and to try my hand at sailing and sea kayaking. But before the fun begins my first challenge is to sign in to the hospital accommodation and tackle my first few days of placement...
Home life

I start my elective in the same week as the new junior staff rotate and one of the first people I meet is an anxious looking FY1, like thousands of others half terrified and half excited to finally be starting work.

The junior medical staff are placed here from 4 months up to a maximum of 12 months. They almost all stay in accommodation within the hospital grounds and it creates quite a sense of camaraderie. We work together, live together and socialise together. And whilst Oban doesn’t have the wildest of nightlife the social scene has been good with juniors and consultants regularly meeting outside of work for sports and outdoor activities, meals out, BBQs or just a few drinks in the pub.

Living with colleagues is fun for the few weeks I’m here you’re forced to get to know each other very quickly. So far, at least for me least cabin fever has not set in but I can imagine after a few months of living and working in close quarters it might and it’s easy to see how living just a few strides across the hospital carpark in a house full of work colleagues could make it hard to switch off even on your days off. Another down side of living with your colleagues in a small staff team is that mostly everyone else is working on days off and there’s never a time when you’re all free for a social. I noticed that there was little opportunity to mix with non-medics, something which I feel is important to keep in touch with the ‘real world’ and to become an integrated part of a rural community.
Work life

Work wise the hospital has 1 surgical and 2 medical wards, 1 operating theatre and a well-equipped endoscopy suite. There are 3 full time surgeons and 3 full time physicians, 4 surgical juniors and 5 medical juniors. It’s a small team and you quickly get to know everyone including the nurses, porters and secretaries etc. It creates a friendly atmosphere and a community spirit. I was made very welcome by everyone and really enjoyed being part of the team, a huge contrast from the anonymity of bigger hospitals such as Ninewells where you can often be seen as just a name badge or another student to get in the way.

Oban itself has a population of approximately 9,000 people but Lorn and Islands hospital serves a population of almost 20,000 spread sparsely from Campbeltown and the Kintyre peninsula in the south to Ballachulish in the north. It also serves a number of inhabited islands including the inner Hebridean islands of Islay, Jura, Gigha, Tiree, Coll, and Mull.

The clinical staff here run general surgical and medical outpatient clinics and there are visiting services from psychiatry, orthopaedics, dermatology, ENT and ophthalmology. All the allied health professions are based on site and there is an in house dental practice with a monthly dental surgical list. There are some things which cannot be catered for here and notably there is no intensive care facility so the sickest patients and those requiring more specialised treatment, routine or emergency are referred to larger centres; usually one of the Glasgow hospitals.

Oban’s remote location and the long traveling times to specialist care in Glasgow can force clinicians to make some tough decisions which would be thought twice about in city hospitals. A road ambulance takes around 2½ hours, an air ambulance takes about 30 minutes to transfer a patient from Oban but Glasgow but costs a considerable amount more. Both can take over an hour to arrive if a specialist retrieval team is needed to accompany the patient.
I witnessed several patient transfers during my time here both by road and air ambulance. Sometimes the decision to transfer a patient was an obvious one, but sometimes it’s much more difficult to call and balancing out the costs and use of valuable resources against the likely benefits to the patient can be a tough. Luckily these aren’t decisions you’ll have to make alone, especially as a junior and the consultants here work closely with the emergency medicine retrieval team to coordinate emergency transfers to bigger centres.

Out of Hours

The on-call demands here are high; 1 night in 3 for the consultants which is a big commitment but it’s part of the reality of working in a rural area. For the junior medical staff a set of 4 night shifts comes around roughly once each month and day time on call which involves a 12 hour shift covering admissions to both the ward and A&E about every 1 shift in 3.

During my placement I spent a little time in the hospital in the evenings and into the nightshift; there’s only 1 FY2 on overnight here who, with the help of an ANP covers the whole hospital including A&E between the hours of 9pm and 9am. During evenings and weekends there are 2 FY2s and an ANP covering the wards and A&E. There are no consultants based in the hospital out of hours but there is a physician, surgeon and anaesthetist on call at all times.

One of the biggest differences of working out of hours in a rural hospital is that the labs and radiology departments only open during office hours. This makes managing emergency admissions presenting in the evenings and overnight much more challenging and really stretches your clinical decision making skills. Routine tests that you wouldn’t think twice about doing in a larger hospital pose more difficult questions; how sick is this patient? Can bloods and imaging wait until morning or shall I call the lab staff to come in? Shall I wake up the radiographers to come in? Shall I call my consultant? As a junior left to make these decisions alone
I imagine you can feel quite isolated but thankfully the ANPs are very experienced and able to help. The consultants are all incredibly approachable and eager to be involved and the level of support and teaching that I witnessed between junior staff and consultants was great.

Location, location, location

Another striking difference which I came across here in Oban is the large distances which some patients have to travel to get to the hospital and the implications that this has on their care. Patients living 3 hours drive from the hospital are not good candidates for day case surgery and are often admitted the afternoon before their operation and discharged post-op to spend the night close by in a B&B before returning home. Similarly you’re reluctant to discharge someone who lives 3 hours away from the nearest A&E with the safety net of ‘pop back if it gets worse’. People relying on infrequent ferries to get home put additional pressure on staff for prompt discharges and on more than one occasion a patient’s bloods were sent to the lab as urgent or they were bumped up the x-ray queue in order to be discharged in time to make the last ferry home.

To avoid patients having to commute long distances for routine clinic appointments the consultants here run satellite medical and surgical clinics in Lochgilphead, Campbeltown, Mull and Islay on a regular basis. However, for specialist appointments and for investigations and treatments not available in Oban patients still need to make the long commute to Glasgow.

Dr Fiona Johnson discusses her career as a rural physician and what life is like for junior doctors working in a rural hospital.
Ups & Downs

I wanted to give a realistic flavour of life working in a rural hospital and whilst it was fun for an elective placement there are some practical aspects which need to be considered by anyone contemplating a rural career.

I recall on a few occasions being called away from clinic or jobs on the wards to go and assist in theatre and on occasions the FY2s were needed to assist in theatre also. Whilst it’s nice to be needed and it makes you feel like a valued member of the team this also highlights that in small hospitals staffing levels are often stretched, and a staff absence can have a huge impact on the rest of the team. You need to be adaptable and be prepared to cover other people’s roles at short notice. This might involve covering the surgical ward for the day instead of medical or working a man down due to staff absence.

There are a few comforts we city dwellers take for granted which may not be found in rural areas such as Oban and which you should be aware of; mobile phone reception in the accommodation and in many parts of the local area was quite poor and the broadband connection in the accommodation was quite unreliable making streaming catch up TV largely impossible. There are no 24 hour supermarkets, none of the usual high street fast food outlets and very few if any of the usual high street stores here.

As mentioned previously, the town gets much quieter in the winter time and some of the local shops and restaurants hibernate for the winter season emerging in the spring to cater mostly for the tourist trade. On the plus side a small community run cinema has just opened in the town, there are some great independent local shops selling local produce, a few cosy pubs & restaurants, and a wealth of beautiful countryside and islands to explore.

Conclusions

In summary, I really enjoyed my time in Oban. Going back for an elective allowed me to take a closer look at day to day life in a small rural hospital and to experience both the high points and low points of rural life in more depth than I did during my surgical block. It also gave me chance to explore some of the surrounding areas and sample what the rural outdoorsy lifestyle has to offer outside of work.

Hopefully I’ve given you a realistic account of my time here. I admit it’s not for everyone and if you love the bright lights and the big city, you want to be at the cutting edge of medical research or you simply can’t live without a 24 hour Tesco and superfast broadband it probably isn’t for you. But, if you love the freedom of the great outdoors and are up for the unique challenges of being a rural medic then perhaps you should give it a try, you might be surprised by what it has to offer.
Conclusion
STUDENT TASK
In a short reflective piece, discuss your experience of remote and rural medicine in task 8 of the workbook.
As I said at the beginning, I had never really put much thought into a career in remote and rural medicine.

I’ve now stopped to think: “Why is that?” I’ve come to the conclusion that it was largely down to my preconceptions. Medical school has led me to believe that after I graduate I will either be pigeon-holed into a hospital specialty or sent out into GP-land. If I asked you right now: have you ever considered a career in remote and rural medicine? If not, why not?

I guess your answer will be pretty similar to mine: it was never really made apparent to me as a career choice. To be fair - my preconceptions were not “too” far from the truth. There were occasions with rescues by boat or helicopter, yet there were equally days with only 3 patients to see, where we would fill our time with table tennis or lunch outings.

How have your preconceptions measured up with your experience? This may be something to consider in your reflective piece.

So what was it about remote and rural medicine that I particularly liked? I suppose in a way practicing medicine in rural areas offers a different way of life. This of course will vary depending on whether you’re a GP 1.5 hours drive from the nearest hospital or whether you’re a GP 5 hours by ferry and 3 hours by road to the nearest hospital - but the beauty is, you can choose what’s right for you.

The nature of remote and rural practice means that multidisciplinary teams must work as a very tight-knit unit, and take on different roles to adjust to the demands of unpredictable practice. You become an important part of a small community - with the opportunity to build intimate and trusting relationships with generations of a families. With less pressure for time you can really get to know your patients- find out what is really concerning them, or just take the time to listen to 82 year-old Mr. Smith talk about his chrysanthemums. Home visits surrounded by beautiful scenery and fresh air can even make the longest day at work seem a little easier.

Of course like any specialty there will be challenges to face and compromises to be made, however I didn’t meet one doctor who regretted leaving the busy city scene for life in the country.

What I’m trying to say, is that remote and rural medicine has really surprised me by what it has to offer. What started out as a summer studentship has now turned into a serious career consideration, and I feel as though more students would be interested in the specialty if we knew more about it from the outset.

I would just like to finish by thanking you for reading my iBook. I hope it’s been of some use, whether you’re about to start placement or are interested in more information on remote rural medicine. If I could give you one piece of advice - take a rural placement in 5th year. You may be pleasantly surprised too!
Interested in pursuing a career in remote/rural medicine? Or just want to know a bit more? Read on!

Where to start?

**Years 1-3:** Self-propose SSC in remote rural practice, literature review and audits are always good opportunities! Keep an eye out for summer studentships and conferences available. (More on conferences on page 41.) Otherwise spend some time shadowing on a clinical attachment, nothing will give you a better flavour of remote rural medicine than experiencing it yourself.

**Year 4:** Ideal opportunity in 4th year to base your 4th year project around remote/rural medicine. Alternatively see how remote and rural practice differs around the globe and get planning your elective! Australia, Canada and Norway have some fantastic opportunities available.
Year 5: This year you have the option to undertake an extended GP placement in a remote or rural area, such as Islay, Skye and Orkney. Alternatively use your theme SSC as another chance to get involved!

Also - if you’re not already a member, join the GP society to share your interest and ideas with others. This is a great way to socialise and learn more about the profession through various talks, conferences and workshops run throughout the year.

Foundation Jobs

Getting experience is all very well at undergraduate level, but what about foundation jobs? The northern deanery for Scotland offers foundation placement for anything from 3 months to 2 years in remote rural areas. If you decide after some time it’s not for you- there is still the option to change.

Specialty Training

This year marks the beginning of the new Scottish National Rural-Track General Practice Specialty Training (GPST) Programme. The 4-year programme, otherwise nicknamed ‘GPST-plus’, is based around rotations at some of Scotland’s Rural General Hospitals such as Fort William, Orkney and Wick. There is also the opportunity in year 3 to undertake a 6-month Out of Programme Experience, in the likes of Australia, Canada or South Africa. The link below describes the programme in more detail:


Conferences

Rural Primary Care Conference - Gregynog Hall, Powys. 25th-28th September 2012:


Useful links

Remote practitioners association of Scotland: [http://www.remote-doctors.co.uk/](http://www.remote-doctors.co.uk/)


Rural GP blog containing information, news and events: [http://www.ruralgp.com/wp/](http://www.ruralgp.com/wp/)

Australian College of Remote and Rural Medicine: [https://www.acrrm.org.au/](https://www.acrrm.org.au/)
Press the play button to view the following vodcasts. The video can be made bigger by double tapping the video. With thanks to Dr. Kevin McCaughey and Lorna Malicki.

**Movie 9.1** Dr. Kevin McCaughey, Aberfeldy and Kinloch Rannoch Medical Practice

Dr. McCaughey discusses his career in rural medicine and why it particularly interests him.

**Movie 9.2** Casualty nurse Lorna, Ross Memorial Hospital, Dingwall.

Lorna discusses the variety of cases seen at this small community hospital.


Lazovich DA, White E, Thomas DB, Moe RE. Underutilization of breast-conserving surgery and radiation therapy for women with stage I and II breast cancer. JAMA 1991;266:3433


Pegram, R. W., Adelaide, N., Health, A., Humphreys, J. S., & Bendigo, R. H. (n.d.). Meeting the needs of rural and remote Australians for specialist medical care: Issues and options RW Pegram (Central and Northern Adelaide Area Health Service), JS Humphreys (Monash University What do we already know? What does this study add?, 0–2.


