A study to identify the additional skills and knowledge required by GPs to work in rural Wales

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A study to identify the additional skills and knowledge required by GPs to work in rural Wales.

1.0 INTRODUCTION

This project was funded by Cardiff University, (December 2008 to June 2009) and set out to identify the additional skills and knowledge required by general practitioners (GPs) to work in rural Wales. Early work had demonstrated that although rural general practices may have smaller patient list sizes than urban practices they have a different work profile (Deaville, 1998):

- Rural GPs undertake more emergency and minor casualty work
- Difficulties associated with distance and travel mean more time is spent on home visits
- Specific rural illnesses and diseases, eg zoonoses
- Difficulties in obtaining cover for absence and 'out-of-hours'

Ten years on from this initial work, the new GP contract is in place and the additional work that rural GPs traditionally undertook (for example minor surgery) is now recognised and reimbursed (Deaville et al, 2006). The impact of distance on patient outcomes is still a focus of research interest, showing poorer health outcomes for rural residents for particular conditions, e.g. asthma and cancer (Bendall et al, 2007; Heenan, 2006 and Maheswaran et al, 2006). Distance to specialist services, lack of economies of scale in serving a dispersed population, maintenance of skills and difficulty in accessing Continuing Professional Development (CPD) all underline the need for team working in general practice and in the wider community and the use of new technologies to support isolated professionals. In order to support practitioners in Wales working in a rural environment two initiatives have been set up:

- The Welsh Rural Postgraduate Unit was set up as a joint initiative by the Institute of Rural Health (IRH) and the School of Postgraduate Medical and Dental Education at the then University of Wales College of Medicine to provide postgraduate medical and dental education to practitioners across rural Wales.
- Recently the IRH has established the concept of the "Rural Campus" which is an innovative flexible learning experience for students and health care professionals using effective and relevant approaches for lifelong learning in rural areas. Initial work has focussed on engaging with medical students at Cardiff University to raise awareness of rural practice and to inspire them with the opportunities offered.

To support this pioneering work and to further develop rural medical education in Wales initiatives research is needed to fully understand the skills and knowledge needed by GPs who work in rural Wales.

2.0 METHODOLOGY

The aim of this study is to identify the additional skills and knowledge required by a general practitioner in order to work in rural Wales. The application of this information will be in development of CPD programmes and under-graduate and

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post-graduate training. To support this study a project management group was set up and met every month.

2.1 Research questions

This study set out to examine five research questions:

1. What are the perceived additional skills and knowledge required by rural GPs to work in rural Wales?
2. What impact does rurality have on GPs way of working?
3. How does the work profile and responsibilities of rural GPs differ from those in urban and less sparse areas?
4. What are the gaps in knowledge between under-graduate medical education and the knowledge required to work in rural general practice?
5. What are the skills required to be a rural GP?

2.2 Literature review

A literature review was undertaken drawing on UK and international published and grey literature to address the research questions outlined above. Literature was sought on the nature of rural general practitioners workload, ways of working, skills and knowledge, drawing out differences between urban and rural general practitioners. Databases including science citation & social science citation indexes, Medline, CINAHL, EMBASE and HMIC were searched. Searches were limited to English language publications over the last 10 years for reviews and over the last five years for original research studies. The search terms were as follows:

Search term category	Key words
Rural general practice search terms	Medically Underserved Area, Physicians, Family, Family Practice, Primary Health Care, general practice Rural or Rural Health/ or Hospitals, Rural/ or Rural Population/ or Rural Health Services
Educational related search terms	Competency-based education/ or education, medical, continuing/ or education, medical/ or education, medical, undergraduate/ or education, medical, graduate/ or "internship and residency"/ or professional competence/ or clinical competence/ or curriculum
Skill related search terms	Competence assessment or competence based learning, skills, professional competence, clinical practice , specialisation
Rural services related search terms	Rural planning, rural development or rural regeneration, rural communities, rural social services, rural health services, rural areas, rural transport , rural hospitals
Symptom related search terms	Anxiety/ or Anxiety Disorders, Depression/ or Depression, Postpartum/ Suicide/ or Suicide, Attempted/ Self-Injurious Behavior/ Depressive Disorder/ Zoonoses/Tuberculosis, Bovine/ or Tuberculosis, Avian/ or Tuberculosis/ Tinea/ Parasitic Diseases/ Agrochemicals

From the database searches a combined total of 337 papers were found. Removing duplicates reduced this to 298. This was further reduced to 74 references through

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examining the reference details and abstracts (where available) to ensure that the reference focused on the relationship between the general practitioner's role and rurality. After obtaining full text papers an additional 50 papers were excluded for the following reasons:

- Focused on recruitment rather than the GPs role
- Focused on urban and suburbia with not enough detail on rural
- Focused too much on training outcomes
- Focused too much on retention of GPs in rural areas
- Described the work of GPs but did not pick out the differences between rural and urban
- About rural consultants and not GPs

A total of 24 papers were included. The internet was also searched and the following websites accessed for information:

Australian College of Rural and Remote Medicine www.acrrm.org.au
British Medical Association www.bma.co.uk
Healthcare Republic www.healthcarerepublic.com
Institute of Rural Health http://www.rural-health.ac.uk
Lancaster University www.lancs.ac.uk
National Statistics http://www.statistics.gov.uk
North West Public Health Observatory http://www.nwpho.org.uk
Postgraduate Medical Curriculum for General Practice www.gpcurriculum.co.uk
Royal Australian College of General Practitioners www.racgp.org.au
Royal College of General Practitioners http://www.rcgp.org.uk
Social Care Institute for Excellence www.scie.org.uk
Wales Rural Observatory http://www.walesruralobservatory.org
Welsh Assembly Government http://new.wales.gov.uk

2.3 Data collection and analysis

The literature review informed development of a semi-structured interview schedule that was developed individually for each professional group (included in appendix I), for use in a series of telephone interviews with a sample from the following groups (target sample size shown in brackets):

- Rural GPs (n=15)
- Consultants who work with rural GPs (n=9)
- Practice nurses (n=9)
- Chair or nominated representative of the RCGP Rural practice standing group (n=1)
- Chair or nominated representative of the Welsh rural Postgraduate Unit (n=1)
- A representative from Cardiff University School of Medicine (n=1)

Three study areas were selected to reflect north, south and mid Wales and also different degrees of rurality. The three study areas were Powys, Gwynedd and Carmarthenshire. The interview schedule was drafted and discussed with the project

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management group. The interview schedule was designed to gather primary data on the five key research questions above. Participants were contacted by letter to explain the nature of the study and to invite them to participate in a telephone interview, they also received an information sheet. They were asked, if they wished to participate, to sign a consent form and return it . They were then contacted to arrange suitable time for the interview. The interviews took about 30 minutes to complete and comprehensive notes were taken at the time of the interview. The interview data were analysed for emerging themes and concepts.

NHS ethical and research governance approvals were obtained from the relevant organisations prior to starting the study.

3.0 LITERATURE REVIEW

This review will start by setting the context for this study by examining the nature of rurality in Wales and evidence on health issues for rural residents. The review will then explore more specifically the existing evidence on the nature of work of rural general practitioners.

3.1 Where is rural Wales?

According to the Rural/Urban classification published by ONS in 2004 settlements having more than 10,000 people are defined as urban, and settlements below 10,000 population are defined as rural. Each rural and urban area is then classified as either ‘sparse’ or ‘less sparse’ (ONS 2004). In addition to the areas traditionally acknowledged as rural, this classification reveals less sparse rural areas in the Welsh Valleys (such as Pontlottyn, Tonyrefail, Cwm, Blaenavon and Ynys-y-bwl) and in some built up areas (such as Cowbridge, Caerleon and Mold). Conversely in the sparse rural areas of Powys and Ceredigion, Newtown and Aberystwyth are categorised as urban.

3.2 The nature of rurality

There are several factors that differentiate rural areas from urban areas:

- Rural areas are often characterised as having a higher proportion of older people than in urban areas, this is due to in-migration of older people and exacerbated by out migration of younger people. This increases the likelihood of more long term illness, as this type of illness is most often encountered in those with advancing age (Carter 2005 & BMA 2005). This is true in rural Wales. Rural areas are projected to have an increase of older people (65 years and over) of 39.1%, while in urban areas of Wales the projected increase of older people is 27.73% (Davies et al, 2008).
- There are fewer core services in rural areas which are essential to maintain a cohesive community such as a shop, a post office, primary school, general practitioner and community hall. It is suggested that declining services have the greatest impact on the least well off and the elderly, creating increased loneliness and isolation (Carter 2005)
- Access to specialist services can be more difficult for rural residents because of distance to travel and poor public transport. This is more so for the elderly. (Campbell *et al* 2001, Harrison & Wardle 2005, Winters *et al* 2006, Green-Hernandez 2006). .

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- The image of the ‘rural idyll’ pervades, and deprivation can be hidden in rural areas as the population is dispersed and routine statistics tend to be only available for large geographic units and there not sensitive enough to identify small pockets of deprivation (Carter 2005).
- A lack of a comprehensive transport system in rural areas creates difficulty for those who have no independent transport. This burden generally falls on those with low incomes and the elderly (Pugh *et al* 2007). In relation to transport in rural Wales, White *et al* (2007) found that 11% of households in rural Wales do not own or have the use of a motor vehicle. Such households have lower incomes, with 32% of these households having a gross annual income of less than £10,000, compared to just over 2% of households with a gross annual income of £21,000 or more. Age is also a factor affecting access to private transport. Respondents aged 65 or over are twice as likely as younger people to have no access to a car. Age and low income can compound the issue making access to services difficult. Accessing services, such as leisure centres, doctors’ surgeries and general hospitals proves to be particularly difficult for those without a car.
- There is less anonymity in rural areas than in urban ones. Problems can arise in relation to issues which have stigma attached such as depression, domestic violence or severe mental illness. Consequently people may not seek help from primary health care and instead suffer in silence and isolation (Pugh *et al* 2007, Jackson *et al* 2007)

3.3 The nature of patients in rural areas

Research has found that people living in rural areas tend to be more stoical than those living in urban areas, this is particularly true for older people and farmers. There is a pride attached to self-reliance that can delay consultation with healthcare services (Bentley 2002 & Heenan 2006). One study highlighted that older people feel that their legitimate use of primary care occurs when they are in pain, have a swelling or when symptoms match with past experience (Bentley 2002). Another found that farmers would only seek help if very ill or experiencing a great deal of pain (Osborne 2001). For the rural population Farmer *et al* (2006) found that residents tended to prefer to see their own doctor and were prepared to wait for an appointment, rather than having a consultation with a stranger. Similarly, for out-of-hours care Campbell *et al* (2006) found that while people in urban environments demanded home visits, or attended emergency departments, in rural areas people tended to delay until their own doctor became available because in many cases they did not know there was an alternative.

4.3 Health issues in rural areas

Whilst the key health issues are the same for rural and urban populations there is a different profile to the workload: more injuries, a greater onus on dealing with mental health problems because specialists are less readily available, and a higher level of long term illness because of the increasing elderly population (BMA, 2005). A similar scenario is found in Wales when Davies *et al* (2008) reviewed health data sets. It was found that the important health issues in rural areas were:

- Older people and the increasing occurrence of long term illness
- Accidents (including road traffic accidents and farm accidents)

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- Mental health issues including suicide and because of the increasing level of older people, dementia

Also because of the rural environment Wood (2004) describes the following conditions that are more likely to be found in rural areas:

- tick-borne diseases from sheep, hypersensitive systemic reactions to insect stings, reactions to horsefly bites, the risk of poisoning from adder bites, and inflammatory tick borne Lyme disease.
- Pregnant women who come into close contact with sheep during lambing may be risking their health and the health of their unborn child. Infections such as chlamydiosis, toxoplasmosis and listeriosis can be passed on, leading to the potential risk of miscarriage.
- Ringworm, orf and cowpox may affect farmers and farm-workers.
- Helicobacter pylori, Weils disease and liverfluke may be acquired from animals.
- Farmers have an increased incidence of osteoarthritis, may suffer from dust diseases such as farmers lung, organophosphate poisoning (with concerns over chemicals used in sheep dipping), psittacosis from bird farming.

3.5 The nature of work for the rural general practitioner

3.5.1 Procedural skills and knowledge

Most literature about the general practitioner's (GP) work in the rural environment originates in Australia and Canada with a small number of studies from the UK (eg Deaville et al, 1998). From a general perspective it is believed that GPs working in rural areas require more wide ranging skills and competencies compared to those working in urban areas (Curran *et al* 2007). Moreover the proportion of GPs providing a broader range of services increases with increasing rurality or remoteness (Hutten-Czapski *et al* 2004, Denz-Penhey & Murdoch 2007, BMA, 2005). The most common skill required was found to be that of dealing with injuries, accidents and emergencies (Smith & Hays 2004, Curran *et al* 2007, BMA, 2005). The type of emergency care revolves around day-to-day injury, rotation in accident and emergency departments and pre-hospital management of trauma patients (BMA 2005), setting fractures and stabilising patients for long periods (Denz-Penhey & Murdoch 2007). Within this context GPs can find themselves dealing with more patients in their surgery with injuries and sprains than in urban areas (Probst *et al* 2002) and attending road traffic accidents because of poor access to accident and emergency departments (Farmer *et al* 2005). The literature further identified other procedural skills and knowledge required in rural areas:

- Obstetrics, anaesthetics (Smith & Hays 2004, Denz-Penhey & Murdoch 2007),
- Certain health problems related to the farming community such as, anxiety, depression and suicide, zoonotic disease and risks associated with chemical use (BMA, 2005).
- The GP provides more total care to hospital inpatients (Olatunde *et al* 2007)
- GPs tend to undertake a broader range of minor procedures (RACGP 2008)

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However, although some of these above issues have been raised previously as being issues in rural health, no more evidence could be found about how GPs recognised and dealt with them in the community.

3.4.2 Relationship with the community

Research from Scotland, Ireland and Australia has shown that there are significant differences for GPs working in rural areas as opposed to urban areas when relating to the local community. Rural GPs tend to:

- Need to have greater consideration of confidentiality issues because 'everyone knows everyone' in rural areas, therefore conversations should not be overheard about an individual's condition and files should not be left for people to see. (Iversen *et al* 2002, Bourke *et al* 2004, BMA 2008).
- Have a different way of thinking (Denz-Penhey & Murdoch 2007) Living in small communities creates issues around professional and social relationships. Iverson *et al* (2002) report how GPs have to balance between friendships and their professional role. It is believed that sensitive issues are harder to raise if a practitioner is a friend (Bourke *et al* 2004). An Australian study by Denz-Penhey & Murdoch (2007) found that because of isolation GPs thought about patient's problems in a different way to those of their urban counterparts. They showed greater professional independence and a greater responsibility for patient care because they had to be self contained with less access to specialists.
- Rural GPs have a greater social standing than their urban counterparts (Denz-Penhey & Murdoch 2007) because of smaller communities than in urban areas. They are expected to give leadership in matters of community issues and they are held more accountable about their clinical skills.

Professional aspects

Working in a rural area can create a different professional approach compared to those working in urban areas; research has found that there is greater emphasis on:

- The level of teamwork (BMA, 2005). Teams in rural care are smaller than in urban areas which leads to a greater reliance on each other and having more contacts with each other, as choice can be limited. The end result can lead to a more holistic care for patients with both treatment and prevention being recognised, and continuity of care being fulfilled (Gabhainn *et al* 2001, Bourke *et al* 2004, Denz-Penhey & Murdoch 2007).

- Managing a specialist – generalist role. Small teams with little choice of expertise can create specialist – generalist scenarios with GPs, especially when there is distance to general hospital services. (Iversen *et al* 2002). In Scotland Iversen *et al* (2002) describe how GPs have to deal with a 'specialist-generalist' role where there is a need to deal with 'everything and anything'. This unpredictable workload can create a dominant pressure and stressful work situations.

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- Being in the surgery less and in the community more (Wood 2004,Olatunde *et al* 2007). Public transport is poor in rural areas, many older people and those on lower incomes may find it difficult to travel to their GP. Therefore GPs find themselves out of the surgery more than their urban counterparts. Visits to patients' homes also involve far longer journeys, with GPs away from their surgery for longer periods. In some areas, 4-wheel drive vehicles may be essential in winter (Wood 2004,Olatunde *et al* 2007).

3.6 International developments in competency and curriculum development

This emerging evidence on the nature of rural general practice has led to developments in competency and curriculum development which specifically takes into account the need for specific skills in rural and remote practice.

3.6.1 Australia

In Australia the Royal Australian College of General Practitioners (RACGP) defines Rural General Practice and recognises that for some rural GPs, whilst their practice conforms to the core curriculum set for RACGP Fellowship, it also involves specific skills appropriate to the rural and/or remote health context in which they find themselves.

The National Rural Faculty is the academic faculty within the RACGP and was established in 1992 (as the faculty of rural medicine) and represents and advocates on behalf of 6000 members. It is responsible for the award of the Fellowship in Advanced Rural General Practice (FARGP) to reflect the fact that GPs practising in rural and / or remote contexts need additional skill sets that will be practised at an extended or advanced level, depending on patient requirements. The aim of the FARGP is to assist candidates to become competent and confident to work anywhere in unsupervised rural and remote general practice.

The FARGP is flexible and consists of core and optional educational activities which have a strong practice based focus and is designed for GP registrars enrolled in vocational training and for experienced general practitioners who wish to undertake a recognised educational program to further develop their knowledge and skills in rural general practice.

Advanced rural skills training is available in:

- Anaesthetics
- Obstetrics
- Emergency medicine
- Aboriginal health
- Child and adolescent health
- Mental health
- Surgery
- Adult internal medicine

In general GPs attain advanced rural skills of practice if they can demonstrate:

- Competence in advanced rural skills in the skills area(s)
- An assessment process has been undertaken to certify competence

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- The use of appropriately equipped facilities and resources
- Involvement of a team of health professionals in the advanced skills practice(s)
- The active engagement of the practitioners in an appropriate skills maintenance programme in the relevant procedural area(s)
- A commitment and responsiveness to community health needs

The Australian College of Rural and Remote Medicine (ACRRM) has 2500 members who practice in rural and remote communities throughout Australia. The College's core function is to determine and uphold the standards that define and govern competent unsupervised rural and remote medical practice. Fellowship awards are conferred to rural medical practitioners who have been assessed as meeting the College standards for rural practice. This qualification is required to be maintained by doctors' participating in professional development programmes that are relevant and accredited for rural practice and ACRRM has designed the first online learning platform designed and built specifically for rural doctors.

3.6.2 Scotland

In Scotland, the General Practitioner's Subgroup of the Remote and Rural Training Pathways Group (a tripartite collaboration between the Academy of Medical Royal Colleges and Faculties of Scotland (The Academy), NHS Education for Scotland (NES) and the NHS Scotland Remote and Rural Steering Group) published its recommendations in a report "Delivering for Rural and Remote Healthcare", in May 2007.

The remit of the GP sub-group was to produce a curriculum for use by general practitioners in remote and rural practice, define the curriculum and its core competencies and specialties, models of achievement, workforce, recruitment and retention, as well as address sustainability. It was recognised that the proposed work is important not only to the future of remote and rural general practice but also has a significant role in contributing to the social capital and indeed survival of remote and rural communities.

This Subgroup developed a set of rural competences that follow the RCGP curriculum, addressing clinical, governance, education and patient safety issues for practitioners working in isolation. The group recommends that these competences be followed in the GP Rural Fellowship Programme. It also suggests that single-handed GPs in remote and rural General Practice should be considered a GPwiSI (a GP with special interests) in its own right.

In the report 4 categories (A-D) have been developed (see table below) for GPs working in rural and remote areas. Category A includes the least rural specialisation and is similar to the requirements of an urban GP practice, whereas category D includes working in very remote areas with GPs being responsible for supporting and running rural general hospitals.

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NHS REMOTE & RURAL STAFFING MODEL LEVEL	GP SPECIALTY TRAINING CATEGORY	TYPE OF GENERAL PRACTICE	EDUCATION REQUIRED	PROFESSIONAL GOVERNANCE
1	**A**	Any **Urban** practice or **Rural** practice	**GPST** scheme may/may not be based around Rural General Hospitals	**Rural Proofing** of competencies and curricula
1	**B**	**Rural Practice** with an extra geographical need e.g. ambulance cover, mountain rescue	**Short Courses**	Standard **GP Appraisal**
1/2	**C**	**Remote Practice** e.g. no OOH opt out **Community Hospital Practice (CHP) Rural Practice** with local service needs e.g. obstetrics, diving chamber.	**GPwSI** (GPs with special interests**)** Level Rural fellowship Experienced GP gaining extra necessary competences	**Accountability Beyond the Practice Level** to CHPs and local governance systems
2/3	**D**	GPs supporting/running **Rural General Hospitals**	e.g. **Hospital Level 2** competencies for acute receiving in medicine	**Dual Accreditation General Practice and Acute Internal Medicine**

A proposed curriculum has also been developed to prepare GPs to work in rural and remote areas, covering the following subjects:

- Healthy People: promoting health and preventing disease
- Genetics in Primary Care
- Care of Acutely Ill People
- Care of Children and Young People
- Care of Older Adults
- Gender-Specific Health Issues
- Sexual Health
- Care of People with Cancer & Palliative Care
- Care of People with Mental Health Problems
- Care of People with Learning Disabilities

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- Clinical Management
  - Cardiovascular Problems
  - Digestive Problems
  - Drug and Alcohol Problems
  - ENT and Facial Problems
  - Eye Problems
  - Metabolic Problems
  - Neurological Problems
  - Respiratory Problems
  - Rheumatology and Conditions of the Musculoskeletal System (including Trauma)
  - Skin Problem

The issues identified in the Report are being considered further by NHS Scotland, the Remote and Rural Steering Group and PMETB (Postgraduate Medical Education and Training Board).

3.6.3 Wales

This study is a first step in Wales to examining the need for developing a set of rural specific competencies. Existing data on rural skills and knowledge is limited, however data on constraints and learning needs has been collated by the School of Postgraduate Medical and Dental Education, Cardiff University. The data is based on the appraisal summary and the Personal Development Plan for every GP who undertook an appraisal in Wales during the period April 2008 – March 2009. The data is available for all Wales and for each LHB. Whilst this study did not allow for a detailed analysis of the data from the rural perspective the table below shows the top three issues for 'All Wales' and for the three study areas for each category.

Whilst there are many similarities across the categories - for example 'premises size too small' and 'poor quality/delayed communication' featured across all three study areas and in the All Wales data – there are some issues that may reflect the rural nature of the study sites. In Powys for example having a split site is identified as a practice constraint, split sites are arguable more likely in a large rural area. It is also notable that 'workload shift from secondary to primary care' featured in the top three service constraints for Powys and Carmarthenshire but not for Gwynedd or All Wales. Again this may be due to increased pressure on rural practice due to distance from secondary care. Further in depth analysis of this data for all rural LHBs would be worthwhile.

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‘Top three issues’ for constraints and learning from Appraisal and Personal Development Plans

	All Wales	Carmarthenshire	Gwynedd	Powys
Personal constraints	Time Family commitment None	Time Family commitment None	Time None Family commitment	Family illness/bereavement Family commitment None
Practice contstraints	Premises too small, Excessive workload Demanding patients	Premises too small Practice size increasing Demanding patients	Premises too small =2 lack of parking =2 excessive workload	Premises too small Split site Nurse shortage issues
Service constraints	Waiting lists Poor quality/delayed communication Inappropriate early discharge	Workload shift from secondary to primary care Waiting lists – general Poor quality/delayed communication	Delayed/difficult acute admission Poor quality/delayed communication Inappropriate early discharge	Poor quality/delayed communication England/Wales differential waiting list =3. Ambulance problems =3. Workload shift from secondary to primary care
Clinical learning needs	Women’s health/gynaecology, Endocrine, Dermatology	=1Cardiovascular =1Endocrine =3 dermatology =3 women’s health/ gynaecology	Cardiovascular =2 endocrine =2 miscellaneous =2 women’s health/gynaecology	Endocrine Dermatology Therapeutics
Non clinical learning needs	Audit and feedback, Practice management, Personal development	Audit and feedback =2 practice management, =2 personal development	Audit and feedback IT development Personal development	Audit and feedback Personal development Practice management

Source: School of Postgraduate Medical and Dental Education, Cardiff University

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3.7 Summary

The literature reviewed above provides evidence that GPs working in rural areas have a different work profile to their urban counterparts, for example through practicing obstetrics, emergency work, minor procedures and anaesthesia. There is also recognition that zoonotic diseases are more prevalent. The social and cultural issues are also an issue, where the rural GP is known by most people in the community both in their professional and social lives. These issues are compounded by the lack of specialists and resources in rural areas, making GPs rely heavily on teamwork and their wide range of knowledge. Most evidence is from Canada and Australia with a small emerging body of literature from Scotland. No literature was found specifically from Wales however and the purpose of this study is to examine these issues within the Welsh context.

4.0 THE RESULTS

4.1 The sample

A total of 30 people were interviewed out of a possible 36. A purposeful method of sampling was used. Here participants were invited to be interviewed and if they declined another round of letters were sent to other possible interviewees. After the second round of invitations no more were sent as time for the project was limited. Below is a breakdown of the sample:

	GPs	Practice nurses	Educationalists	Consultants	**Total**
Powys	5 (5*)	3 (3)		3 (3)	**11 (11)**
Carmarthenshire	3 (5)	3 (3)		2 (3)	**8 (11)**
Gwynedd	4 (5)	2 (3)		3 (3)	**9 (11)**
Cardiff University School of Medicine			1(1)		**1 (1)**
Welsh Rural Postgraduate Unit			1(1)		**1(1)**
RCGP Rural Practice Standing Group			0 (1)		**0 (1)**
Total	**12 (15)**	**8 (9)**	**2 (3)**	**8 (9)**	**30 (36)**

*Target number in brackets

4.2 Results from the interviews

This section describes the results from the interviews. Participants own words are used to illustrate emerging themes. The findings describe the landscape of rural general practice in Wales, and then go on to compare the differences between rural and urban general practice in Wales. This exploration highlights the lack of close proximity to specialist services in rural areas and describes how GPs and practice nurses overcome these shortfalls. In the final section educational issues are explored specifically about continuing professional development and the preparation of newly qualified GPs to work in rural Wales.

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4.2.1 The landscape of rural general practice in Wales

The GPs and practice nurses interviewed believed they worked in a rural area (although one area was described as semi-rural) and when asked what made the area rural they mentioned these characteristics:

a) Distance from health services

Distance from health services was a consistent theme. These services included distance to district general hospitals (DGHs), hospices, ambulance stations, and in some cases community hospitals:

> *'We are 35 miles from a DGH, 11 miles from an ambulance station, 11 miles from a community hospital and 11 miles from the nearest GP practice'*
> (GP Powys)
>
> *'Its 2 hours drive to the nearest DGH'*
> (Practice Nurse Gwynedd)
>
> *'There is an ambulance station nearby but that tends to be used for more urban areas and can often take 30 minutes to respond'*
> (GP Gwynedd)
>
> *'The nearest hospice is about 60 miles away'*
> (GP Gwynedd)

b) Small practice populations with large catchment areas

Participants commented about the small towns in which they were based and the scattered population outside of that town which covered a large catchment area:

> *'We have 1500 patients in the town and 3000 scattered over 400 square miles'*
> (GP Gwynedd)
>
> *'I'm based in a small town, I have a large area to cover, 400 square miles, with a population of 8,500'*
> (GP Powys)
>
> *'We are based in a small town, our population is spread out in a 5 mile radius with 2 branch surgeries'*
> (GP Carmarthenshire)

Small population sizes often produced small practices which meant that GPs needed to have a wide range of knowledge and skills:

> *'We are a small practice and because of this we take on a wide range of skills'*
> (GP Powys)
>
> *'The size of the practice means we have to be a multi-tasker and you have to know a lot'*
> (GP Gwynedd)

However, for each individual to know and be skilful in everything would be impossible, so small practices made sure that a wide knowledge and skill base was spread among the partners:

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'At least one of us has to have these skills. We can't have them all because we would not have enough cases to keep up our competence. So we share them, I'm not very confident about doing joint injections but another partner is'
(GP Powys)

c) Employment in rural areas

Typical occupations were described to be farming, forestry, light industry with some clerical, retail and caring work. A large proportion was also self-employed:

'Its mainly agriculture and tourism'
(GP Gwynedd)

'There is a strong farming community here'
(Practice Nurse Carmarthenshire)

'Occupations tend to be clerical, retail work and some factory work.'
(GP Powys)

'There is no major industry but there are 3 small types of light industry, people are in the caring profession and a huge amount of people are self employed'
(GP Powys)

d) The rural community

The rural community was described as a mixture of small towns, isolated properties, having a lack of public transport, an increasing older population, a transient population of holiday makers, with some hidden deprivation which is different from the obvious deprivation in urban areas:

'There are many isolated properties and a lack of public transport'
(GP Carmarthenshire)

'There is a lot of hidden deprivation, although people have their own cars because they have to but many cars are falling to pieces'
(GP Powys)

'There is a large transient population because of many holiday homes and many people come in from the West Midlands'
(Practice Nurse Gwynedd)

'I believe that there is more of an ethnic mix in urban areas. Rural areas do not have so much deprivation but have more older people. There are different diseases but that can be the same for urban areas'
(Educationalist)

e) Transport difficulties

It was acknowledged that most rural residents had independent transport because it was necessary to get about. Public transport, however, was scarce and so if someone was without their own transport then issues about service access occurred:

'There is an issue with public transport and the ambulance. We tend to be at the end of the line here, so someone needing radio- therapy could be picked up at 8am to get to south Wales, they arrive at 10.30, and then have a long journey to get back and may not be home until 7.30 pm. Its not nice after you have had treatment, and not feeling well'
(GP Carmarthenshire)

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Occasionally, other types of transport were available but these were reducing in capacity:

> *'Most people have access to transport, and we have a good community transport system, where people just have to pay for the petrol. We used to have hospital transport available for people who had out patient appointment, but that is no longer available but some who are eligible can still qualify'*
> (Practice Nurse, Powys)
>
> *'This is also a problem with going to a hospital which is 10 miles away, and if people need specialist help then they have to travel 24 miles. Some people have to rely on public transport or a taxi. We used to have community transport, where people just paid for the petrol but that service is not so good now.'*
> (Practice Nurse, Carmarthenshire)

It was not just patients who might have travel problems but sometimes the weather and the rural terrain can be difficult for professionals:

> *'Travel can be difficult sometimes, snow has hampered me, but more recently it has been floods and fallen trees. Also we do a lot of travelling, about a third of our practice population live a long way away.'*
> (GP Powys)
>
> *'I think there is an issue about transport and getting to patients who live in remote areas. Tracks can be very muddy and places can be hard to get to, so it can be harder to do house visits.'*
> (Practice Nurse, Carmarthenshire)

4.2.2 The relationship between the professionals and patients

Participants described several features they thought depicted the characteristics of patients in rural areas:

a) The Welsh Language

In some areas the Welsh language was the dominant language, especially in Gwynedd and Carmarthenshire:

> *'The Welsh language is spoken in this area, in urban areas as well, about 75% speak Welsh. I think it is because the schools teach Welsh'*
> (Practice Nurse Carmarthenshire)
>
> *'There is a lot of people who talk Welsh here, about 75%. We could communicate in English but its good to use their first language'*
> (GP Gwynedd)
>
> *'The majority of people are Welsh speaking, especially the elderly. Its essential here to speak Welsh, I find that they can explain easier in Welsh'*
> (Practice Nurse Gwynedd)

However in other areas, (especially Powys) the Welsh language was not dominant:

> *'Very little Welsh language is spoken here.'*
> (GP Powys)

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Although participants were aware that in many parts of rural Wales, the Welsh language was spoken, some also said that they spoke little or no Welsh:

> *'There are lots of Welsh speakers, I don't speak Welsh, and sometimes they start talking in Welsh, but as soon as I speak English, they just speak English as well. It always seems to be okay'*
> (GP Carmarthenshire)
>
> *'I can speak a bit of Welsh, and I usually speak Welsh with children'*
> (GP Gwynedd)

b) Knowing patients families

Participants believed that the rural population tended to be more static than in urban areas. Therefore GPs were able to develop an intimate knowledge of patients and their families:

> *'We seem to have more intimate knowledge of patients [than those in urban areas]. Different generations come here and there are many branches of the same family, so you can make connections of who is who.'*
> (GP Carmarthenshire)
>
> *'We deal with whole families and we know everyone. You build up a rapport with people because you tend to follow them through for a long time.'*
> (Practice Nurse Carmarthenshire)
>
> *'We know all our patients here, not from babies, because we don't do obstetrics, but from childhood to grave, there is good continuity of care and that's really lovely'*
> (GP Powys)
>
> *'GPs know their patients for a long time and tend to know complete families. Patients also tend to stay in one place'*
> (Practice Nurse, Gwynedd)

Because of this intimate knowledge, GPs tended to be more informal with patients especially with palliative care:

> *'Its like with terminal care, I tend to give anyone with terminal illness my home telephone number, so that they can phone me out-of-hours.'*
> (GP Carmarthenshire)

Familiarity also produced flexible appointment times that allowed for personal circumstances:

> *'Patients tend to just drop in [we do have an appointment system] especially those who know us well and have lived here for a long time'*
> (Practice Nurse Powys)
>
> *'We often have to work around certain farming events like lambing, so they can come in at 8.30 or 12 noon, otherwise they have to feed their animals'*
> (Practice Nurse Powys)

c) Rare visits to the doctor

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A small number of participants described sections of the community that rarely consulted the GP, (however this was not a widely expressed issue) and when they did it was felt that their visit warranted time:

> *'People in the countryside [especially farmers] can present with problems later than they do in the towns but it is not a detriment to their health. They have a basic knowledge because of looking after animals and so tend to observe their problems and see how they get on. It's a good way to be, a good balance.'*
> (GP Carmarthenshire)

> *'Farmers are reluctant to turn up at the surgery, especially in February and March when its lambing time, so when they do come in we try to do everything for them'*
> (GP Gwynedd)

d) Compliant and 'lovely' patients

Participants often described their patients as 'lovely', and they gave a sense that dealing with patients in rural Wales was mostly a pleasant experience, where they were well motivated and compliant:

> *'Patients mostly attend the appointments, they comply to their treatment, we also have a 'wait and see' facility. People don't abuse the system they always have a valid reason for attending'*
> (Practice Nurse Powys)

> *'Patients from rural areas seem to be more motivated, they want to know how to keep well and how to look after themselves'*
> (Consultant Gwynedd)

4.2.3 Living and working in a rural community

Living and working in a rural community posed both positive and negative issues. The positive issues were that they:

a) Liked the lifestyle

Participants often said they enjoyed activities associated with the countryside such as walking and gardening, and therefore it was their choice to move to a rural area:

> *'Well, I chose to come here, so it's a choice, a lifestyle choice. I like outdoor activities'*
> (GP Gwynedd)

> *'I enjoy walking and gardening. I was bought up in the countryside so its where I want to live'*
> (GP Carmarthenshire)

b) Enjoyed the environment

Many expressed the view that the rural environment was a safe environment for their children and their job, also they like they way everyone knew each other:

> *'I love working in the environment, I really like my job, the kids are safe, and everyone knows each other'*
> (GP Carmarthenshire)

> *'There is a low crime rate, I don't feel frightened going anywhere'*
> (GP Powys)

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'The environment is a lovely place to live and its good for the kids. There is a great sense of belonging'
(GP Gwynedd)

However living and working in a rural environment can be difficult because often there was no boundary between professional and social life:

a) Patients as friends

There is the potential to have friends who are also practitioners patients:

'GPs in rural areas need to be aware of the culture because they live in it. There are patients as patients and patients as friends.'
(Educationalist)

b) Always a professional

GPs and practice nurses found themselves to be always seen as the professional whether on or off duty, which can be very stressful and difficult to manage:

'We found the life style a big change. I don't think I would have come here if I had have known, the most stressful thing is on my personal life. I can't escape, its not that people phone me up, I have had clear boundaries about that. I've had to keep a distance, I've had to stand back. I'm always the 'doctor', with everything I do, I want to be known as a mum and a wife at home and a doctor at work'
(GP Powys)

'You are so accessible all the time. In social situations people know you, so you are never off duty, but you do get used to it '
(Practice Nurse Powys)

'It can be like living and working in a gold fish bowl. In social situations you are noticed by everyone, I went out to a social event to other night, I was dancing and having a good time. The next day a patient saw me, and said ' you were well away last night and having a good time'. Well, in fact I was very sober because I was driving. '
(GP Powys)

c) Little is private

Many participants commented that living and working in a small rural community meant that everyone knew everyone's business. This manifested itself in various ways, for instance, it can be difficult when something goes wrong with a patient, or when a GP is seriously ill. From a patients point of view, it can be difficult to book an appointment for a sexual health issue when people are related to each other:

'We are a public figure in a small community, when things are OK its fine, but when things go wrong, it can be very difficult. If someone dies under your care, because you have missed something, everyone knows about it. Your kids get mixed up in it, because my kids know their kids'
(GP Gwynedd)

'One of our colleagues is seriously ill, and on long term sick, she said to me that she did not want to go out because people would see her, and talk to her and ask her how she was. Everyone knows everyone's business around here.'
(GP Powys)

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'Its is difficult for young women to seek appointments for sexual health and GUM clinics, when their auntie is on the desk. Here everyone is related to everyone else. Its also not normal practice for people to work in the same practice as they are as a patient, but here they do not have any choice. So there is a lack of choice when this is the only surgery in the town'
(Practice nurse, Powys)

d) Isolation

Participants talked about two types of isolation, the first was social isolation, where it was explained that it may be difficult to find a partner, to go to a cinema and adjust to the lack of shops:

'I think if you are unattached, you would never find a partner in a rural area because no one available'
(GP Powys)

'I have to travel for a social life, and it's a long way away from anywhere'
(GP Carmarthenshire)

'In my personal life moving here was a cultural shock a lack of shops, driving quite a few miles to the cinema, which is the only culture. '
(GP Powys)

The second type was professional isolation, which manifested itself in different ways:

'Can't pop out to a hospital'

'The problems are that we are professionally isolated, we only have our partners to liaise with. I can't just pop out to a hospital for updating.
(GP Powys)

'A long way from other surgeries'

'We are isolated here, we are a long way from other surgeries and so need to make more of an effort to meet each other'
(GP Carmarthenshire)

'We can get isolated, outside this town our nearest GP colleagues are 30 minutes away. So we tend to see the same GPs, and have to go out of our way to meet them, and we don't really know them'
(GP Powys)

'Under stress & nowhere to go'

'I think we need more support, working in an urban area I had lots of support and networking opportunities with GPs. GPs here seem quite private. I see GPs under severe stress and they do not have anywhere to go'
(GP Powys)

'Hard to know hospital consultants'

'Its hard to get to know all the hospital consultants in the DGH because we are so far away and they tend to change around a lot'
(GP Gwynedd)

e) High social status

High social status was a mixed blessing. Some participants commented that because they were known to the local population, and that the medical profession was

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perceived to be of a high social status, this attracted respect but there were high expectations of them from the community:

'I live in the community that I work in. GPs are visible, and have a high standing in the community and we get asked to do a lot of things, like to sit on committees. So I'm a local councillor, work part time on St Johns Ambulance'
(GP Powys)

'We are all high profile amongst the local population and well respected. You can not hide easily!'
(Consultant Gwynedd)

4.2.4 The differences between urban and rural general practice

The literature review suggested significant differences between rural and urban general practice, centring around the fact that rural GPs practice more obstetrics, accident and emergency work and undertake more minor surgery. However the evidence from these interviews suggested that the gap was narrowing:

'I would say that 80% of our work is generic and the same as working in an urban area'
(GP Carmarthenshire)

'Things have changed since I first started, before we made more use of our skills but in the last 10 years we are less different'
(GP Powys)

'Medical knowledge is pretty general. Like for palliative care, the medical knowledge is the same'
(GP Powys)

There was also a belief that wherever a GP practices, there is always a need to adapt knowledge:

'GPs need to adapt there knowledge to the population that is served. Most issues are common to both rural and urban areas'
(Educationalist)

It is suggested that the rural-urban practice gap has narrowed because of two main changes. GPs reported that they no longer practiced obstetrics because midwives had taken over this role and midwifery units were no longer local:

'We do no obstetrics now, the midwives do more and the community hospital has been downgraded so there is no midwifery unit. So people either have home births or are admitted to the DGH.
(GP Powys)

'When I first arrived [about 20 years ago] obstetrics was my concern. I got lots of experience but it did worry me and doing forceps deliveries. Now this is less, it is more with midwives and Powys does not want in-house deliveries, so maternity care has shifted'
(GP Powys)

'We are not involved in midwifery, we have a good midwifery team, and they get on with it'
(GP Carmarthenshire)

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The second change was that emergency work especially attending road traffic accidents (RTAs) was much less because of the increase in paramedics:

> *'We do less emergency care than we did, because there are more paramedics but we do have some emergencies especially with in the community hospital, like acute chest pain and acute injuries'*
> (GP Gwynedd)

> *'We used to do a lot of trauma care. I'd turn up at an accident, and may have to insert a drip until the patient was cut out, which may have taken hours. Now the ambulance service has paramedics and the fire brigade has much better cutting equipment. Also because of Shropdoc and St Johns Ambulance as first responders, its now rare to be involved in a RTA'*
> (GP Powys)

> *'We don't have so many RTA call outs now. This only happens if patients don't want to go to a DGH because they are not badly hurt and just have a minor injury, so we may then be called out to treat them.'*
> (GP Carmarthenshire)

However one practice nurse described how a GP had set up a voluntary service:

> *'Some GPs have set up a voluntary service called MEDs. They have a car that is fully kitted out for any emergency, like an RTA, cardiac emergency. They get updated in Birmingham, where they join the crisis team. They attend emergencies if the ambulance can't arrive in time, and so other colleagues will cover for them. They go beyond the practice area. They cover for 24 hours, and may get a call once per week. The other day they went out to an RTA because the ambulance could not get their quickly'*
> (Practice nurse Powys)

Interestingly, even though it was recognised that GPs in rural areas attend to fewer RTAs, because of an improved ambulance and fire service, one consultant from an A&E department believed that GPs should still attend accidents when necessary:

> *'There is a need for local GPs to do more emergencies in rural areas. Paramedics don't always get there in 8 minutes, which is a very demanding time. I think they achieve 65% of the time. So it would be good if there were a scattering of GPs in rural areas who made themselves available for emergencies when the ambulance could not make it in time.'*
> (Consultant Carmarthenshire)

Participants recognised these differences and felt that it was better for them on a social level, but on the other hand they believed that they were becoming deskilled in these areas, and that these skills would not be regained:

> *'Before Shropdoc [an out-of-hours service] we were involved with more RTAs in the past. Its much more regulated now. It's a shame for professionalism but better for our life style'*
> (GP Powys)

> *'Some of this is good but I am deskilled in obstetrics'*
> (GP Carmarthenshire)

> *The thing is now, is that we are deskilled in obstetrics and could not really go back to it.'*
> (GP Powys)

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While the difference between urban and rural areas has narrowed, it was agreed that the differences are more ‘subtle’ and existed because of the lack of specialist services, distance to services, and being responsible for a community hospital as described below.

4.2.5 Access to services and resources in rural general practice in Wales

Many participants commented on the lack of specialist services, resources and the issues surrounding the distance to travel to secondary services. However community hospitals were seen as a good resource particularly for rehabilitation.

a) Lack of specialist services, clinics and resources

Participants described the difficulties they faced because of the lack of specific services and these fell in the following categories:

Mental health specialists

In this section, participants described how it was difficult to obtain a range of mental health services, this ranged from a lack of nurses, psychiatrists, approved social workers and support groups:

> *‘Access is poor, especially to specialist nurses, and mental health is a particular problem. There are lots of private institutions around here, many patients are placed out of their own area. The acute psychiatric hospital is 50 miles away, we do have a CMHT [Community Mental Health Team] but its on the thin side. I had to deal with someone who had learning difficulties and behavioural problems, in a private institution. I tried to contact the psychiatrist, because they needed to be sectioned, but it took days to get hold of him’*
> (GP Gwynedd)
>
> *‘Mental health issues can give us problems. I’ve given up getting an approved social worker [to section someone]. They won’t come from the large town which is about 3 hours away. So there is no point in trying to get people sectioned, so I put people in an ambulance, and they usually get there. This can happen several times a year and it’s a few hours journey to hospital’*
> (GP Powys)
>
> *‘There is no primary care psychiatric service, I had someone who I felt I could not cope with, so I wrote to the CMHT, and they wrote back, without seeing the patient, that her condition was more appropriately served by primary care’*
> (GP Powys)
>
> *‘We have people coming in from outside to live, and they come here and ask if they can have counselling or some special psychological therapy and they are shocked to find that it does not exist’*
> (Practice Nurse Powys)

Family planning clinics

The lack of family planning services created wide ranging concerns for practitioners centring around the distance to travel to clinics, the lack of choice for women and the restriction of resources for GP practices to develop a whole service:

> *‘There is access to a family planning clinic, but it is not held very often.’*
> (GP Gwynedd)

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'We cannot offer women the full range of family planning services, the family planning service has stopped. We cannot offer coil services. We will have an implant service in a year, but for coils [because they last longer], we have to do 12 per year and we do not have the volume to keep up our practice.'
(GP Powys)

'Sexual health and contraception is an issue. We would like to put the service on here in the surgery, but you need the whole service, like a GP, a nurse and a counsellor, the LHB will not support this. They will let us go on a basic sexual health course but that does not set us up. We need to have time for this and be staffed correctly. It would also be good to set this service up in the schools, because the nearest sexual health service is about 20 miles away and if a school child wanted to go there from here, the parents would know about it.'
(GP Powys)

'We would like to do more in family planning services, and have a comprehensive service in the practice because at the moment people have to travel a long way for the service'
(GP Carmarthenshire)

Sexually transmitted disease clinics

A similar scenario was presented with sexually transmitted diseases which again centred around access and resources:

'I am not confident about sexually transmitted disease, the clinic is held every 2 weeks but people have to be seen within 24 hours once we have diagnosed a problem'
(GP Powys)

'Screening for sexual transmitted diseases is difficult because the clinic is 30 miles away. We could provide this service but we need more resources. We have done the courses, but we need more facilities. You need counsellors, and other specialists'
(GP Gwynedd)

Palliative care specialists

Hospices were often many miles away and specialists such as Marie Curie nurses did not visit people in remote areas, so GPs took on much of the responsibility:

'Patients in urban areas would have a hospice and Macmillan nurse, we don't have specialists in palliative care. Its 35 miles to a clinic, and a hospice is 30 miles away'
(GP Powys)

'Palliative care is an issue, I tend to look after people at home because the hospice is about 60 miles away'
(GP Gwynedd)

'Marie Curie can't [or won't] visit people who are really remote'
(GP Carmarthenshire)

b) Distance to a DGH and specialist medical services

It has already been highlighted how the distance to clinics and hospices creates concerns to practices and another issue expressed was the distance to district general hospitals and other medical specialist services (also described in section 4.2.1):

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'Distance has a big impact on the patient's life. It can be a100 mile trip or 200 mile trip for very specialist medicine like paediatrics'
(GP Gwynedd)

'It's the distance from services like a DGH, which is 30 miles away, you have to weigh up if it is appropriate to send a patient there'
(GP Gwynedd)

'We do not have the capacity here to carry out technical work, and so for very specialist services patients have to travel between 40 – 100 miles'
(Consultant, Powys)

c) Community hospitals

The majority of GPs reported that they had local access to a community hospital, and because of this the practice was responsible for the medical cover. These community hospitals generally admitted patients who needed rehabilitation, respite care and assessment and those discharged from a DGH but needing some on-going care:

'In the community hospital we tend to look after people, especially the elderly, who have been discharged from the DGH'
(GP Carmarthenshire)

'We have people for respite and rehabilitation'
(GP Carmarthenshire)

'Its good to have the community hospital, here were can support people who need on-going care after discharge from a DGH'
(GP Powys)

Any seriously ill patients were admitted to a DGH:

'The focus on the community hospital has changed, used to have a lot of strokes, infections and acute work. Now because of clinical governance issues, we admit for less acute problems, more for rehabilitation. If someone is ill, out-of hours, they phone the DGH, and if they cannot deal with it on the phone, the patient gets transferred to the DGH.'
(GP Carmarthenshire)

Another GP reported how the community hospital was not so useful as it was:

'The community hospital is not as good as it was, its always full. Its half full with delayed discharges, and the other half with rehabilitation. There is no minor injury unit, and no elderly assessment unit.'
(GP Powys)

4.2.6 Making up the shortfall in services

The distance from DGHs and the lack of specialists locally has created the need for GPs and their practices to develop a self-contained service, a wide knowledge base, hone clinical skills, develop on-site services and manage patients in different ways. These developments are described below.

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a) Self-contained GP service

Small stable populations in rural Wales allowed GPs to know their patients (as described in section 4.2.2). This knowledge enabled GPs to anticipate need and create a self-contained GP service and therefore compensate for the shortfall in services. A self-contained GP service showed itself in various ways:

'We cut our own cloth'

There was a belief that because of the distance from services GPs referred less to specialists preferring to manage on their own:

> *'We cut our own cloth. Our referral rates are very low for every thing, so we tend to manage on our own more than others do.'*
> (GP Gwynedd)

Consultants also noticed that rural GPs tended to be more careful about referral than urban GPs which subsequently created more appropriate referral patterns:

> *'I would say I get proportionally 3 to 4 times more referrals from urban areas than from rural areas. Rural GPs seem to take on more responsibility and take more considered decisions before they refer a patient. I think they realise about the travel for patients'*
> (Consultant Gwynedd)

However another consultant believed that being too self-contained had the potential to create problems and that it was important for GPs to be aware of their limitations:

> '*GPs in rural areas need a balance. Sometimes they don't ask for advice, they believe they can do everything and don't ask for help from outside. They need to be more responsible and recognise their limitations'*
> (Consultant Gwynedd)

'Patients want us to sort things out'

Sometimes local services were not available and so GPs were prepared to help out their patients:

> *'We do carry things like oxygen in the car, ambulances can take up to any hour to arrive its no one's fault, its just sometimes there is a long way to travel so patients do want us to sort things out for them and they prefer to be cared for at home'*
> (GP Powys)

> *'We carry more medication, sometimes people miss the pharmacy and its closed, and there is no late opening, so we can help out'*
> (GP Powys)

'We are the hub of care'

In rural areas there are no alternatives from which to obtain medical care, such as walk-in clinics and accident and emergency departments (A&E). Generally there is just the one surgery in the local town. Hence the brunt of care falls on the one GP practice. So although GPs attended to fewer RTAs, they still found themselves coping with injuries, accidents and acute care:

> *'Medical knowledge is pretty general, like for palliative care, the medical knowledge is the same, but there is more emphasis to do it because we are the hub of the resources in the town'*
> (GP Powys)

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'Its about the way we work. We are the only ones people can see, we have no walk in centres, no A&E'
(GP Carmarthenshire)

'There is a different range of practices more injuries, accidents and more acute work because they have no where else to go. In urban areas, any acute problems people would go straight to hospital via the ambulance'
(GP Powys)

'Patients expectations are high, people want everything, they want a dressing done, blood tests done because there is nowhere else to go. Its not that I have to do them, the nurse will do it, but its about managing all of the service, that we can cope with it all. We have to know we can fund it all, that we are employing enough nurses, that we can take enough bloods. Patients are discharged earlier from hospital, so we have to make sure we have enough appointment times and money'
(GP Powys)

b) Wide range of knowledge and skills

Another way of making up the shortfall of services was for GPs and practice nurses to develop further skills and knowledge to reflect need (already described in section 4.2.1). This was aptly captured by the following participants:

'They need a wide variety of knowledge, GPs don't know who is coming through the door'
(Practice Nurse Gwynedd)

'Having worked a long time in the city, there I got very specialised, and did not work outside the box because someone was always available in which to pass a patient on if there was a problem. Now I work in a wider field, and so people are dealt in more detail here. If they need an ECG, or a 24 hour BP monitor, or if they need a specialist test, we can generally do it here, so they don't have to travel'
(Practice Nurse, Gwynedd)

'I think rural GP's have to go the extra mile because they do not have an A&E or hospital on their doorstep. In urban areas it is easier to refer to the hospital or A&E.'
(Consultant Gwynedd)

Because of the distance from a DGH many GPs found they needed to keep their clinical skills honed to stabilise patients before admission to hospital:

'We have to stabilise patients before they are admitted to DGH.'
(GP Powys)

'There may be a longer referral to hospital, because the ambulance may take a while to arrive, anything from 10 minutes to 60 minutes, you never know, because the ambulances may be else where. So GPs may need to thrombolyse, or stabilise patients for fluids or for an asthma attack for instance, so that patients can get safely to hospital when the ambulance comes.'
(Practice nurse, Powys)

'I've thrombolysed patients who have had an MI'
(GP Powys)

Others felt that they needed to be competent in emergency care:

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'GPs need basic life support skills and advanced life support skills, especially if they find themselves in an isolated place, and the ambulance will take many minutes to arrive.'
(Educationalist)

'We don't do any obstetrics but I do need to feel competent about resuscitating a baby'
(GP Powys)

However this was not always the case, when travel time was shorter, for instance the GP quoted below said the hospital was only 10 miles away, then the way forward was to phone for an ambulance:

'If we have emergencies, like chest pain, we send for an ambulance'
(GP Carmarthenshire)

c) Delivering services locally

Participants reported offering more services in surgeries to make up for the shortfall in services. They realised that many patients did not want to travel to a hospital because of the distance:

GPs in rural areas provide a wider range of services because of the distance from a district general hospital (DGH). They need a higher expertise in managing patients.
(Educationalist)

Hence the following services were available in many surgeries:

Minor surgery

'We do minor operations and joint injections'
(GP Powys)

'GPs do a lot of minor surgery like take off warts. They may take a biopsy of a mole and send it off for analysis, this saves the patient travelling to a DGH. This is especially for older people, they will probably let younger people travel.
(Practice Nurse Gwynedd)

'GPs do minor operations here for example they remove lesions'
(Practice Nurse Carmarthenshire)

Minor injury services

'We used to do more suturing, but we do less now, but more than in city practices because people don't want to go to A&E. So we end up treating more minor injuries like twisted ankles and cuts.'
(GP Carmarthenshire)

'We have a walk in facility for minor injuries, we get lots of people turning up. Last week I had 2 machine injuries, someone had been bitten by a cat, and a motorbike accident. It saves people travelling 45 miles to a DGH'
(Practice Nurse Gwynedd)

'The minor injuries department has closed so people have to travel quite a few miles to an A&E department, so what they do is come here, and that adds extra pressure on us.'
(GP Powys)

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Undertaking blood tests and ECGs

> *'So much goes on in the practice like blood tests and ECGs'*
> (GP Powys)
>
> *'We collect blood in surgeries, in the city patients would have to go to a hospital'*
> (Practice nurse, Powys)
>
> *'We tend to do more things here, so that patients don't have to do too much travelling. We have recently got a machine that measures blood clotting (I&R machine). This means that patients only have to visit us once, rather than returning to get their results.'*
> (Practice Nurse Gwynedd)
>
> *'We spend most mornings testing blood for patients, if they lived closer to a DGH then they would go to the phlebotomy department'*
> (Practice Nurse Gwynedd)

Contraceptive services

> *'We put in coils because we have no family planning clinic'*
> (GP Powys)

The use of remote technology

> *GPs also take photos of dermatological problems and send them to the consultant for feedback. This again saves people from travel especially older people'*
> (Practice Nurse, Gwynedd)

The lack of local specialist services required some GPs to obtain new qualifications in order to develop a service:

> *'I found there was no service for rheumatology, so I obtained a post-graduate diploma in rheumatology and now I do an out-patients clinic with a consultant'*
> (GP Powys)
>
> *'We all have a diploma in palliative medicine, we want people die at home or the community hospital, not miles away. '*
> (GP Powys)

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However not everything was available locally and then patients had to travel:

> *'People do not want to go to hospital but services are not individually available so its difficult for patients. They have to go a long way for blood tests, and physiotherapy.'*
> (GP Carmarthenshire)
>
> *'We have a high level of older people and we have much more chronic illness now. We can offer some blood tests at the surgery but we need more spaces to do more'*
> (GP Carmarthenshire)

d) Doing more house visits

A few participants said that the shortfall of transport services meant some undertook more house visits than they would in urban areas:

'I probably do more home visits because some people can't get into the surgery'
(GP Carmarthenshire)

'I do more house calls because travel is not so easy for people, especially for the elderly, and there seems to be quite a lot of them'
(GP Carmarthenshire)

However, this was not a widely held view because most people had access to independent transport. When house visits were necessary these took up time because of the mileage involved:

'When I do house visits, I travel about 10-20 miles and this takes up a lot of time'
(GP Gwynedd)

To help accommodate patients who had transport difficulties, many described how they had a flexible appointment system so that patients could organise appointments around bus timetables, lifts or taxis:

'Because of poor public transport and some do not have their own transport we are very flexible with appointments, many get lifts, and you can't expect GPs to visit a lot because of the travel involved, they might have to go 30 miles one way and then 30 miles the other way'
(Practice Nurse, Gwynedd)

'Public transport is sparse. So we make appointments for people to fit in with the bus timetable, so that they can get here okay and get home without waiting too long. This is quite a problem with one village, and the elderly are most likely to be without their own transport. Some people do manage to get a lift.'
(Practice Nurse, Carmarthenshire)

'We adapt appointment times, especially for the elderly, because they often rely on a lift to get in'
(Practice Nurse, Carmarthenshire)

e) Patient management

The shortfall in specialist services resulted in patients being managed differently than those in urban areas. Patient management manifested itself in several ways:

'Managing patients at a higher level'

This term meant that GPs took on more responsibility for their patients and undertook more medical interventions than GPs in urban areas, this action was enabled by using the local community hospital:

'Because of the distance from built up areas, there are not the units around the corner, it's a big decision to send someone to hospital. There is also not the range of services, like accident and emergency, rapid response units. GPs therefore have to take more responsibility, which means they have to manage patients at a higher level, especially within a community hospital.'
(Educationalist)

'*Seeing things through'*

This term meant that GPs in rural areas had more opportunity to continue care from start to finish with patients:

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'The difference is that we see things through more from the start to the finish. We are more involved. There is just the one practice in the town, so there is a relationship with everyone'
(GP Powys)

'Doing more things in detail and having a deeper involvement'

This term meant that GPs became more involved with patients because local specialist services were not available such as a palliative care team:

'We do more things in detail, like palliative care, in urban areas people would go the palliative care team, so we get more involved because there is no such team'
(GP Gwynedd)

'Palliative care is an issue in rural areas and is essential. It has to be delivered. In order to do it right you must be confident in pain management, get the right information and know where to get it. You need to treat patients as individuals so they get care as they require it. The relationship with the patients is important, and so I have a deeper involvement with them'
(GP Powys)

'Working with patients more before and after referral'

This term meant that GPs tended to do more for patients prior to being referred to a consultant and after referral. This included completing additional blood tests, providing the consultant with additional information and carrying out guidance suggested by the consultant:

'Our job is different from an urban GP, we work with patients more before they see a consultant, for many it would be a 100 mile round trip'.
(GP Gwynedd)

'Because it is more travel to hospital, we tend to refer later. Its difficult for patients to get to the DGH. We don't tend to refer for investigation, we tend to do more of this ourselves'
(GP Powys)'

'Maybe because the DGH is remote we tend to manage more chronic conditions, for example we may follow up someone with diabetes more. Also the consultant may give us guidelines to follow so that patients do not have to attend so many appointments because of the travel'
(GP Gwynedd)

This willingness to work with patients before referral was also noticed by consultants:

'I have more contact with rural GPs, I'm able to work with them and question them more about a patient's background, and they are likely to have more knowledge about the family. I can also ask them to do more investigations like blood tests. I do this because it cuts down on travel for patients and the GPs are prepared to do it'
(Consultant, Powys)

The same also happened after referral:

'We place more responsibility on rural GPs, we realise that patients can't just pop back next week, so we tend to pass on some guidance to GPs so that they can monitor them'
(Consultant, Gwynedd)

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4.2.7 Decision making and risk management

Making decisions about patient care can be less straightforward in rural areas because of the distance from specialist services.

a) Hospital admission

There can be a dilemma about referring a patient to a DGH because of the travel distance. This requires a set of skills focusing on potential deterioration, journey survival and remaining at home:

'You need a different set of skills'

> *'I've needed a different set of skills. Without easy access to referral, I have to decide whether to send someone to a DGH or not. If we are in doubt I will admit them to a DGH but then you question if its appropriate or not.'*
> (GP Gwynedd)

'You have to think about the travel distance'

> *'You do have to think of the distance to a district general hospital. You need to weigh up how ill a person is, and if they are likely to deteriorate. So you need to think about the journey and how that will effect them but on the other hand its important to admit them if they need specialist care'*
> (Educationalist)

'You can't wait and see'

> *'Sometimes its not safe to keep someone at home because of where they live, so we would admit them to hospital. I recently had someone who had a head injury, and they were sent home from hospital. When I visited them, I was not happy because they lived down a track and through a field, and by the time an ambulance arrived and got them to hospital it would have been over 2 hours, so I sent them back to hospital. Its different if you don't live far away from a hospital you can wait and see how someone is, but when they live in a remote place, then you have to take everything into consideration, and admit them to hospital if you are at all worried.'*
> (GP Powys)

> *'If you have someone you are concerned with, you either have to do something and send them to hospital, or keep them with you . Because you have to consider that its 2 hours to hospital, and in that time will they get worse. There is no safety net in rural areas'*
> (Practice Nurse, Gwynedd)

Although GPs were aware of the distance to hospital when there was an obvious need to admit someone to hospital then the decision was straightforward:

> *'This situation does not impact of the use of the DGH, we make the medical decision, then we sit and work out how they will get them there'*
> (GP Gwynedd)

b) Calling an ambulance

There can be a dilemma about calling an ambulance because unless it is absolutely necessary calling an ambulance, this action may preclude someone who really needs it :

> *'GPs may have to make a decision to call out an ambulance, they then appreciate that another ambulance for another emergency is not available for another 2 hours.'*

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(Educationalist)

c) Ordering an x-ray

There can be a dilemma about ordering an x-ray because some GP surgeries have part-time x-ray facilities, and so they have to weigh up if it is necessary to send someone many miles to a DGH for an x-ray, or for them to wait until the x-ray facility is available locally:

'We treat with small injuries in the surgery and we have to decide if a patient can wait for an x-ray here which takes place 2 times per week, or if they should travel some miles to the DGH. We have to weigh up the type of injury and where it is in the body'
(GP Powys)

'We have an x-ray facility on Tuesdays here, and so if someone has damaged their ankle later in the week, we have to make a decision for them to go to the DGH, 35 miles away, or ask them to come back here for Tuesday just to double check the damage.'
(GP Gwynedd)

4.2.8 Zoonotic diseases

It was agreed that zoonotic diseases although encountered did not usually pose many issues once recognised. Types of diseases are described below:

'We do get some zoonotic diseases, its not a huge problem. If we have a locum GP, who has not met orf, we have to tell him not to puncture the wound, as you might with other wounds, orf will heal better if it is left alone'.
(Practice Nurse Carmarthenshire)

'We find a few cases of orf, a bit of ring worm but once you have seen it, then you recognise the pattern '
(GP Gwynedd)

'I've also met cyticosis from birds this lady had chickens. Also had Q fever'
(GP Powys)

'We tend to get orf once per year and campylobacter, also giardia which is a parasite in water in the hills'
(GP Powys)

However rarer and more serious examples have been encountered:

'I have had one abortion which was induced at the lambing season that was very frightening, she did not know she was pregnant, she became very ill, admitted her to the community hospital, took her blood and found she had no platelets. She was moved to a DGH and then to Birmingham she was very ill but she did survive'
(GP Powys)

'I have also suspected that we have a couple of cases of TB. A girl had a lump under her arm it was odd and wondered if she had caught it from cows [bovine TB]'
(GP Powys)

4.2.9 Clinical Governance

The impact of clinical governance standards on the types of service that could be offered in rural areas is highlighted in this study. One consultant raised the issue of

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the need to develop local services but being restrained by capacity. So while GPs provide more services locally the issue of clinical governance can impede these developments:

> *'The 'powers to be' say we can't do so much minor surgery because they want almost an operating theatre'*
> (GP Gwynedd)

However, some felt that clinical governance should be challenged so that it was more sympathetic towards rural areas:

> *'You cannot hide behind clinical governance, for instance patients need coils implanted but nothing has been rural proofed. So where is the evidence that someone needs to insert so many coils per year in order to be competent'*
> (Educationalist)

> *'Standards set for clinical governance are urban friendly. These standards need to be challenged, and be rural proofed.'*
> (Educationalist)

4.2.10 Continuing professional development

Participants felt that being able to update their practice and knowledge was well covered in Wales:

> *'Education seems to be covered well in Wales. The IRH is brilliant, GP training is well organised, I've been on a really good minor injury course. I think its good because rural GPs can say what they want'*
> (GP Powys)

GPs used a number of ways to update, this included using the IRH, internet access, consultants, other GPs, weekly journals and learning on the job:

> *'Spending time with other colleagues in other practices has helped The rural Conference in the IRH is good. Access to information is helpful, but the libraries are a long way off, but the internet is really good'*
> (GP Powys)

> *'I ask the partners, the consultants are good, I use internet learning and post-graduate sessions'*
> (GP Powys)

> *'We keep up to date by remote learning via the internet, the BMJ every week. Its not a struggle'*
> (GP Carmarthenshire)

> *'You learn on the job, we insert photos of orf [for instance] in case notes, and then it can be recognised by others'*
> (GP Gwynedd)

The issues about continuing professional development centred around access and travel time. Many found attending half-day courses difficult because they were unable to get cover or the travel time was too much:

> *'Half day courses are a waste of space. We can't go, because we have to keep the minor injuries unit open.'*
> (GP Powys)

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'The travelling time for half day is a lot and can be difficult and not worth it'
(GP Powys)

'There are sometimes teaching sessions at lunchtimes or for half days but they are no good for us because its hard to get a locum, we need a day at least'
(GP Powys)

When travel time was not an issue, half-day days were fine:

'The half days are fairly local, they involve consultants, and question and answer sessions. You can use these sessions when you have found something in the surgery, and then learn more about them in these sessions. So I find these very useful'
(GP Gwynedd)

However, many preferred residential courses:

'Going away on residential courses is good'
(GP Gwynedd)

'Residential courses are better, then we can get a locum.'
(GP Powys)

The types of sessions GPs particularly liked were ones that were linked to their clinical practice, consisted of question and answer sessions and were individually tailor made:

'I really enjoy question and answer sessions with a consultant. This is where you can really learn, otherwise some sessions can be a waste of time and don't really meet my needs'
(GP Gwynedd)

'I like sessions that link with my experience in my practice, then you can get stuck in and really learn something'
(GP Carmarthenshire)

4.2.11 How well are GPs prepared to work in rural Wales?

Exploring the issue about how well GP and medical training prepares someone to work in rural areas had a number of facets. Some participants felt they could not respond because it had been a number of years since they had qualified and things had changed so much.

'Most of what I learnt now has been superseded'.
(GP Powys)

'Its such a long time ago I'd rather not comment'
(GP Gwynedd)

Some commented that it was natural to for any GP to adapt to any environment whether urban or rural and that everyone needs to update their knowledge:

'Lots of skills are learnt in medical school. GPs will all have appraisal and have access to courses. Its the same as anywhere else, everyone needs updating'
(Educationalist)

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'There is always a lot of gaps, I'm always learning'
(GP Carmarthenshire)

Others believed that the current curriculum did prepare them to work in rural Wales:

' Things were well covered, I trained locally, I trained in this practice'
(GP Carmarthenshire)

'Our training covered me pretty well'
(GP Powys)

'No special things are required, it's the quality of the doctor that matters'
(GP Gwynedd)

4.2.12 What will help with preparation?

Even though many participants believed that GPs were prepared to work in rural Wales, some felt that preparation was required both within the curriculum and practice:

a) An understanding of rural populations, culture and lifestyle

Many felt it was important to understand rural demography and rural culture. This covered several themes:

'Continuity of care'

This area covered the need to understand that rural populations tend to be static and therefore GPs cared for people and families over long periods of time:

'Its not about knowledge, its about attitude, understanding about stable populations, and getting on with people. Continuity of care is important and dealing with people over long periods'
(GP Powys)

'Grasping country living'

This area consisted of understanding the culture of country living and that access to services is not straightforward in rural areas:

'I think that Great Britain is a suburban society, so rural issues are underserved. Not many undergraduates will have a grasp of country living.'
(Educationalist)

'GPs who come straight out of medical school would be fine to work in rural practice but they do have to be prepared for the lifestyle and they need the right personality. From there you would just need to hone your skills'
(GP Carmarthenshire)

'Everyone knows everyone's business'

This area consisted of the need to understand that people in rural areas make it their business to know about everyone in their area and that anonymity is rarely achieved:

'One thing that new GPs working in rural areas need to know is that everyone is related to each other and everyone knows everyone's business'
(GP Gwynedd)

'The huge area'

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This area consisted of the need to understand the large area that rural GPs have to cover and the implications this has on practice:

> *'Preparation needs to cover the huge area that has to be covered'*
> (Educationalist)

'The Welsh language'

The Welsh language is spoken widely in many rural areas and it was felt that it would be useful if GPs could speak it:

> *'I think it would help if GPs could speak the Welsh language'*
> (GP Gwynedd)

b) Managing remoteness and isolation

Participants believed new GPs should be prepared for the isolation rural practice can bring. This encompassed issues of remoteness, risk management and the development of support networks:

> *'I think they need to understand not so much about different conditions but more about 'what far away means'.'*
> (GP Powys)
>
> *'New GPs may need to prepare for the isolation, you need a lot of support, and supportive networks'*
> (GP Powys)
>
> *'They need to be able to manage risk'*
> (GP Powys)
>
> *'Overtime GPs can become medically isolated. They need to be aware of this and take steps to ensure against it'*
> (Consultant, Powys)

c) Managing emergency work

One GP felt that GPs tended to work in rural Wales once they got plenty of experience:

> *'I've done a lot of hospital medicine, I'm competent in diagnosing stroke, cardiac problems. So I'm well prepared to be a rural GP, and I think a lot of experienced GPs come to work in rural areas. Take the community hospital up the road, many of the GPs there are very specialised'*
> (GP Powys)

This point is interesting because it suggests that GPs with plenty of experience are better prepared to work in rural Wales and so even though many have believed that that their training is adequate to work in rural Wales, it may be necessary to include some emergency work as this participant describes:

> *'ALS [advanced life support] is important. If you are a GP and someone has collapsed, and they are 15 miles away, you get there before the ambulance. You are on your own, you need the skills to manage the patient who has collapsed. Joint education with para-medics could help to manage these situations'*
> (Educationalist)

d) Access to healthcare

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It was felt that accessing healthcare in rural areas is not always straightforward. There is a need for local provision but at the same time the quality may not always be available:

> *'New GPs working in rural areas need to be prepared for developing healthcare services locally but that needs to be balanced with quality and therefore there needs to be a realisation that it is not possible to do everything'*
> (Consultant, Powys)

e) Rural placements

Most participants felt that it was important to give medical students and trainee GPs placements in rural practice. In this way, so long as the placement was of good quality then they would gain the understanding required to work in rural Wales.

> *'We need to get students out here to see how they survive. They tend to worry how they will survive without any shops and getting to places, if they are from the city'.*
> (Educationalist)

> *'If you get registrars who are in their last few months, and they get a good experience, they really want to stay. They realise how good it is to work in rural areas'*
> (Educationalist)

> *'I think its good to get rural experience as a student, so that they can get the rural context of things. Like the length of time it takes to admit someone to hospital because they live in a remote area, and the reason why you might admit someone who may not be as ill as other people.'*
> (GP Powys)

> *'I think students should get experience of a rural practice'*
> (GP Carmarthenshire)

However one participant was mindful of not over loading placements:

> *'You should not have too many students, so that you are overloaded, or else quality will be overloaded. Quality of a rural experience is all important, and if its good they will come back'*
> (Educationalist)

f) An integrated approach

One participant felt that there should be an integrated approach where there is an overall structure:

> *'We need an integrated approach, where young people [in medical training] need to go into rural practice, GP training should be available for rural doctors, fellowships should be available for rural GPs and there should be a sub-dean for rural practice'*
> (Educationalist)

4.3 Summary

The findings from the interviews suggest that differences in work profile between urban and rural GPs which have been noted in previous studies (Deaville, 1998) have become fewer and more subtle as rural GPs no longer practice obstetrics nor attend road traffic accidents to the same degree. This however is a simplified view

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because GPs in rural Wales still have to deliver care ‘at a distance’ from DGH’s and specialist services. This situation has made GPs in rural Wales much more self-contained than those in urban areas, and so they found themselves honing their skills around:

- The need to attend to minor injuries
- Managing patients with mental health problems in primary care due to a lack of specialised services
- The development of a wide knowledge and skills
- The need to stabilise patients in some cases before admission to hospital
- The development of diagnostic services in GP practices such as blood tests, ECGs,
- Undertaking minor surgery
- Running contraceptive clinics
- The need to have more involvement in palliative care
- The responsibility of a community hospital
- A high involvement in patient care where there is a continuation of care that carries with it management at a ‘high level’. This may happen because GPs do not refer on readily because of travel implications, or the consultant may ask the GP to take on more responsibility because of the distance.

It was also noticeable that some GPs felt frustrated because they could not always obtain the appropriate funding and resources to carry out much needed additional services especially in the area of family planning and mental health.

This work has also found that there are issues around decision making and risk management. When a hospital is not nearby, admitting a patient who may or may not require more intense medical care requires a set of skills to assess for deterioration over the next few hours and if a long journey to hospital is necessary. These difficult decisions are also encountered when deciding whether to call for an ambulance or ordering an x-ray; again it is about travel time and shortage of resources.

It was also noticeable that GPs required more specific knowledge in the area of zoonotic diseases but this did not appear to be a huge issue, it was felt that once a certain zoonotic disease had been identified e.g. orf, then it was easily treated and easily recognised the next time.

For continuing professional development GPs used multiple ways for keeping up to date. They used the internet, the IRH, consultants, other GPs, weekly journals and post-graduate sessions. Many found that residential courses were more convenient than one day or half-day courses because they could organise locums and travel time was not such as issue.

Some respondents believed GPs were well prepared to practice in rural Wales stating that GPs have to adapt their knowledge and skills to manage their work wherever they practice. However, others believed that some aspects of the medical student and GP curriculum could be developed to prepare more fully for rural practice:

Knowledge

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- Understanding the rural way of life, where populations are static and GPs care for patients over a long period of time, and where ‘everyone knows everyone’s business’. This means that practices need have a heightened sense of confidentiality
- Awareness of the lack of specialist service and its impact on managing care as a result
- Understanding that rural areas consist of large areas with poor infrastructure and scattered populations
- Awareness that many people in rural areas speak the Welsh language
- Understanding about the development of local services but balancing this with quality services

Skills

- Being able to manage professional isolation
- Being able to manage risks
- Managing medical emergencies
- Having the skills of advanced life support
- Having self-contained services and managing a surgery with many services but at the same time understanding limitations on practices
- Advanced clinical skills in mental health and palliative care

Respondents felt that there should be a structure for rural medical training where fellowships are available and a speciality is developed under the auspices of a sub-dean.

This study explored the opinions of four professional groups (GPs, practice nurses, educationalists and consultants) and it took place within three areas of Wales (Powys, Gwynedd and Carmarthenshire). There was much agreement both inter-professionally and inter-area about the issues that GPs in rural Wales face and these centred around: distance and access from services, the need for a wide range of skills and knowledge, aspects of professional and social isolation, the lack of specialist services, the impact of distance from specialist services on decision making and risk management and the cultural aspects of living in rural Wales. However, there were some differences expressed both within areas and within professions. The main differences for areas were:

- In Carmarthenshire and Gwynedd the use of the Welsh language was seen to be important when consulting patients in GP practice. In Powys, this did not appear to be an issue as fewer people spoke Welsh
- Access to a DGH appeared to be more of an issue in Gwynedd and Powys than it did in Carmarthenshire. It appeared that in parts of Carmarthenshire (especially in the South) that the DGH was only a few miles away. Thus suggesting that there are some rural areas that are closer to services and do not have access problems.

There was much consensus between rural GPs and practice nurses, the main differences inter-professionally were between these groups and the consultants. Consultant views which differed from the rest of the sample were:

- One consultant from A&E believed that GPs should once again be involved with road traffic accidents because sometimes ambulances did not arrive at an accident scene quickly enough

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- One consultant expressed concern that rural GPs were too 'self-contained' and took on too much responsibility. It was felt that rural GPs needed to be aware of their limitations and refer more frequently

5.0 Discussion

The aim of this study was to identify the additional skills and knowledge required by a GP in order to work in rural Wales. The interviews have shown that in rural Wales the additional skills and knowledge needed by GPs is in some ways different to that which was described in the literature. The main differences being that GPs in Wales now appear to attend to far fewer road traffic accidents because of the increase of paramedics and rarely or never practice obstetrics which is contrary to the published literature (Smith & Hays 2004, Farmer 2005, Curran *et al* 2007, Murdoch 2007, BMA 2008). There were also differences found in this study that were not highlighted in the literature:

- The dilemmas of decision making and risk management for rural GPs because of being at a distance from secondary care. This revolved around hospital admission, ordering x-rays and ambulances
- The nature of patient care. While it is recognised that the literature highlighted that rural GPs tended to offer a higher level of holistic and continuity of care, this study showed that there were several facets to these processes that included attending to patients in more detail, seeing things through from start to finish, having a deeper involvement and taking on more responsibility.

Findings which agreed with the literature were about having a self-contained GP service (Denz-Penhey & Murdoch 2007) with GPs having skills in minor surgery, attending to small injuries and delivering a broad range of services (Probst *et al* 2002 & Curran *et al* 2007). These skills were coupled with a need for a wide range of medical knowledge which included zoonotic diseases (BMA 2005). The need to understand the rural community emerged strongly and though not directly linked to medical skills and knowledge is an integral part to being an effective GP in rural Wales and has also been cited in the literature (Iversen *et al* 2002, Bourke *et al* 2004, BMA 2008). Issues relating to the rural community focused around:

- That 'everyone knows everyone's business' in rural areas
- That GPs have a high social status
- The need to have a good social – professional balance that was very difficult to maintain.
- The need to speak the Welsh language
- That there is a stable population in rural areas but this population is often scattered and covers a large area with poor infrastructure.

When it came to the educational gap and the skills and knowledge GPs require to work in rural Wales, this was not clear. Some participants felt that if GPs did require additional skills and knowledge then that should be given at post-graduate level while doctors are training to be a GP. However, a large proportion interviewed believed that GPs were adequately trained or could not comment because it was such a long time since they had completed their medical training. Nevertheless, some did comment that preparation was needed not so much on knowledge but rather on issues that were related to rural populations, culture and lifestyle, managing remoteness and isolation, managing emergency work and access to healthcare.

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Many participants also believed that quality rural placements were very advantageous because it gave students and trainees a chance to have a positive experience and this more than anything else would persuade them to return to rural Wales when qualified.

Continuing professional development was an issue for GPs in rural Wales, many used a combination of different ways to update, including the internet, journals, post-graduate sessions, consultants, work colleagues and learning on the job. Attendance at courses is dependent on obtaining cover and this is deemed more worthwhile for whole day and residential courses. Many preferred question and answer sessions, and having the opportunity to raise clinical issues that they met in their practice.

There were limitations to this study, these included:

- This study is not representative of all rural Wales. Three rural areas were selected for this study reflecting different geographies and the differences between responses in each area have been highlighted. Nevertheless there was a significant degree of consensus in the findings.
- Most GPs who agreed to be interviewed had been in practice for over 20 years and therefore had completed their medical training some time ago. . Further study interviewing newly qualified GPs, medical students and GP registrars would provide a more recent view on the relevance of current medical education in preparing them for rural general practice.

The strengths of the study lay in interviewing four professions (GPs, hospital consultants, practice nurses and educationalists). This allowed for triangulation of the data and therefore strengthened the validation of the project. Interviewing participants was also a strength because it gave a richness and detail to the study that would not have been through any other data collection method.

6.0 RECOMMENDATIONS

This study identified the unique nature of rural Wales which means that GPs working in these areas deliver care at a distance from secondary and tertiary services and are much more self-reliant as a result. In order to ensure that GPs have the additional skills and knowledge to work in rural Wales identified above, the following recommendations can be made:

1. To develop a medical curriculum that covers the following:

Knowledge

- Understanding the rural way of life, where populations are static and GPs care for patients over a long period of time, and where ‘everyone knows everyone’s business’
- Awareness of the lack of specialist services and managing care as a result
- Understanding that rural areas consist of large areas with poor infrastructure and scattered populations
- Awareness that many people in rural areas speak the Welsh language
- Understanding about the development of local services but balancing this with quality services

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Skills

- Being able to manage professional isolation
- Being able to manage risks
- Managing medical emergencies
- Having the skills of advanced life support
- Having self-contained services and managing a surgery with many services but at the same time understanding limitations on practices
- Advanced clinical skills in mental health and palliative care

2. To ensure that all medical students and GP trainees have the opportunity to experience high quality rural placements.

3. To ensure that there is an adequate number of GP supervisors and tutors able to give students and trainees quality learning experiences across rural Wales.

4. To ensure that GPs practising in rural Wales have access to needs based post-graduate education sessions

5. To conduct further research to support the development of rural under-graduate and post-graduate curricula.

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Appendix 1 Interview schedules for each professional group

Schedule for Consultants

The additional skills and knowledge required by GPs to work in rural Wales.

1. How would you describe the area in which you work? (rural, semi rural, urban?)

2. What are the characteristics that make it so? (patients, area, landscape, cultural issues eg language?)

3. Have you had both rural and urban experience? (under grad, post grad, training, previous employment?)

4. Does rurality have an impact on the way you work and how?

5. Do you work differently with GPs from rural practices compared to those from more urban practices? If so, how?

6. Do you feel that GPs need specific knowledge to function well as a GP in rural Wales? (over and above that you would need in an urban setting) (prompt medical and non-medical)

7. Do you feel that GPs need specific procedural skills to function well as a GP in rural Wales? (over and above that you would need in an urban setting) (prompt medical and non-medical)

8. In your opinion what additional responsibilities do GPs working in rural Wales have?

9. How best could these be taught or prepared for?

10. Any other issues you would like to raise in relation to this study?

Thank you for your participation

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Schedule for GPS

The additional skills and knowledge required by GPs to work in rural Wales.

1. How would you describe the area covered by your practice? (rural, semi rural?)

2. What are the characteristics that make it so? (patients, area, landscape, cultural issues eg language?)

3. Can you describe the practice? (eg size, partners, out of hours, community hospital, BASICS, teaching practice, other medical and non-medical work?)

4. What is your own background? (rural/semi/rural/urban?)

5. Have you had any rural/urban experience? (under grad, post grad, training, previous employment?)

6. How many years since qualifying?

7. Do you think that rurality has an impact on your life and the way you work? (prompt, IT, language, communication, lifestyle)

8. Do you feel you have needed specific knowledge to function well as a GP in rural Wales? (over and above that you would need in an urban setting) (prompt medical and non-medical)

9. Do you feel you have needed specific procedural skills to function well as a GP in rural Wales? (over and above that you would need in an urban setting) (prompt medical and non-medical)

10 To what degree were these covered in undergraduate or postgraduate training?

2. How else have you acquired the knowledge and skills needed for rural practice?

3. Should these have been taught formally, and if so at what stage?

4. Do you feel there are any gaps now in your knowledge and skills that are important to rural practice?

5. What additional responsibilities do GPs working in rural Wales have?

6. How best could these be taught or prepared for? (prompt learning styles and modes eg e-learning, skills courses etc)

7. Any other issues you would like to raise in relation to this study?

Thank you for your participation

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Schedule for Educationalists

The additional skills and knowledge required by GPs to work in rural Wales.

1. What is your role/experience of working with rural GPs?
2. Do you think rurality has an impact on the way GPs work in rural areas?
3. Do you see a difference in the way rural and urban GPs work?
4. Do you feel that GPs need specific knowledge to function well as a GP in rural Wales? (over and above that you would need in an urban setting) (prompt medical and non-medical)
5. Do you feel that GPs need specific procedural skills to function well as a GP in rural Wales? (over and above that you would need in an urban setting) (prompt medical and non-medical)
6. To what degree are these covered in undergraduate or postgraduate training?
7. How else do you think rural GPs acquire the knowledge and skills needed for rural practice?
8. In your opinion what additional responsibilities do GPs working in rural Wales have?
9. How best could these be taught or prepared for?
10. Any other issues you would like to raise in relation to this study?

Thank you for your participation

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Schedule for Practice Nurses

The additional skills and knowledge required by GPs to work in rural Wales.

1. How would you describe the area in which you work? (rural, semi rural, urban?)

2. What are the characteristics that make it so? (patients, area, landscape, cultural issues eg language?)

3. Have you had both rural and urban experience? (under grad, post grad, training, previous employment?)

4. Does rurality have an impact on the way you work and how?

5. In your practice do you think GPs work differently from those in more urban settings? If so, how?

6. Do you feel that GPs need specific knowledge to function well as a GP in rural Wales? (over and above that you would need in an urban setting) (prompt medical and non-medical)

7 Do you feel that GPs need specific procedural skills to function well as a GP in rural Wales? (over and above that you would need in an urban setting) (prompt medical and non-medical)

8 In your opinion what additional responsibilities do GPs working in rural Wales have?

9 How best could these be taught or prepared for?

10 Any other issues you would like to raise in relation to this study?

Thank you for your participation

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