Rural health
– Lessons from Scotland

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Introduction

Over the last 20 years general practice in Scotland has undergone remarkable and relentless change as part of an increased prominence for primary care services. The patient consultation remains at the hub of clinical practice but is now being delivered in different ways, in new settings and by a growing team of health professionals. In donning the wider mantle of primary care, it is important that the values and contribution of general practice are not lost sight of in a view of primary care that is multidisciplinary, multidimensional and evolving rapidly.[1] One of the most striking changes has been the introduction of the new General Medical Service (nGMS) Contract in 2004.[2] Although the principles of this contract apply throughout the UK, some of the practicalities are different for Scotland which, since 1999, has had a devolved parliament responsible for the development and delivery of its own 'tartan' health policy. The political environment continues to evolve apace and Scotland has just elected for the first time (May 2007), a minority Scottish National Party government with a manifesto which seeks to secure Scottish independence from the remainder of the UK. So, politically and contractually we in Scotland, as the old proverb goes, are 'living in interesting times'.

Recent government health policy in Scotland,[3] like the rest of the UK, has recognised the importance of a strong primary care sector in keeping with the growing international evidence base that the most effective and efficient health care is underpinned by robust primary care foundations.[4]

Similarities, kinship and recent trends

Before pressing on to examine rural lessons from Scotland which might have some resonance for New Zealand, it is worth pausing for a moment to reflect on the similarities and kinship between the two nations. Aside from our rich historical linkages, New Zealand and Scotland have similar population profiles (four versus five million), both populations are ethnically diverse, geographically disparate and are ageing – more rapidly so in Scotland – but recently there has been an upswing in immigration predominantly from Eastern Europe, with parallels for inwards migration from Asia to New Zealand.

Similarities extend to the number of Heath Boards organising health services delivery, the increasing feminisation and ageing of the GP workforce, with an increasing trend towards part-time working. (In 2006, 47% of Scottish GPs were female. Of those GPs aged 40 and under, 63% were female). Over the last 20 years, other significant Scottish primary care workforce trends have been apparent: a small overall increase in GP numbers contrasted with a massive growth of practice nurses, engaged in treatment room procedures, but also increasingly in prevention and chronic disease management. Role substitution and delegation are proceeding apace with many nurses now engaged in telephone triage of acute illness. These triage nurses are either employed as practice nurses or as part of the services of NHS 24, which is a national telephone/web-based service agency, fronting the out-of-hours services when GP practices are closed.[5] These recent trends can be illustrated by national GP statistics for 2005–06, where of 27.9 million face-to-face clinical patient contacts (an average of approximately five annual consultations, per patient per year), 56% were with GPs, 28% with practice nurses, 11% with district nurses and 5% with health visitors.[6] New breeds of workers are joining extended primary care teams – including nurse technicians, paramedics, physician assistants and others with special clinical, educa-

tional or R&D skills, for example GPs with special interests (GPwSIs). All of these developments will need to be carefully assessed, but this growing amalgam of additional skills should not detract from the core generalist function of primary care. It is likely that these trends will also be accentuated by new contractual arrangements – and by the aspirations of a new generation of more mobile primary care workers, requiring greater career flexibility.[1]

Rural health – what's different?

Definitions of rurality still pose challenges for policymakers and researchers. Recent ideas suggest that rurality is to do with the way people live in small groupings, while remoteness is to do with distance.[7] 'Clinical peripherality' is another index of rurality that has been applied to primary care communities in Scotland and is related to the spectrum of care delivered by rural and remote general practice staff.[8]

In the 2001 census, approximately one-fifth (18.7%) of the population lived in rural or remote areas, and there is a greater proportion of older people (≥65 years) than in urban areas. In common with other countries, rural populations are ageing more quickly – gaining older people from the rest of the UK with out-migration of younger people to urban Scotland, accelerating future demands on health services. In contrast, with other countries, rural populations are less deprived than urban dwelling Scots.[9]

This should also be aligned with a growing evidence base demonstrating differences in morbidity and mortality profiles for those living in remote and rural Scotland. For example, type 1 diabetes[10] and suicide[11] are commoner and clinical outcomes are poorer for road traffic accidents,[12] common cancers[13] and asthma.[14] While in some cases, for example cancer, this might reflect late presentation,[13] in others, the delays associated with delivering acute or emergency care relate to geographical location,[15] sometimes referred to as the *'tyranny of distance'*.[16]

Recruitment and retention issues for primary care staff in remote and rural areas are particularly challenging. Rural primary care workers in Scotland are more likely to have been born in rural areas or to have been born and to have completed their training outside Scotland. Not surprisingly, they also have reported greater perceptions of professional isolation.[17] As experience elsewhere has shown,[18] medical students' opinions of entering rural general practice as a future career option improves following a clinical attachment in rural settings.[19] This has paved the way for greater exposure of remote and rural teaching experience in undergraduate curricula.[18] A comparison of rural and urban primary care teams has shown significant differences in the pattern of health services provided[20] – for example rural settings promote more extended roles, less delegation to others, higher standardised consultation rates[21] and different referral patterns.[15,22–24]

As experience elsewhere has shown, medical students' opinions of entering rural general practice as a future career option improves following a clinical attachment in rural settings

But what of the patient perspective? In 2002, a national patient survey was conducted comparing attitudes to health care in rural and urban Scotland.[25] Remarkably, people living in the most remote areas were most satisfied with health services. They were 2.5 times more likely to be very happy with their local GPs and around twice as likely to be very satisfied with hospitals compared to others. This contrasts with findings of low satisfaction with rural health care provision in other parts of the world. A number of explanations have been suggested for this curious Scottish phenomenon, including stoicism and low expectations, but there is little empirical evidence to support this. Recent qualitative research suggests that rural health care is appreciated as being personal and supportive, compared with descriptions of impersonal and less caring urban health care provision.[26]

Threats to care continuity

Continuity of care is pivotal to the debate on the future of rural health care and a core value for UK general practice – but is now under threat on a number of fronts. The option to withdraw from out-of-hours responsibility by GPs was a key feature of the 2004 contract,[2] and virtually all Scottish GPs have elected to do so, apart from a small number in remote locations. As a result, a recognised tension or discontinuity has arisen between in-hours and out-of-hours care, now the responsibility of all 16 territorial Health Boards and the national helpline, NHS 24.[5] This has been compounded by the availability of GPs who are willing to provide any out-of-hours cover. This dwindling number, presently estimated at 20–30% of the GP principal workforce, is ratcheting pressure on the rapid development and refinement of multiprofessional alternative models of care.[1]

Responding to the challenges

In summary, the distinctive needs of remote and rural areas of Scotland therefore pose significant challenges for effective health care delivery and the imperative of sustainable services. Recognising these challenges, Scottish Government policy[3] is committed to develop a framework of care specifically for remote and rural communities, including:

- Extended roles for individual practitioners and health care teams
- Coordinating roles for visiting specialists
- An enhanced role for community hospitals[27,28]

- Appropriately configured out-of-hours care with adequate transport infrastructure
- A defined role for rural general hospitals that includes trauma and acute illness care with a range of planned services
- An appropriate framework for education and training of rural health practitioners.

A specific Remote and Rural Steering Group has been established to take this work forward, and is currently progressing work on: the role and function of a rural general hospital; the requirements of remote primary care; the development of remote and rural education strategy; the need for an emergency retrieval service; and linked work on the implications for training doctors for remote and rural practice.[29]

The guiding principles underpinning the emerging model of care compared to the current model of rural primary care are summarised in Table 1.

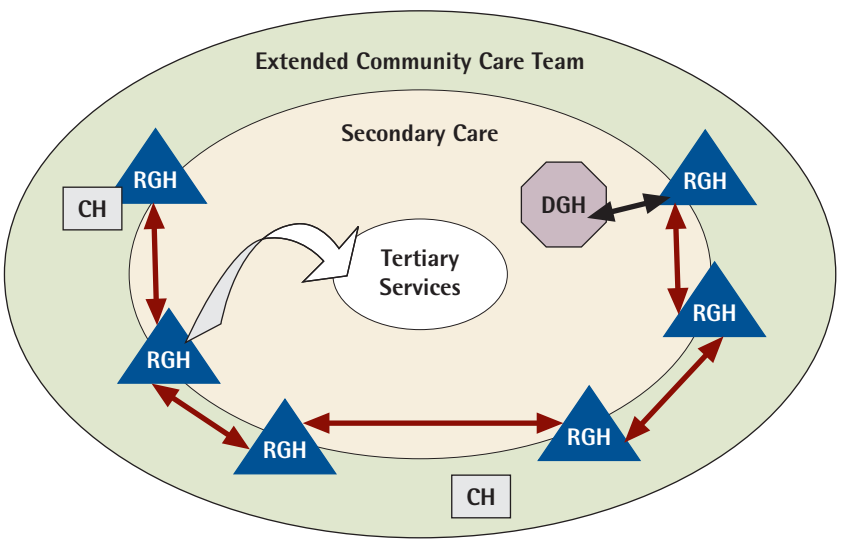
Table 1. The guiding principles underpinning the emerging model of care compared to the current model of rural primary care

Current model of care	Emerging model of care
• Self care infrequent	• Self care encouraged
• Reactive care	• Anticipatory care
• Variation in care pathways	• Robust negotiated care pathways
• Multiple visits to secondary care	• Shifting the balance of care to locally based care
• Fragmented teams	• Integrated competency based teams
• Education not fit for purpose	• Rurally effective education
• Poor infrastructure	• E-health based infrastructure

A diagrammatic representation of the emerging model for rural care is illustrated in Figure 1. Central to this model is the premise that the majority of care can be provided within local communities with only a minority of cases requiring referral to more distant, specialist services. The development of Extended Community Care Teams (ECCT) comprising a skill-mix of health and social care professionals is seen as key to success, emphasising transferable skills.

Community hospitals, whose fortunes have waxed and waned over the last century,[27] have undergone a political renaissance.[28] Revitalised community hospitals are seen as essential to providing locally accessible integrated care, supporting a number of functions including: diagnostic and treatment, community casualty, palliative care, satellite renal dialysis units, out-of-hours primary care emergency centres and telemedicine facilities.[30] The next tier of care is provided by rural general hospitals whose role and optimal staffing structures are under review. One perspective is that they will become 'super' community hospitals, with a more specialised skill-mix and facilities, augmented by specialist staff from district general hospitals. To secure safe and effective health care, it will be important to develop robust shared electronic patient records. In the past, traditional largely paper-based records systems have been developed separately and held at each site of care provision. In the future, successful innovation of electronic records should be patient-centred, offering accessible and accurate information – in the right place and at the right time. Another imperative will be best exploitation of transport infrastructures, including the further development of helicopter emergency evacuation services, securing fast and safe patient transfers. In tandem with service delivery and development, educational endeavour,[31] underpinned by a relevant and focused rural research programme, including the work of the Centre for Rural Health,[32] are equally important to shape the future of robust rural health care in Scotland and, by extension, to influence the rural agenda elsewhere.

Figure 1. Emerging model of remote and rural health care



Key: CH – Community Hospital; RGH – Rural General Hospital; DGH – District General Hospital
Source: Remote and Rural Steering Group Group, NHS Scotland.[29]

Lessons from Scotland

As a rural general practitioner working for the best part of thirty years

in rural north-east Scotland, I have been privileged to witness and, at times, to assist to shape the direction of primary care. What personal lessons have I learned?

- Firstly, in relation to service innovation, the voice of rural general practice, often lost amidst the clamour of urban voices, deserves greater attention. To pick one example: pioneering work on the development of thrombolysis for acute myocardial infarction in rural settings, led to faster care pathways in district general hospitals and the introduction of in-situ giving of thrombolytic drugs by trained ambulance paramedic personnel.[33,34]
- Secondly, while primary care is often characterised as 'low tech' and secondary care as 'high tech', this is a false dichotomy. Again, pioneering work originating in the casualty department of a rural community hospital demonstrated the feasibility and value of telemedicine linkages to specialist advice based at the Accident & Emergency Department of a distant district general hospital.[35] Increasingly, rural primary care must embrace new forms of technology, including universal patient-centred electronic records,[36] and telecare, being developed by the recently established Scottish Centre for Telehealth,[37] under the auspices of the national eHealth Strategy.[38]
- Thirdly, traditional boundaries of health care, demarcated by sectors of service provision, are giving way – with blurring of margins between supported self care, primary, intermediate, secondary and social care provision – with a greater emphasis on integrated care.[1,39] This is mirrored by an increasingly multiprofessional primary care workforce, acquiring new skills and competencies, pursuing aspirations for more flexible careers and improved life/work balances.
- Fourthly, care innovation not only requires incentivised and supported health professionals, but also engaged and empowered patients. With regard to the former, the jury remains out on the merits and demerits of the new GP contract and its specific impact on rural health care delivery.[2] Significant recent increases in GP remuneration have eased pressures on vacancies in rural practices, but it would be a mistake to equate incentives only with money.
- Finally, I am reminded of the paradox of 'constant change' – primary care seems certain to continue its relentless transit away from traditional models of general practice. As this landscape evolves and ambitions grow it will be crucial that the core generalist values of general practice continue to be recognised, revisited and refreshed.

In summary, while Scotland continues to contribute ideas and new models for the development of rural health care, I am conscious of the need to walk humbly. We have a lot to learn from and to share with others, particularly New Zealand. Across the world, while much may have been accomplished in shaping and delivering rural health care, there is still much to do. In that regard, I am reminded of the wise words of the eminent physician, Sir William Osler, emphasising the importance of learning from experience and sharing with others: *'Shut out all of your past except that which will help your tomorrows.'*[40]

Competing interests

None declared.

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