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A BRIEFING PAPER

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What is rural?

- Geographers and sociologists have tended to define rurality either in terms of social or spatial aspects ⁽¹⁾. Recent ideas suggest that rurality is to do with the way people live in small groupings, while remoteness is to do with distance ⁽²⁾.
- In Scotland the Scottish Executive Classification of Settlements has become accepted as a pragmatic tool in rural health services research ⁽³⁾. It selected population size and distance from large population centres as criteria in defining types of location.
- “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 ⁽⁴⁾.

Where is rural Scotland and who lives there?

- In the 2001 census, 18.7% of the population lived in rural or remote areas, with 8.2% in remote areas ⁽⁵⁾. Scotland’s remote communities include many islands and communities reached only by poor quality roads, subject to adverse weather conditions.
- A greater proportion of people living in rural or remote parts of Scotland are of pensionable age: 22% vs 18% in urban areas ⁽⁵⁾. Deprivation is less than in urban Scotland ⁽⁶⁾.
- In terms of migration, rural local authority areas in Scotland tend to gain older people from the rest of the UK while losing younger people to urban Scotland ⁽⁷⁾. Western and Northern Isles have higher out-migration than in-migration.
- Since rural populations are ageing and this is compounded by in-migration by older people, in the future rural populations are likely to have more needs.

What are the main thrusts of rural health policy?

- Delivering for Health⁽⁸⁾ commits to develop a framework of care specifically for remote and rural communities. Among the main recommendations are:
 - Extended roles for individual practitioners and health care teams
 - Coordinating roles for visiting specialists
 - An enhanced role for community hospitals e.g. preadmission and routine testing, outpatient and specialist clinics, day surgery, convalescence, rehabilitation and palliative care.
 - 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
- The National Framework for Service Change Rural Access Subgroup⁽⁹⁾ recognised that changes in rural health care will be essential in the face of changing demography and working practices. The challenges will involve supporting and extending generalist roles and developing community based resources.
- The production of specific policy for remote and rural health services indicates an acknowledgement among policymakers that there are differences or specific issues in providing healthcare to rural areas. This provides an opportunity for service providers, managers and researchers to improve delivery of care in rural Scotland.

What do rural health indicators tell us?

- According to the Scottish Household Survey (2001) people in rural areas generally reported better health, were less likely to be disabled or suffer from a long term limiting illness and were less likely to smoke than those in urban areas⁽¹⁰⁾
- This is supported by data from a cross sectional study performed in 2001-2, in which adults in rural areas reported a lower prevalence of asthma and eczema, but otherwise similar prevalence of other common diseases compared to urban residents. Self reported quality of life scores were also higher in rural residents⁽¹¹⁾.
- There are some health problems that are specific for rural communities, including zoonoses⁽¹²⁾, agricultural injuries⁽¹³⁾, and accidents associated with leisure pursuits such as skiing and mountaineering^(14,15).
- There are also some conditions that are more common in rural settings such as type I diabetes⁽¹⁶⁾ suicide⁽¹⁷⁾, and others where outcomes are poorer in rural or remote settings, such as road traffic accidents⁽¹⁸⁾, cancer⁽¹⁹⁾, and asthma⁽²⁰⁾.
- In some cases, for example cancer, this might reflect late presentation⁽¹⁹⁾, in others the delays associated with delivering acute or emergency care. Patients with ruptured aortic aneurysm who live remote from a hospital were less likely to be referred for emergency surgery⁽²¹⁾, while those with stroke may be managed differently if they live in rural areas⁽²²⁾.

- Migration effects may impact on reports of rural health status. Rural people were less likely than urban people to think someone with a serious medical condition requiring frequent medical appointments could continue living in the local area ⁽²³⁾.

What is the nature of rural health workforce?

- A survey of the primary care workforce in Highland in 2003 ⁽²⁴⁾ revealed that rural workers:
 - were more likely to have been born in rural areas, and to have been born and to have completed their training outside Scotland
 - reported greater perceptions of being isolated, of caring roles extending beyond work; and inability to get away from work for holidays and study leave
 - reported more difficulty with access to amenities and services
- Medical students' opinions of entering rural general practice showed that following a rural placement, female medical students were more likely to consider a rural general practice career ⁽²⁵⁾. Perceived advantages of rural working were the variety of work, closeness to patients, pleasant environment and feeling of community. Deterrents were travel, isolation and the pressures of working in a small community.

What happens in rural health care?

- A study comparing rural and urban primary health care professionals' descriptions of their work showed that rural health professionals tended to have extended health care roles while their urban colleagues were able to delegate or demarcate work more readily within the primary care team and also through referrals to other local health and social care professionals ⁽²⁶⁾.
- Rural health professionals describe a social role that includes work with individuals, but also contributions to community. ⁽²⁷⁾
- A comparison of rural and urban primary care teams in 2001-3 showed significant differences in the pattern of health services ⁽²⁸⁾. Rural primary care was characterised by higher standardised consultation rates, a different pattern of consultation reflecting patterns of access to other services and large fluctuations in workload in some areas due to temporary residents.
- A study of rural and urban patients' decision-making about consulting primary health care showed that rural patients had a tendency to consider effects of consulting on future consultations ⁽²⁹⁾.
- Rural people have different expectations of who should provide services ⁽²³⁾. For example, a rural patient experiencing symptoms of a heart attack is more likely to telephone their general practitioner or request a home visit.
- Rural practitioners may have differing patterns of referral for example, initially referring cancer patients to a nearby hospital rather than a specialist centre ⁽³⁰⁾,

or tending to refer more and earlier for hypertension in pregnancy, probably to preempt potential crisis situations ⁽³¹⁾.

What are the key recent changes in rural health provision and how might they impact?

- Several key changes in policy and contractual arrangements have set in motion a transformation in health care delivery in the UK. Consultants, general practitioners and pharmacists have new contractual arrangements. The implementation of the new GMS contract for general practitioners ⁽³²⁾, has led to major changes in the configuration of services, particularly out-of-hours provision which has been a long standing issue in remote and rural areas ^(33,34). Combined with the introduction of NHS 24 as a national telephone triage system ⁽³⁵⁾, the scale of change has been greater for many rural communities compared to urban communities.
- The Quality and Outcomes Framework of the new GMS contract is impacting in different ways in rural areas ⁽³⁶⁾.
- New policy around nursing and allied health professionals' roles ⁽³⁷⁾ suggests that more primary health care and support for self management of chronic diseases in the community could be provided by these groups
- Policy initiatives such as Joint Future ⁽³⁸⁾ suggest there should be greater partnership and flexible working between health and social care. Rural health care would potentially appear to be a suitable environment for such joint working. In addition, government policy is increasingly looking at 'third sector' service provision ⁽³⁹⁾. Rural areas have potential to benefit from such initiatives.
- There are few studies of change in Scottish rural health care. Previous changes in policy or service delivery have not always taken into account the differing circumstances prevailing in rural areas. One study investigating change in rural maternity care suggested specific issues for managers and policymakers in achieving rural change ⁽⁴⁰⁾. These included the overlap between community and workplace pressurising staff to conform to the prevailing community view about change.

How satisfied are rural Scots with their healthcare?

- A survey in 2003 highlighted that rural Scots tend to have high levels of satisfaction with aspects of basic healthcare ⁽²³⁾. Those living in remote rural areas were 2.5 times more likely than others in the survey to be very satisfied with their local doctors. Those living in remote areas were also more likely to be very satisfied with hospital inpatient stays and outpatient visits. Those in remote rural areas were twice as likely as others to think A&E services were too far away.
- However, the evaluation of NHS 24 ⁽³⁵⁾ showed that satisfaction of patients living in rural areas declined after the introduction of the telephone service and that respondents living in rural areas expressed lower levels of satisfaction than urban

patients. The fall in overall satisfaction may have due to factors intrinsic to NHS 24, for example increased use of call back, but may also be due to extrinsic factors, e.g. the changes in service delivery and organisation of primary care out-of-hours services following the GP opt-out from out-of-hours responsibility.

What is the role of technology?

- eHealth, defined as the use of information and communication technologies locally and at a distance, provides a potential solution to some issues of delivery and training in remote and rural settings, particularly as mobile networks and broadband internet increase penetration into rural and remote communities ⁽⁴¹⁾.
- A Scottish Centre for Telehealth has been set up to explore the potential of new technology.
- Barriers to implementation of eHealth initiatives have been well described in the UK, in general, and in remote Scottish primary care settings, in particular ⁽⁴²⁾.
- There is a need for a ubiquitous information and communications infrastructure that adheres to clearly delineated technical standards and protocols ⁽⁴¹⁾.
 - Equally important, however, is an explicit recognition of personal and organisational barriers to uptake of eHealth initiatives and development of an implementation strategy that overcomes these barriers.
- Finally, at national and international level, co-operation on the technical, clinical, legal and ethical aspects of eHealth will be essential ⁽⁴¹⁾.

What lessons can be drawn from international experience?

- All countries with a significant rural hinterland face challenges in delivering services. Some developed countries, including Australia, USA, Canada and Scandinavia have a highly-developed government-funded research and educational infrastructure targeted specifically at rural healthcare. Consequently, in recent years a literature on rural health services has been developing.
- In most of these countries, perhaps with the exception of Scandinavia, there is a significant rural-urban health gradient, poorer health in rural communities being partly explained by rural poverty, indigenous populations, migrants, health behaviours, fewer available health professionals and lack of access to services.
- In most, as in the UK, there is also a trend to an increasingly ageing rural population, reflecting both increased longevity and out-migration of young people.

- Selected models from international experience can inform Scottish rural health policy. For example:
 - There is current debate about community hospital and rural general hospital provision in Scotland. The US model of the Critical Access Hospital ⁽⁴³⁾ might provide a framework for development of our community hospitals and the insights gained in implementation of the Medicare Rural Hospital Flexibility Program could guide us in that development, including the decommissioning of hospitals where appropriate.
 - The Australian model of rural clinical schools for training medical students is maturing, with the first cohorts trained in these settings now taking up employment. Early results indicate that at graduation, a majority (66%) of these students at James Cook University's School chose non-metropolitan internships, consistent with career intentions at entry to medical school ⁽⁴⁴⁾. Longer-term data from a broader range of schools will be necessary to fully establish the effectiveness of this strategy. Rural undergraduate and postgraduate training for nurses and allied health professionals has also developed alongside infrastructure for rural student placements and rural student 'clubs' that encourage multidisciplinary learning and foster enthusiasm for rural working.
 - Provision of maternity services in remote areas is a contentious issue. In New Zealand, provision of maternity care is designed around a Lead Maternity Caregiver (LMC), who takes responsibility for the coordination and provision of care for each woman. The LMC can be a nurse, midwife or doctor and this model has delivered improvements in many aspects of maternity care ⁽⁴⁵⁾.
 - Experience with lay health caregivers in Canada points to some cultural and organisational challenges that may face Scotland in its attempt to create resilient communities predicated on the development of first responders and similar initiatives ⁽⁴⁶⁾.

What are the main gaps in current evidence and strategic thought?

- Health data are not necessarily readily accessible in a form that allows information from rural and remote Scotland to be aggregated and compared.
- Regional planning groups exist, but do not at present have executive authority and accountability frameworks to deliver services on a regional basis. This impedes the reconfiguration of services to optimise delivery in remote and rural settings.
- Distance technologies are underused, not only in the delivery of services and in training and education of rural health workers, but also in management and policy development. As a result, many remote practitioners feel disenfranchised with regard to policy setting.
- A suitable repository of information on remote and rural health services is lacking. This may be addressed by the development of the rural portal of the NHS e-library.
- Rural proofing of health policies remains underdeveloped and rural health policy remains divorced from social care policy as well as other aspects of the rural economy such as transport, and economic development.
- Insufficient account is taken of international experience on rural and remote health care delivery.

References

- 1) Shucksmith M (1994) Conceptualising post-industrial rurality. pp.125-132. In: Bryden J ed. *Towards sustainable rural communities*. The Guelph Seminar Series. Guelph: Canada; University of Guelph.
- 2) Hugo G (2005) The state of rural populations. Ch.4 pp.56-79. In: Cocklin C & Dibden J eds. *Sustainability and change in rural Australia*. Sydney: UNSW Press.
- 3) <http://www.scotland.gov.uk/Publications/2004/06/19498/38784>
- 4) Swan GM, Hepburn I, Selvaraj S, Dougals I, McLennan A, Godden DJ. *Clinical Peripherality: An index Applicable to Rural and Remote Primary Care in Scotland*. Report to Scottish Executive National Service Framework - Rural Access Subgroup. University of Aberdeen, Centre for Rural Health
- 5) <http://www.scotland.gov.uk/Publications/2003/05/17207/22176>
- 6) http://www.isdscotland.org/isd/files/Measuring_deprivation_in_ISD_v3.pdf
- 7) Fleming AD (2005) *Scotland's census 2001: statistics on migration*. GROS Occasional Paper 11. Edinburgh: General Registrars Office for Scotland.
- 8) <http://www.scotland.gov.uk/Publications/2005/11/02102635/26356>
- 9) Scottish Executive. *Building a Health Service Fit for the Future*. 2005 Vol 2: 160-178.
- 10) <http://www.scotland.gov.uk/Publications/2003/05/17207/22180>
- 11) Iversen L, Hannaford PC, Price DB, Godden DJ. Is living in a rural area good for your respiratory health? Results from a cross sectional study in Scotland. *Chest* 2005;128:2059-67.
- 12) Thomas DR, Salmon RL, Kench SM, et al. Zoonotic illness determining risks and measuring effects: association between current animal exposure and a history of illness in a well characterised rural population in the UK. *J Epidemiol Commun H*. 1994;48:151-5.
- 13) Lindsay S, Selvaraj S, Macdonald JW, Godden DJ. Injuries to Scottish farmers while tagging and clipping cattle: cross-sectional survey. *Occupational Medicine* 2004;54:86-91.
- 14) Langran M, Selvaraj S. Snow sports injuries in Scotland – a case-control study. *Br J Sports Med* 2002;36:135-140
- 15) Hearn S. The Scottish Mountain Rescue Casualty Study. *Emergency Medicine Journal* 2003;20:281-4
- 16) Waugh N. Personal Communication. Incidence of Diabetes in Scottish Children 1984-2003. Data from Scottish Study Group for the Care of Diabetes in the Young.
- 17) *Suicide in Scotland: trends, occupational associations and rurality*. Stark C, Hopkins P, Gibbs D, Rapson T, Belbin A, Hay A. Report to the Scottish Executive Remote and Rural Areas Resource Initiative.
- 18) Weiss SJ, Ellis R, Ernst AA, Land RF, Garza A. A comparison of rural and urban ambulance crashes. *Am J Emerg Med* 2001;19:52-6.
- 19) Campbell NC, Elliott AM, Sharp L, Ritchie LD, Cassidy J, Little J. Rural and urban differences in stage at diagnosis of colorectal and lung cancers. *Brit J Cancer* 2001;84:910-4.
- 20) Jones AP, Bentham G, Horwell C. Health service accessibility and deaths from asthma. *Int J Epidemiol* 1999;28:101-5.
- 21) Cassar K, Duncan JL, Godden DJ. Community mortality in ruptured abdominal aortic aneurysm is unrelated to distance from a surgical centre. *British Journal of Surgery* 2001;88:1341-44.

- 22) O'Neill NP, Godden DJ. Stroke outcomes in northern Scotland: does rurality really matter? *Rural and Remote Health* 3 (online) 2003: no 243
- 23) Farmer J, Hinds K, Richards H, Godden D (2005) Urban versus rural populations' views of health care in Scotland. *Journal of Health Services Research & Policy* 10(4) 212-9.
- 24) Richards HM, Farmer J, Selvaraj S. Sustaining the rural primary healthcare workforce: survey of healthcare professionals in the Scottish Highlands. *Rural and Remote Health* 2005: 5: 365-78.
- 25) Farmer J, Iversen L, Bond C, Duthie I (2003) Medical students' orientation towards rural general practice: results from an exploratory study of a Scottish cohort. *Education for Primary Care*, 14(4) 397-533.
- 26) Iversen L, Farmer J, Hannaford PC (2002) Workload pressures in a rural general practice: a qualitative investigation. *Scandinavian Journal of Primary Health Care* 20, 139-44.
- 27) Farmer J, Lauder W, Richards H, Sharkey S (2003) Dr John has gone: assessing health professionals' contribution to remote rural community sustainability in the UK. *Social Science & Medicine*, 57 673-686.
- 28) Farmer J, West C, Whyte B, Maclean M. Primary health care teams as adaptive organizations: exploring and explaining work variation using case studies in rural and urban Scotland. *Health Services Management Research*, 2005, 18(3), 151-64.
- 29) Farmer J, Iversen L, Campbell NC et al (2006) Rural/urban differences in accounts of patients' initial decisions to consult primary care. *Health & Place* 12, 210-221.
- 30) Bain NSC, Campbell NC (2000) Treating patients with colorectal cancer in rural and urban areas: a qualitative study of the patients' perspective. *Family Practice* 17, 475-9.
- 31) Tucker J, Farmer J, Stimpson P (2003) Guidelines and management of mild hypertensive conditions in pregnancy in rural general practices in Scotland: issues of appropriateness and access. *Quality & Safety in Health Care* 12, 286-90.
- 32) NHS Confederation and BMA. New GMS contract 2003. Investing in general practice. 2003. London.
- 33) Thompson, H., O'Donnell, C.A., Heaney, D., Moffatt, K., Ross, S., Scott, A., & Drummond, N. 2003. Unity or diversity? recent developments in the organization of out of hours general medical services in Scotland. *Primary Health Care Research & Development* 4, 193-225.
- 34) Heaney, D., & Hall, S., (2005). Out of Hours Care in Remote and Rural Scotland: Identifying Sustainable Strategies for Change. Report to Remote and Rural Areas Resource Initiative.
- 35) Heaney, D., O'Donnell, C., Wood, A., Myles, S., Abbotts, J., Haddow, G., Armstrong, I., Hall, S., Munro, J., 2005. Evaluation of the introduction of NHS 24 in Scotland. Report to Scottish Executive
- 36) http://www.isdscotland.org/isd/files/QOF_Scot_200506_Junerelease_comparisons.xls
- 37) Scottish Executive (2005c) Framework for developing nursing roles. Edinburgh: Scottish Executive.
- 38) <http://www.scotland.gov.uk/Topics/Health/care/JointFuture/Introduction>
- 39) Scottish Executive (2005d) Framework for role development in the allied health professions. Edinburgh: Scottish Executive.

- 40) Tucker J, Farmer J, Bryers H et al (2006) Sustainable maternity services in remote and rural areas of Scotland: implementation and external evaluation of maternity care models. Report to NHS Scotland RARARI Maternity Services Project Board. Aberdeen: University of Aberdeen.
- 41) Godden DJ, Barry N. Telemedicine in Scotland. Scottish Affairs, 2005 no 53, Autumn
- 42) Richards H, King G, Reid M, Selvaraj S, McNicol I, Brebner E, Godden D. Remote working: survey of attitudes to eHealth of doctors and nurses in geographically isolated general practices in the United Kingdom. Family Practice 2004;21:1-6
- 43) Rural Assistance Centre: Critical Access Hospitals. Available at: http://www.raonline.org/info_guides/hospitals/cah.php
- 44) Veitch C, Underhill A, Hays RB. The career aspirations and location intentions of James Cook University's first cohort of medical students: a longitudinal study at course entry and graduation. Rural and Remote Health. 2006;5:537
- 45) Guilliland K. Rural Maternity Services. Presentation to "Making it Work 2" Conference, 2005. Available at <http://www.helse-nord.no/category10749.html>
- 46) Crosato KE, Leipert B. Rural women caregivers in Canada. Rural and Remote Health 2006: 6:520.

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