

Analysing space-time variations in primary healthcare provision in rural areas

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Abstract. This paper highlights findings from a research project underway at Cardiff University in the UK which is concerned with 'Health Variations and Primary Care Services in Wales'. The research is illuminating the geographic aspects of the need for, and provision of, health care services in Wales, including an assessment of inequalities in health across the country at a time of wide ranging institutional changes in health care provision. In this paper one aspect of the research is considered in detail, namely the spatial organisation, and access to, primary healthcare in a rural area of Wales. Obviously, in a rural setting the issue of physical accessibility to healthcare services takes on greater significance and a number of measures of spatial proximity or potential accessibility were calculated in a GIS to represent this. Such measures are useful in relaying general patterns of access, but also of interest are the temporal variations in the utility of services and the quality of services available to different sectors of the population. A range of methods have been explored within a GIS framework to explore these aspects of the service supply-demand equation, primarily through taking into account; aspects of quality of service provided and times available, patient location data at a finer scale, and detailed network data, including public transport flows. The aim is to give a clearer picture of both the spatial and temporal accessibility to primary healthcare services in rural areas and, importantly, to comment on variations in access to healthcare of varying quality.