Geographical mapping of referrals to the Cancer Genetics Service for Wales

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Background

The demand for cancer genetics services, such as risk assessment and counselling is growing.
The Cancer Genetics Service for Wales (CGSW) has seen a four-fold increase in referrals since
1998.
CGSW follows a Calman-Hine Model with centres in Cardiff, Swansea and Rhyl.
The Service covers a population of almost 3 million, many of whom live in rural areas with poor
travel links.
Equity is essential in developing and providing clinical genetics services. An examination of
the geographical referral pattern to CGSW will elucidate the extent of parity in service uptake.

Method

CGSW utilises a central dataset, Information System for Clinic Organisations 3 (ISCO), to manage data on all referrals.
Anonymised ISCO data were imported into Microsoft MapPoint; proband referrals were grouped by unitary authority. Referral rate
denominators were mid-year population estimates from the Office for National Statistics.
Boxplots were used to examine the referral rate distribution between unitary authorities (SPSS for Windows v10).

Results

There is geographical disparity in referral rates across Wales.
Notably, Carmarthenshire is in the lowest quartile of referral rate distribution for the entire four year period, accompanied by Powys
from July '99 onwards and Merthyr Tydfil from July '00.
Conversely, the Vale of Glamorgan is in the upper quartile range from July '99, with Conwy from July '00.

Discussion

Distance from cancer centre appears to have an effect on service uptake (e.g. Carmarthenshire, Powys). However, inconsistencies
in this pattern suggest it is not the only factor (e.g. Merthyr Tydfil, Pembrokeshire > Carmarthenshire, Monmouthshire > Newport).
Ongoing research aims to explore other potential influences (e.g. socio-economic status of referrals; referrer decision-making; impact of referral guidelines see below).
In July 2000 referral guidelines were distributed to every general practitioner and hospital specialist in Wales; these may have some
effect on uptake by reducing inappropriate and increasing appropriate referrals.
Where distance does deter uptake, research into novel means of service delivery, such as telegeneics, may suggest a solution.

Conclusion

Distance to centre appears to influence service uptake but does not completely explain disparity. Other factors require exploration.

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