



Chronic Disease - Islington Primary Care Trust

Aims

Chronic disease presents a significant burden for the UK economy and for the UK's healthcare resources in particular. The direct annual cost of treating coronary heart disease (CHD), diabetes, hypertension, and related diagnoses is about £10bn. This research, funded by the Institute of Actuaries and Islington PCT, used new data and developed new techniques to understand the patterns, pathways and risk factors leading to chronic disease.

What we did

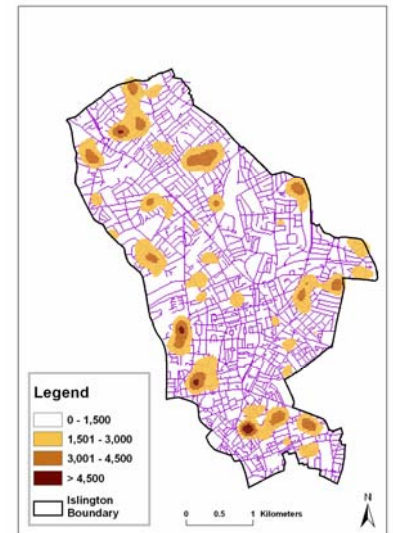
In partnership with Islington PCT, local GP practices and the Institute of Actuaries, we obtained and linked data to the Local Property Gazetteer. In parallel, we obtained and analysed a national GP data set containing over 3m patient records. We evaluated local and national risk factors for each disease and analysed the frequency with which one diagnosis led to another (disease pathways), and the survival chances of individuals being diagnosed with chronic disease at different ages. Based on co-morbidity (the prevalence of two or more diseases), smoker status and Body Mass Index (BMI), we then established the relative uptake of health services including GP visits, prescriptions and hospital admissions.

We quantified how the burden on health services increased with the number of risk factors present for all possible disease and risk combinations. Risk maps were produced identifying the concentrations of particular sub-populations at risk (see example).

Risk ladders were produced for each disease based on prior diagnoses and socio economic factors (see example) for Islington, based on gender, age and council tax bands. This particular example shows that males in the top risk group have a 14.3% chance of having CHD.

Outputs

The research was published in October 2005 by Cass Business School, London. The results were presented at the Institute of Actuaries at Staple Inn, in London, at other conferences, and to local GPs and Islington PCT. The co-authors of the study included health actuaries, and the collaboration benefited both them and public health specialists alike. The research significantly raised the level of knowledge of the behaviour and causes of these diseases and helped identify scope for their better management and prevention. The research was disseminated nationally and internationally.



Map of Islington showing the concentrations of males aged 50+ living in council tax bands A-C

Category	Sample	Male	Council tax band A-C	Aged 50+	Risk %
1	370	Y	Y	Y	14.3
2	400		Y	Y	12.0
3	2,107	Y		Y	7.8
4	1,968			Y	4.7
5	1,541	Y	Y		0.3
6	8,312	Y			0.1
7	8,335				0.1
8	1,568		Y		0
Total	24,401	12330	3457	4845	1.6

An example of a risk ladder for CHD based on gender, age and council tax band.

*Tailoring
services to local
needs*