

Fuel Poverty and Mortality in Northern Ireland

Key Findings:

- deaths from circulatory & respiratory causes significantly increase with age and temperature shortfall;
- 4 to 6% of deaths have a linkage to low temperature - this may be due to low temperature inside the home (fuel poverty) as well as outside low temperature;
- low income and poorer quality housing (unfit, lacking cavity wall insulation, lacking double glazing, lacking damp course) are drivers of fuel poverty;
- both the East (broadly Belfast and its catchment area) and the West experience common impacts on fuel poverty and cause of death except for urban location which is related to a greater risk of fuel poverty in the East;
- local fuel poverty is higher in Urban East areas than in Rural East whereas it is lower in Urban West areas, compared with Rural West;
- proportion of circulatory & respiratory deaths is lower in Urban East areas than in Rural East, whereas in the West, there is no significant difference between urban and rural.

BACKGROUND TO THE RESEARCH

The Government in Northern Ireland is committed to addressing the problem of fuel poverty (see Department for Social Development's Fuel Poverty Strategy and Public Service Agreement target to eradicate fuel poverty)¹. This research focuses on the factors which impact on cold-related mortality rates as these also tend to have an impact on fuel poverty; changes in cold-related mortality can be potential indicators of progress in tackling fuel poverty.

METHODOLOGY

Analysis of the Northern Ireland Mortality Study (NIMS) database was undertaken on a sample of individuals who died in the period 2001-2006 based on variables such as cause of death, age, social class, date of death, housing tenure, house type, central heating and capital valuation. To this was added local housing data (relating to house aspect, double glazing, cavity insulation, damp course, unfitness, energy efficiency and occupation). Local household information on income and fuel poverty was also attached.

A range of geographic indicators were also incorporated; maritime location, altitude, settlement type, urban/rural, sub-regional location, and temperature shortfall at time of death. An adjusted temperature shortfall was computed, taking account of heat island effects, altitude and location/season.

¹ Department for Social Development (2004) Ending Fuel Poverty: A Strategy for Northern Ireland

POLICY IMPLICATIONS

- fuel poverty policy interventions will have to take cognisance of the identifiable differences between the East and West parts of Northern Ireland;
- housing stock in the open countryside is particularly associated with fuel poverty whereas the situation in relation to tenure in urban areas is less clear-cut - here social housing seems to be associated with lower levels of fuel poverty while owner-occupied, detached property and older property are associated with higher levels;
- in the East, the factors influencing fuel poverty also influence deaths from circulatory & respiratory causes - in the West, property valuation appears to be the main additional variable;
- parts of Northern Ireland which have an older population or colder weather will thus tend to have more circulatory & respiratory deaths. People living in inland rural upland areas in winter are thus most at risk.

Table: Local Housing Quality by Settlement Type

Settlement	Housing Quality			Total
	Good	Intermed.	Poor	
Belfast Met	28.7	69.2	2.1	100.0
Derry Urban	46.2	53.3	0.5	100.0
Large Town	36.4	61.1	2.5	100.0
Medium Town	37.3	61.6	1.1	100.0
Small Town	29.6	64.9	5.5	100.0
Intermediate	41.8	54.9	3.3	100.0
Large Village	28.3	68.8	3.0	100.0
Small village, hamlet country	25.1	61.6	13.3	100.0
NI	28.7	69.2	2.1	100.0

NORTHERN IRELAND MORTALITY STUDY (NIMS)

The NIMS, a sister study to the Northern Ireland Longitudinal Study (NILS), is a record linkage study which links 2001 Census returns to subsequently registered mortality data. Both studies allow exploration of health and socio-demographic characteristics to provide an insight into the status of the NI population. They can be used in analyses of, for example, social inequity, population trends, mortality studies and the impact of new public health policies and the planning of services. The data will interest a variety of researchers and policy-makers UK-wide.

The NILS Research Support Unit provides information, advice and support for potential academic and government research users of the NILS and NIMS databases. For further information please go to our website at www.nils-rsu.census.ac.uk.

This research brief is based on Morris, C. (2007) *Fuel Poverty, Climate and Mortality in Northern Ireland 1980-2006*. Dept. for Social Devt. NI For further information please go to [NILS-RSU Publications](http://NILS-RSU-Publications).