

# Counting the cost of cold winters: Emergency treatment for falls on snow and ice

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During the winter of 2009-2010 the average temperature for the UK was 1.6 degrees centigrade ( $^{\circ}\text{C}$ ), making it the coldest recorded winter in the last 30 years. Using winter data from 2005 to 2010, new research published in BioMed Central's open access journal *Environmental Health* demonstrates an inverse relationship between temperature and the number of falls on snow and ice, which result in emergency admission to hospital, and looks at the cost of these falls.

Researchers from the North West Public Health Observatory, based at the Centre of Public Health, Liverpool John Moores University, compared data from the Hospital Episode Statistics (HES), which record the number of emergency hospital admissions, with weekly average temperature readings from UK's Meteorological Office across England. The results showed that hospital admissions due to [falls](#) on snow and ice increased with age, and that men age 85 and over were especially vulnerable, with more than one in 1000 likely to be admitted to hospital due to falls. Of the five winters studied 2009-2010 had the highest number of emergency admissions due to falls on snow and ice, 18 times more than the lowest (2007-2008). In 2009-2010 these admissions cost the health service 42 million GBP.

Comparing the HES regional data to geographically corresponding temperature data it became apparent that as temperature fell there was an exponential increase in the weekly rate of admissions. It also became apparent that when temperatures fell below  $1^{\circ}\text{C}$  the model underestimated the number of falls. Consequently the cost of colder

winters could be much higher than predicted.

Dr Caryl Beynon said, "The total cost of these accidents to the health services is like to be much higher than reported here. This is because the calculation does not include patients who went to hospital but were not admitted, nor patients who went to their GP or pharmacist, or visited a 'walk-in' centre. It also does not address the long-term costs of rehabilitation or recuperation in a nursing home. With responsibility for health improvement moving to local councils, they will have to balance the cost of winter public health measures, like gritting, with the healthcare costs associated with falls."

**More information:** The cost of emergency hospital admissions for falls on snow and ice in England during winter 2009/10: a cross sectional analysis, Caryl Beynon, Sacha Wyke, Ian Jarman, Mark Robinson, Jenny Mason, Karen Murphy, Mark A Bellis and Clare Perkins, *Environmental Health* (in press)

Provided by BioMed Central

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