

How the HHCC calculates the health cost data

The Housing Health Cost Calculator has been developed to enable environmental health practitioners to measure the quantitative health impact of the work undertaken to reduce and mitigate hazards defined under the Housing Health and Safety Rating System (HHSRS) it can probably be best described as measuring the cost savings to the NHS and society achieved.

The methodology used draws on the BRE publication “The Real Cost of Poor Housing”, a link to which can be found on the main page of the website. In summary the health costs are derived by working out the likelihood of each level of harm occurring, and then applying a cost for each level of harm.

The calculation provides mathematically based estimates of the cost to the NHS as a result of incidents occurring due to these hazards. In addition to the costs to the NHS the cost to society are calculated. The Real Costs of Poor Housing project estimates that the costs to the NHS account for only 40% of the cost to society as a whole.

The project considered a number of methods for estimating the health costs associated with poor housing. Reviewing previous published research evidence showed that a fifth of the NHS clinical budget is spent on curing illness caused by unemployment, poverty, bad housing and environmental pollution. Other cited research notes that poor housing increases the likelihood of family tension and breakdown, child abuse and domestic violence.

Due to the complexity of the issues the model only includes those costs that have direct health costs. “By taking just the costs of medical treatment and care, we are only accounting for, at most, 40% of the total costs to society of the consequences of poor housing”. HHCC adds the costs to society back in as an additional percentage.

All costs are based on ‘simple’ sums and although commonly called ‘cost benefit’ are properly known as ‘cost off set’. This means that for the cost of works the only sum considered is the actual cost of materials and employing a contractor to do the work. Similarly the health costs are simply based on the cost attributed to the class of harm as published in the Real Cost of Poor Housing. Administration costs are not included. The costs have been developed by looking at typical health outcomes and first year treatment costs which can be attributed to selected HHSRS hazards as shown in the table reproduced below.

	HHSRS Outcome			
Hazard	Class 1	Class 2	Class 3	Class 4
Damp and mould growth	Not applicable -	Type 1 allergy (£2,034)	Severe asthma (£1,027)	Mild asthma (£242)
Excess cold	Heart attack, care, death (£19,851)	Heart attack (£22,295)*	Respiratory condition (£519)	Mild pneumonia (£84)
Radon (radiation)	Lung cancer, then death (£13,247)	Lung cancer, survival (£13,247)*	Not applicable -	Not applicable -
Falls on the level	Quadraplegic (£92,490)*	Femur fracture (£39,906)*	Wrist fracture (£1,545)	Treated cut or bruise (£115)
Falls on stairs and steps	Quadraplegic (£92,490)*	Femur fracture (£39,906)*	Wrist fracture (£1,545)	Treated cut or bruise (£115)
Falls between levels	Quadraplegic (£92,490)*	Head injury (£6,464)*	Serious hand wound (£2,476)	Treated cut or bruise (£115)
Fire	Burn ,smoke, care, death (£14,662)*	Burn, smoke, Care (£7,435)*	Serious burn to hand (£1,879)	Burn to hand (£123)
Hot surfaces and materials	Not applicable -	Serious burns (£7,378)	Minor burn (£1,822)	Treated very minor burn (£123)
Collision and entrapment	Not applicable -	Punctured lung £5,152	Loss of finger £1,698	Treated cut or bruise £115

Classes of Harm are marked 'Not applicable'. In these cases the HHSRS class is either very rare or nonexistent. Death, for example, is very unlikely to arise from Damp and mould growth alone so no Class 1 harms are applicable and Radon, if present and causing a health effect, is expected to cause an extreme outcome leading to lung cancer or death hence no class 3 or 4 harms are applicable. Where asterisked the costs are as a result of treatments predicted to be required during the first 12 months. Continuing care costs after one year are likely to occur but these are not modelled.

The diagram below explains the methodology in simple terms

