

# Respiratory Health and Housing in Scotland

Results from the  
Scottish House  
Condition Survey 2002

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Sara Grainger

# SHCS

- 🏠 Main aim is to report on the state of Scottish housing and make the link between houses and the people who live in them
- 🏠 Nationally representative of all residential dwellings
- 🏠 15168 social and physical surveys
- 🏠 'Housing and Health in Scotland' (August 2004)

# Four health measures

- 🏠 Any children in household with any respiratory symptoms
- 🏠 Adult respondent has any respiratory symptoms
- 🏠 (Adult respondent's self-assessed health)
- 🏠 (Adult respondent's GHQ12 score)

# Independent variables

## Housing

Tenure, dwelling type, date of construction, urban/rural, primary fuel source, extent of central heating, fuel poverty, NHER, level of disrepair, damp, mould, condensation, tolerable standard, bedroom standard

## Other

Age, sex, marital status, LTI/D, smokers in household, social class / income, presence of pets / furry pets, satisfaction with home, neighbourhood rating, number of children, heating usage

All ideas of Jeremy Walker and Stephen Platt,  
Research Unit in Health, Behaviour & Change,  
Edinburgh University.

## Heating usage

- 🏠 Ratio of rooms heated:unheated
- 🏠 Total hours of heating
- 🏠 Total hours of all rooms heated / total number of rooms
- 🏠 Total hours of all rooms heated / total number of rooms heated
- 🏠 Heating use constrained – ‘is heating adequate during the winter months?’
- 🏠 Respondent home all day

## Descriptives: Children's respiratory health

- 🏠 498,500  $\pm$  6,500 households with children
- 🏠 19 $\pm$ 1% wheezing/whistling symptoms
- 🏠 15 $\pm$ 1% dry cough at night
- 🏠 15 $\pm$ 1% medicine for respiratory problem
- 🏠 9 $\pm$ 1% antibiotics for respiratory problem
- 🏠 10 $\pm$ 1% asthma attack
- 🏠 136,500  $\pm$  2,500 households have at least one child with at least one symptom

CHILDREN: MODEL 1	Sig.	Exp(B)	95% C.I.for EXP(B)	
			Lower	Upper
heating usage: little	0.03			
heating usage: medium	0.44	0.93	0.78	1.11
heating usage: lots	0.05	1.18	1.00	1.40
heating satisfactory (yes)	0.03	1.25	1.02	1.52
adult respondent has resp. problem (no)	0.00	2.06	1.76	2.41
tenure (private)	0.00	1.63	1.38	1.93
smoker in household (no)	0.02	1.20	1.03	1.40
dwelling type (house)	0.00	0.83	0.69	0.99
Constant	0.00	0.23		

# Children

		predicted		
		no symptoms	symptoms	percentage correct
observed	no symptoms	2923	35	98.8
	symptoms	1037	54	4.9
	Overall percentage			73.5



## **Child respiratory health: Non-significant variables**

- Damp, condensation or mould
- Fuel poverty or NHER
- Extent of central heating or primary fuel source
- Urban/rural location
- Overcrowding
- Income
- Disrepair

## Descriptives: Adult respiratory health

- Approximately 2192,500 households in Scotland
- 29±1% (642,500±4,000) had at least one respiratory symptom

ADULTS: MODEL 1	Sig.	Exp(B)	95% C.I. for EXP(B)	
			Lower	Upper
Gender (male)	<0.001			
Age (8 cats)	<0.001			
Ever had furry pets (no)	<0.001			
Health board (15 cats)	<0.001			
Dwelling type (2 cats)	<0.001			
Tenure (2 cats)	<0.001			
Any smokers in household (no)	<0.001	1.53	1.41	1.65
Any damp (no)	0.010	1.22	1.05	1.41
Heating usage: low	0.07			
medium	0.37	0.92	0.78	1.10
high	0.78	1.02	0.87	1.21

# Adults model 1

		predicted		
		no symptoms	symptoms	percentage correct
observed	no symptoms	10137	220	97.9
	symptoms	3950	240	5.7
	Overall percentage			71.3

ADULTS: MODEL 2	Sig.	Exp(B)	95% C.I.for EXP(B)	
			Lower	Upper
Gender (male)	<0.001			
Age (8 cats)	<0.001			
Ever had furry pets (no)	<0.001			
Health board (15 cats)	<0.001			
Dwelling type (2 cats)	<0.001			
Tenure (2 cats)	<0.001			
Any smokers in household (no)	<0.001	1.48	1.37	1.60
Heating satisfactory- out all day	<0.001			
Heating satisfactory- home all day	<0.001	1.33	1.21	1.47
Heating unsatisfactory- out all day	<0.001	1.36	1.11	1.66
Heating unsatisfactory- home all day	<0.001	2.14	1.85	2.49
Heating usage: low	<0.001			
medium	<0.001	0.91	0.83	1.00
high	<0.001	1.11	1.01	1.21

## Adults model 2

		predicted		
		no symptoms	symptoms	percentage correct
observed	no symptoms	10183	283	97.3
	symptoms	3904	336	7.9
	Overall percentage			71.5

## Adult respiratory health: Non-significant variables

- Damp, condensation or mould
- Fuel poverty or NHER
- Extent of central heating or primary fuel source
- Urban/rural location
- Overcrowding
- Income
- Disrepair or tolerable standard
- Furry pets in household

# Variables not considered

- Diet
- Exercise
- Working environment
- Genetics / environment in utero / inherited predisposition
- Hygiene / dust mites



## 3 main messages

1. Housing factors play only a very small role in respiratory health
2. Heating usage is more important than heating provision
3. Tenure has an effect independent of social class

# Contact details



[www.shcs.gov.uk](http://www.shcs.gov.uk)



[Sara.Grainger@scotland.gsi.gov.uk](mailto:Sara.Grainger@scotland.gsi.gov.uk)



0131 794 5366