

Health Implications of Cold and Damp Housing

a training resource

Supported by:

NHS Education for Scotland

NHS Health Scotland

Eaga Partnership Charitable Trust

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Updated 2004



Health implications of cold and damp housing

NHS Education for Scotland (NES) has a remit to ensure that all members of staff in the NHS are competent to contribute fully to the healthcare agenda in Scotland, including the important arenas of public health and health improvement.

It is well known that cold and damp housing has a detrimental effect on the health of many people in Scotland and that a few practical changes can make an enormous difference to the burden of ill-health suffered. It was acknowledged in Nursing for Health (SEHD, 2001) that community nurses and midwives, who often meet with individuals and families in their own homes, are uniquely placed to influence factors contributing to a healthy environment by providing initial information about resources and sources of assistance.

This educational resource provides a robustly tested method of training front-line health staff about the implications for health of cold and damp housing and more importantly what they can help do about it. I am therefore delighted that NES, together with the Eaga Partnership Charitable Trust has been able to support an initiative that has the potential to make a real difference on a practical level to the health of people in Scotland.

Graham Buckley, Chief Executive, NHS Education for Scotland

One of the biggest scourges of fuel poverty is its debilitating effect on people's health. Cold, damp, thermally inefficient houses that people cannot afford to heat adequately contribute to a variety of preventable illnesses. These include respiratory infections, asthma and strokes. This, in turn, places enormous winter pressure on the NHS. For several years Eaga Partnership Charitable Trust has funded a 'targeted' programme of work on the theme of fuel poverty and health. During this time we have been constantly reminded of the vital role that front line health professionals play in the fight against fuel poverty. Many of their clients, including the elderly and isolated, are very vulnerable and health care staff hold a unique relationship with them, based on trust. These health professionals also see, on a daily basis, the negative effects of cold, damp and poorly ventilated housing on their clients' health. If trained to recognise and understand the signs of fuel poverty, they can refer their clients to the advice and, where eligible, grants to ensure that their housing is warmer and more energy efficient.

Eaga Partnership Charitable Trust is delighted to support the production of this comprehensive training resource, which underlines the important link between health and housing conditions and the benefits of improved energy efficiency. We believe it is crucial that the health sector is fully engaged as a partner in tackling fuel poverty and this resource provides a practical means of encouraging effective partnerships at a local level.

Prof. John Chesshire, Chairman, Eaga Partnership Charitable Trust

Health Implications of Cold and Damp Housing

a training resource

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Introduction

This training resource originates from a pilot programme of training that spanned two years (2001 - 02) and which focused on the health implications of cold and damp housing. This training was funded by the Affordable Warmth Programme of Transco plc and was designed by Trevor Davison, Employment & Training Consultant. The key target groups for the training were front line primary health care staff and public health staff and the training programme was developed following broad consultation with representatives of these key target groups.

By the end of year one the training session, which lasts two hours, had been delivered to 198 front line health staff in 19 different locations throughout Scotland. This included all the post graduate students of the Nursing and Health Studies department at Queen Margaret University College. The largest groups of participants were health visitors 32.3%, district nurses 11.3% and community nurses 9.8%. All participants were asked to complete an evaluation form at the end of the session and the overall feedback was extremely encouraging.

In year two the course was updated to take account of any changes in the previous twelve months. It was then promoted to the same target groups and the target numbers increased. Some feedback from year one had suggested that participation in the session should be opened out to other professional groups in related caring roles. It was felt that joint sessions would help front line health staff to build bridges and form partnerships with these other groups. Consequently, while the primary target group remained front line health staff, the training sessions in some areas were also promoted to locally based social work, housing and environmental health staff.

By the end of year two 29 sessions had been run in 17 different locations and altogether 423 people attended. The session was again delivered to all the post graduate health studies students at Queen Margaret University College and in year two it was also run on two occasions for students on the undergraduate and postgraduate health studies courses at Abertay University. In year two the largest groups of

Introduction

participants from the health sector were health visitors 54% and district nurses and community nurses, both 14%. From the non-health sector the largest groups of participants were welfare rights officers 16%, social workers 15.8% and housing officers 14.3%. The feedback from both broad groups of participants was again very positive.

To underline the key themes of the training and to encourage participation, the sessions were all scheduled during the autumn/winter months in both years one and two.

At the beginning of 2003 the NHS Education for Scotland, the Public Health Institute of Scotland (now NHS Health Scotland) and the Eaga Partnership Charitable Trust agreed to support the production of this successful training session as a fully packaged resource. This training resource contains all the necessary trainer's notes and training materials to allow a locally based trainer to provide the session at a local level. The resource is produced in CD ROM format and will be provided free of charge to all those with a responsibility for providing health care training. The funding also covers the provision of a series of training of trainer's days in different locations throughout Scotland plus the updating of the resource for the next three years. The resource is produced by Trevor Davison, Employment & Training Consultant.

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Section 1

Notes to the Trainer

Notes to the Trainer

- How this resource pack is set out

This resource is designed to provide anyone with a responsibility for providing training for front line health staff with all the necessary training resources (training notes, training materials and background guidance) that are required to deliver the Health Implications of Cold and Damp Housing training session. For ease of use the training resource has been produced in CD ROM format, thereby allowing the trainer to reproduce all or part of the resource and exactly the number of copies required. Updating the resource in this format should also be more straightforward.

It is strongly advised that the trainer gives the intended target audience plenty of time to schedule the session in their diaries. It is suggested that promoting the session should begin at least six weeks in advance and, to help promote the session, it might be useful to produce a flyer and/or advert about the session and its content. A copy of a draft flyer is provided in Appendix 1.

Because time is tight for many of the intended target audience it is essential that any promotion clearly states that the session is only two hours long. If it is possible to schedule the session so that it begins or ends with some form of refreshment then this can also help to attract participants!

From experience gained in years one and two of this initiative it was clear that the session had more impact if it was delivered in the autumn/winter period as this is when most people are aware of being cold in their homes and consequently more receptive to energy advice

- Aims of the training session

To raise the awareness of front line health professionals to the health implications of cold, damp and mouldy housing.

To alert these front line health staff to the various sources of help, advice and financial assistance that are available to combat these problems.

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- Objectives

To outline the condition of the housing stock in Scotland and its financial implications for householders.

To review the research to date linking ill health with cold, damp and mouldy housing conditions.

To highlight the range of initiatives available to the householder to improve the energy efficiency of their home.

- Learning outcomes

The participant will be able to identify householders vulnerable to fuel poverty.

The participant will be able to direct the client to sources of free and independent help and advice.

The participant will be able to inform the client of the range of financial assistance that is available.

- Key target group(s)

The primary target group for this training session is front line health staff. This is a very broad group and this was demonstrated during the first year of the initiative when 26 different types of staff attended the sessions with the main groups being health visitors (32.3%), district nurses (11.3%) and community nurses (9.8%). In year two the range of health staff was slightly narrower with 17 different types of staff attending; health visitors were again the largest group (28%), followed by district nurses and community nurses (both 14%).

If it is intended to open the session up to other care related staff, which was how a number of the sessions in year two were run, then the session may also prove relevant and useful to other groups, such as welfare rights workers, social workers, housing officers and members of voluntary organisations. Joint sessions such as this can be an important step in forging links between different groups of professionals. To organise these types of training session it is vital that early contact is made with other partners in the local health community

Section 1

planning team. This will allow other community planning officers to identify possible participants from the groups they represent and to help promote the session to these groups. Inter-departmental sessions can play an important role in fulfilling the goals of local health plans but early co-ordination and sharing of information between all the members of the community planning team is vital.

Essentially the session is designed to provide all participants with information that might be practically useful to their clients. The ideal participants are therefore any staff who have regular contact with vulnerable groups in the community, particularly if the staff meet with clients in the client's own home, as research on energy advice suggests that information/advice is more effective if it is given in the client's own surroundings by someone they know and trust.

The training session proves most effective with small to medium sized groups (5 - 15 participants).

- **Training techniques**

The training session is designed to be delivered in a participative manner. The trainer should therefore ensure that the venue for the session and the way in which the seating is arranged is conducive to such an approach. It is suggested that the seating is arranged in a semi-circle (or series of semi-circles) with the trainer at the centre. The use of desks or tables should be avoided if possible as this can cut off the trainer from the participants and therefore discourage participation. Tables are not really required as most of the information in the session is contained in the handouts.

Other basic points the trainer should bear in mind are that many of the participants will have hectic schedules with various commitments, such as clinics etc., where start times are not flexible. The session should therefore begin on time and should finish at the time indicated on the initial promotional material. Very few participants will be able to 'hang on' for even a short period of time.

Many of those attending the session will have abundant experience that may offer invaluable insights into many of the points the trainer is highlighting during the session. It is therefore important that the

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trainer encourages the participants to contribute to the session. Various training techniques or styles have been suggested in the following section and these are designed to foster discussion. The trainer should also incorporate open questions directed to the participants to encourage them to contribute. Useful questions of this type are included in the trainer's manual, (Section 2)

There are four key topic areas within the session:

- The condition of the Scottish housing stock
- The financial impact of poor housing and high fuel bills
- The health implications of cold, damp and mouldy homes
- Sources of help, advice and financial assistance

The overall time allocated for the session is **two hours**. Because the main target group is front line health staff the trainer should allocate the time as follows (all times are approximations and include sufficient time for questions):

- Introduction to the session **5 minutes**
- The condition of the Scottish housing stock up to **15 minutes**
- The financial impact of poor housing and high fuel bills **10 minutes**
- The health implications of cold, damp and mouldy homes **60 minutes**
- Sources of help, advice and financial assistance **25 minutes**
- Summarise the key points and conclude the session **5 minutes**

Each of the four key topic areas begins and ends in the same manner i.e. the trainer should introduce each topic area in turn and should recap the key points at the end of the section and ask if there are any questions before proceeding further.

After introducing the topic area for discussion the trainer should set out the main points using acetates and an overhead projector (OHP). The trainer should proceed through each point in turn on the acetate, explaining each as they go along.

(Handouts are usually given out **after** the corresponding acetate has been shown as this discourages the participants from reading the handout when they should be following the points on the screen!)

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In some sections there are open questions that the trainer should use to encourage the participants to contribute to the session. There are also points that can be opened out for wider discussion involving the whole group. These opportunities are very important as it would be easy for the trainer to deliver the session in a very formal lecture type style and this should be avoided if possible. Having said this, there are some groups that are naturally more quiet than others and the trainer will need to 'pitch' the session accordingly.

- **Training materials used in the session**

The training materials required to deliver the training session have been kept deliberately simple and straightforward. This allows the session to be run in a variety of different venues and locations that may not have access to sophisticated training equipment. At the beginning of Section 3 there is a checklist of all the training equipment and materials the trainer will require before the session begins. Essentially the main training materials consist of a series of acetates and handouts. Therefore the trainer will need access to an overhead projector and screen (some venues will have large, plain walls that can double up as a screen). It will also be necessary for a flipchart to be available; this can be used to record or expand on any key points that may arise (do not forget to have your own supply of felt tip pens as these can easily go missing). If the necessary equipment is available to make a PowerPoint presentation then the series of acetates used in the training session are available in PowerPoint format on this CD-ROM.

It might also be useful if the trainer takes along some paper and pens as, although it is not necessary for the participants to take many notes as the handouts are so comprehensive, there may be occasions when participants want to make a note of something.

- **Local information**

The training manual has been designed primarily from a Scotland-wide perspective but it is important that local information is incorporated into the presentation. Consequently, space has been left in the appropriate sections of the training manual for this information to be inserted. Extra handouts can also be produced by the trainer that sets out this local data etc.

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- **Relevant local information might include:**
 - Facts and figures regarding the local housing stock (this can usually be obtained from the local HECA officer or the housing department).
 - Facts and figures regarding the levels of fuel poverty in the surrounding area (this might be harder to obtain as this level of detail is not readily available, a good place to start might be the local HECA officer).
 - Contact details of the local HECA officer(s) (see appendix 2).
 - Local energy efficiency initiatives/grants etc. (information from the local Energy Efficiency Advice Centre or HECA officer - see appendix 2).
- **If some of the participants are from related caring disciplines it might also be useful to include the contact details of the following:**
 - Local Health Care Co-operative(s)
 - Public Health Practitioner(s)
 - Local Authority Health Improvement Officer(s)
 - Housing Department
 - Social Work Department/Welfare Rights
- **Background reading**

Before delivering the training session it might be useful for the trainer to become more acquainted with some of the main background information on which the training input is based. The reading list in Appendix 4 may look rather daunting, however, the recommended essential reading below is considerably less. The essential background reading provides in-depth information to support the key points in each section of the session.

- **Essential background reading:**

Section - Condition of the Scottish housing stock

Scottish House Condition Survey (2002) Summary report

Section - Financial implications of hard to heat housing/fuel poverty

UK Fuel Poverty Strategy (Nov 2001), especially chapters 1 and 5

Fuel Poverty in Scotland: A Further Analysis of the Scottish House Condition Survey (2004)

Section 1

Section - Health implications of cold, damp and mouldy homes

Fuel Poverty and Ill Health - A Review (see also Appendix 3)

Health and Fuel Poverty

Poor Housing and Ill Health: A summary of research evidence

The impact of housing conditions on excess winter deaths

Section - Energy advice/heating and insulation grants

Warm Deal promotional leaflet

Central Heating Programme promotional leaflet

Housing Improvement and Health Gain - A summary and systematic review

Health impact assessment of housing improvements: incorporating research evidence

(NB Full references to all the essential reading can be found in Appendix 4).

- **Updates**

The first edition of this training resource was produced in May 2003. Updated sections of the resource will be issued to all those in receipt of the training resource in CD ROM format, the next update will be available:

- **July/August 2005**

These updates will be posted on the websites of both the NHS Education for Scotland and NHS Health Scotland.

It is the responsibility of the recipient to incorporate these changes into the package as indicated.



Section 2

Training Manual

Suggested time allotted to each section of the course:

- **Introduction and welcome** **5 min.**
- **Condition of the housing stock** **15 min.**
- **Fuel poverty in Scotland** **10 min.**
- **Health implications of cold and damp housing** **60 min.**
- **Sources of advice, information and grants** **30 min.**

Do not forget:

- **to have sufficient copies of all handouts ready in advance.**
- **Flip Chart paper and pens**

Key to the symbols used in the manual



Explain



Question - a guide to the question you should ask the participants



Answer - a guide to the answer you might expect



Discuss

OHP 12

**Show Overhead slide
(showing reference no.)**



**Handout
(showing reference no.)**



Flip Chart



Recap

Section 2

Introduction and welcome

5 mins

Registering who has attended the briefing session can be undertaken in a number of ways.

Introduce yourself and explain who you are.

Thank everyone for attending and if the session has been organised by anyone in particular then do not forget to thank them for their help.

Point out any regulations/arrangements concerning the venue, such as, fire alarm and drill, smoking policy, location of toilets, switch off mobile phones, etc.

OHP 1

Go through the programme of the session, encourage participants to ask questions as you go along. (OHP 1: Course Programme)

OHP 2

Briefly explain the aims of the training session.
(OHP 2; Aims of the session)



(H/O 1: Aims, objectives and outcomes)

Condition of the housing stock

10 mins

(You may wish to gather some information on the condition of the local housing stock to add to the national data used in this section)

E

This section illustrates the condition of the housing stock using data from the Scottish House Condition Survey (2002)

OHP 3

(OHP 3: Condition of the housing stock)

D

Many people are not aware of the very poor condition of the housing stock and many will believe that the majority of the housing stock is relatively new, modern and therefore energy efficient.

Using the facts and figures shown on OHP 3 and the more in-depth data on H/O 2, discuss these points with the participants.

Use the first point to highlight how the problem of hard to heat homes is not a small one affecting only a few people.

In relation to the point on central heating remind the participants that even though the client may have a central heating system it does not mean they use it. They may be worried that extensive use will mean their fuel bills will be too high.

Also remind the participants that even if someone has a central heating system and is using it, this does not mean they are operating it correctly.

?

Demonstrate this point by asking the following questions:

Ask the participants who has a central heating system?

Ask how many have a wet central heating system (gas, oil, LPG or solid fuel)?

Ask the participants how many different types of controls are found on this type of system?

Section 2



Up to five different controls programmer/timer, room thermostat, thermostatic radiator valves, hot water tank thermostat and boiler thermostat.

In relation to the age of the central heating system, ask participants how old is their boiler (boilers should be replaced after 12 - 15 years).



You will need to explain the term NHER ([see Appendix 5](#)).

Note how the mean NHER has improved since the last survey in 1996, however there are some types of housing where it remains low (use H/O 2 to guide you).

Point out that the current building regulations require that a new house must score the equivalent of an 8 on the NHER scale. Currently 70% of the housing stock is below NHER 7.

Do not forget to highlight the types of households that often suffer from poor housing conditions. This is important as these vulnerable groups are frequently the same as those that suffer from fuel poverty and the health implications of cold and damp housing.



(H/O 2: Condition of the housing stock)

Introduce any local information on the housing stock.

Ask the participants if they have any questions



The key points are:

- **The problem of hard to heat homes is not a minor one affecting only a small number of the population.**
- **Hard to heat homes are commonplace in all housing sectors.**
- **Some groups are more vulnerable than others.**

Section 2

Financial impact of poor housing - fuel poverty

10 mins

E

This section illustrates how we do not all pay the same for our fuel bills and how some householders have to spend substantially more than others.

A

Ask the participants if they know how much they spend **annually** on their fuel bills? (i.e. gas, electricity, oil, paraffin)

?

You will find that very few, if any, of the participants, will know what their annual fuel bills are. This is because most of the participants will have fuel bills that represent no more than 2% - 3% of their income.

OHP 4

(OHP 4: Fuel poverty definitions)

E

Using OHP 4, explain that the original two definitions of fuel poverty have now been replaced by the definition adopted in the report Fuel Poverty In Scotland (2004).

OHP 5

(OHP 5 Fuel poverty by tenure, income)

E

Using the data on OHP 5 and H/O 3 as a guide, illustrate how the incidence of fuel poverty is not evenly spread throughout the community. Highlight how the numbers have fallen sharply since the previous Scottish House Condition Survey in 1996 (723,000 to 286,000). This remains a high figure and could increase if fuel prices rise or household income falls as a result of unemployment, etc.

Section 2

Do not forget to highlight those groups that are particularly vulnerable to fuel poverty. Point out that surveys have shown that many of those in these vulnerable groups frequently have to spend significantly more than 10% of their income on fuel.



(H/O 3 Fuel poverty by tenure, income)



To combat this problem the Scottish Executive published the Scottish Fuel Poverty Statement (2002). This commits the Executive to ending fuel poverty by 2017 and reducing the current number of people living in fuel poverty by 30% by 2006.



Point out that some difficulties with paying fuel bills can be overcome relatively simply, for instance:



Ask the participants if they know how many different payment methods there are for paying fuel bills?



Up to seven (direct debit, standing order, budget scheme, quarterly bills, flexi-plan, prepayment meters and fuel direct). Point out to participants that many householders can get into problems because they are not on the most appropriate payment scheme for their circumstances. It is important to inform participants that paying by prepayment meter can have numerous drawbacks for the householder (see energywatch, page 64).



Ask the participants how many have switched their fuel supplier in the last twelve months?



This will vary from one group to another but based on national figures it is likely to be low. Stress that significant savings can be made by shopping around and the client's difficulty in paying for fuel could be alleviated by getting a better deal elsewhere. (energywatch Scotland can help with these matters -see Appendix 6 for contact details).



Ask participants if they have any questions.



The key points are:

- **Fuel poverty continues to be a problem facing significant numbers of households in Scotland.**
- **Many of those suffering from fuel poverty are very vulnerable groups.**

E

The links between ill health and cold, damp and mouldy housing have been recognised by front line health professionals for many years. However, until very recently these links have not always been reflected in government health policy.

Remind the participants that the Scottish Office/Executive has issued some very important reports in the last five years that have explicitly recognised the important links between poverty, poor housing and ill health. These include, Towards a Healthier Scotland (and the consultation paper that preceded it, Working Together for a Healthier Scotland) plus Our National Health: A plan for action, a plan for change.

D

In 1995, the Building Research Establishment (BRE) published a report 'Building Regulations and Health' in which they reviewed the evidence on 16 different health hazards in the home and attempted to rank these according to their impact on health.

?

Ask the participants to suggest what these hazards might be.



Write the responses on the flipchart.

The list should include:

- The temperature of the home
- The level and type of dampness in the home
- Lack of air movement within the home
- Radon emissions
- Environmental tobacco smoke
- Carbon monoxide
- Security and the effects of crime

Section 2



- Lead in pipes
- Sanitary accommodation and other sources of infection
- Lack of space
- Volatile organic compounds
- Oxides of nitrogen
- Particulates
- Sulphur dioxide and smoke
- Landfill gas
- Pesticides

OHP 6

(OHP 6: Hazards to health in the home)

E

Point out that the three most major hazards to health in the home from the evidence reviewed by the BRE were shown to be:

- Temperature in the home
- Level and type of dampness (humidity)
- Lack of air movement within the home

E

Explain that the research into the health impact of poor housing has tended to investigate these factors separately from one another, in order to demonstrate a clear causal link between each particular hazard and certain illnesses. This is a typical reductionist approach to the investigation of ill health. This approach has produced separate and distinct groups of research studies.

OHP 7

(OHP 7: Health implications research)

Section 2

E

Point out that because of the way these factors combine in reality it is not always possible to separate them from one another in a research study. This means that some of the findings of the research studies cannot be completely conclusive. (Also note that some studies were unable to demonstrate any clear linkages due to other practical problems such as lack of, or missing, medical records.)

E

Lack of time in the session prevents an in-depth discussion of the many research studies that have been undertaken over the last 30 years or so.

Therefore, to provide an overview of the findings of these research studies, use OHP 8 to illustrate the various medical conditions that have been linked to cold, damp and mouldy housing by these studies.

OHP 8

(OHP 8: Health implications of cold and damp housing)

D

Discuss with the participants how some of these medical conditions may appear as somewhat minor ailments, while others are much more severe. Point out that some studies have suggested that the cost to the NHS of these various forms of ill health might be as high a £1 billion per annum.

OHP 8a

(OHP 8a: Health implications of cold and damp housing. contd,)

E

Point out that some research has also demonstrated how poor housing can also cause other, not necessarily medical, problems. Explain how a cold and damp home can make some people less keen to invite friends and relatives to visit, thereby increasing the householder's isolation and social exclusion. A cold and hard to heat home can also mean that children are unable to do their homework in a quiet and warm room on their own. Families are forced together in the only room in the house

Section 2

that can be kept reasonably warm. This can lead to tension amongst family members that in turn could lead to emotional stress and depression.

E

Numerous research studies have shown how these various health and other social implications are frequently concentrated in certain groups. Remind participants that these are the same groups that also suffer from the poorest housing and the greatest risk of fuel poverty.



(H/O 4: Health implications of cold and damp homes)

E

While the time available might not allow for an in-depth review of all the research, it is important to highlight some key points in relation to the three main areas of health research.

E

Remind participants of the World Health Organisation's recommended temperatures for the home (21°C for the main living area and 18°C for the remainder of the home). Point out that the indoor temperature does not have to fall very much below the 'safe' zone before possible effects on health can arise.

OHP 9

(OHP 9 Health implications of low temperatures)

E

Explain how as temperature decreases the blood will get thicker which, in turn, can increase the risk of heart attacks and strokes.

Point out that research has demonstrated how after one or two days of prolonged cold weather there is an increase in the rates of hospital admissions for myocardial infarction (heart attacks). This is because strain is put on the heart by having to function in a cold environment.

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The heart is required to work harder to maintain the body metabolism.

After several days of cold weather there is usually an increased incidence of strokes, probably as a result of an increase in the thickness/viscosity of the blood. There is also an increase in respiratory illnesses as a result of cold temperatures, along with the seasonal incidence of various opportunistic viruses.

Finally, point out that in Scotland there is an almost 30% increase in death rates during the colder winter months. In Scotland this equates to approximately 4,000 - 7,500 excess winter deaths each year.

E

Explain that in other countries with similar, if not more extreme climates (Norway, Sweden, Canada etc.), there is a much smaller increase (10%) during the same months.

Health implications of damp and mould growth

OHP 10

(OHP 10 Dampness and mould growth)

E

Using the data on OHP 10 (plus any local data you may want to include) explain how prevalent dampness is in the housing stock. Point out that if the fabric of the dwelling is damp it will retain the heat less well than if it were dry. This, in turn, makes the internal temperature lower (thereby leading to the ill effects mentioned above) and it will make the dwelling more costly to heat hence increasing the risk of fuel poverty.

Explain that dampness can take different forms - rising damp, penetrating damp, plumbing defects and condensation dampness and that it is condensation dampness that is the most widespread. It is this type of dampness that is most clearly linked to health problems.

Section 2



Ask the participants what are the factors that can lead to condensation dampness occurring.



Talk through each of the four points on OHP 11.

OHP 11

(OHP 11 Causes of condensation dampness)



Briefly explain how condensation dampness is caused by the interaction of the four factors on OHP 11.



Ask the participants what are the main sources of excessive moisture production in the home.



Point out how excess moisture production is at the root of the condensation problem. Explain the main sources of this excess moisture (use OHP 11).



Ask the participants what areas of the home are most prone to condensation dampness.



Explain how condensation dampness is frequently found in particular areas of the home (use OHP 11).



(H/O 5: Main causes of condensation dampness)

Section 2



Explain that to combat condensation dampness the householder must tackle each of the four causes.



(H/O 6: Ways to reduce condensation dampness)



Stress that the householder must try to adopt all four parts of the solution. It is no good just doing one or two. Having said this, the key to solving the problem must be the reduction in the level of moisture production in the home.

Mould growth



Point out how mould growth is a form of different kinds of fungi and a damp home is an ideal environment for the spread of these fungi.

It is important to explain how mould growth can only occur as a result of condensation dampness, as opposed to the other forms of dampness (the water associated with condensation dampness is relatively pure whereas the water associated with other forms of dampness is somewhat impure, mould requires pure water in which to flourish). Therefore, if mould is prevalent in the home then there must already be a condensation dampness problem.

Explain that it is the invisible microscopic spores produced by the fungi which then float around in the air within the home that can lead to different forms of ill health when inhaled.

Explain how research has demonstrated that mould growth can give rise to different types of problems:

Section 2



Write these on the flip chart.

- Allergies
- Infections
- Toxic effects

E

Explain that moulds have been shown to cause certain allergies, especially of the respiratory organs. Research has demonstrated how one of the causes of asthma is linked to moulds. It can also lead to rhinitis (inflammation of the nasal passages) and alveolitis (inflammation of the lungs). One particular type of mould, aspergillus, has been linked to acute illnesses with severe symptoms such as fever, headache and wheezing.

Explain that infections can be caused by breathing in the fungal spores of the mould. Research has shown how these infections can vary from mild to very severe reactions ranging from flu-like symptoms (headaches, fever, sore throat and aching joints) through to irreversible changes in lung function. Research has also shown how these infections in the lungs can travel to other organs including the heart, kidneys and the brain. These acute reactions are thankfully very rare but, obviously, if mould growth was to occur in the home of someone with a suppressed immune system (for example, leukemia or AIDS) it could be very serious.

Finally, note that at certain times in their life cycle fungi produce metabolites that can be toxic. These are known as mycotoxins and act as poisons. Mycotoxins can be swallowed with contaminated food and the spores may be swallowed with spit or mucus, particularly where a child, for example, is a mouth-breather rather than breathing through the nose. Mycotoxins can cause vomiting, diarrhoea and their presence in the lungs may interfere with the immune system, thereby making allergies and infections worse.

Research into the effects of dampness and mould growth shows there is a clear **dose-response relationship** or, in other words, more damp, more mould and more illness. This relationship has been shown to be very strong and the research demonstrates a direct **causal** link.

E

Stress that if mould is found in the home it must be eliminated. The short term answer is to wipe away the mould with a damp cloth soaked in a mild bleach solution. Do not use a dry cloth as this will only disperse the spores around the house. Getting rid of mould growth has to be backed up with actions that address the real source of the problem i.e. condensation dampness.

Dust mites

E

Explain that dust mites have been shown to thrive in warm, damp and poorly ventilated dwellings. Point out that it is not the dust mites that are the problem but their faecal pellets. It is these pellets that can lead to respiratory problems such as wheeze and certain types of asthma. Some research has suggested how exposure to dust mites in a child's first year may increase the risk of asthma in later years.

Explain how some action research projects that have improved the energy efficiency of the home through the installation of insulation materials, improvements to the heating system and better ventilation have shown reductions in the incidence of asthma and other respiratory illnesses amongst members of the household.

Research highlights how it is important to reduce the humidity of the home by avoiding excess moisture production while also ensuring adequate ventilation. It can also help to regularly replace bedding, especially pillows.

Viruses

E

Certain kinds of viruses thrive in damp conditions because they require a moist environment in which to move. It has been suggested that some of the illnesses that occur more frequently in people who live in

Section 2

damp housing can be linked to these viruses. Some studies have found that dampness alone can be linked to reports of coughing, aches and pains, excessive tiredness and stomach pains in adults and children.



Ask if there are any questions.



The key points are:

- **Government policy now recognises the link between poor housing and ill health.**
- **Cold indoor temperatures, dampness and mould growth may have an impact on health.**
- **Certain groups are more vulnerable than others.**

Sources of advice/ info. etc

E

This section of the briefing session highlights the numerous sources of advice, information and insulation/heating grants that are available. These numerous forms of help are not only available to many clients but also to many of the participants themselves. Although most of these initiatives have been promoted at a national and local level it is still surprising how few people are aware of them.

Energy advice

E

Research has demonstrated that if energy advice is provided in the right manner it can help the householder reduce their fuel bills by up to 10%. This could be a significant reduction for many fuel poor households.

Energy advice can therefore be very helpful to many clients. At present there are numerous sources of advice at both the local and national level that can offer help, most of this is independent and free. Much of this advice is available to everyone.

OHP 12

(OHP 12: Sources of energy advice)

E

Using OHP 12 and H/O 7, briefly explain the function and purpose of each of the agencies that offer energy advice and information.

Answer any questions as you go along.

Section 2

Add your own information regarding sources of advice and information at a local level. (remember to give the participants the contact details of their local HECA Officer/unit - see Appendix 2)



(H/O 7: Sources of energy advice)

Insulating the home

E

Explain that investing in insulation may not appear to be the best way to improve the home. After all it's not easy to show off your loft insulation! Having said this, insulating the home can have numerous and long lasting benefits.

OHP 13

(OHP 13: Benefits of insulation)

E

Describe the features of the house outlined on OHP 13.

OHP 13a

(OHP 13a: Benefits of insulation. contd)

E

Point out the various insulation measures and other improvements listed on OHP 13a, the annual saving from each and the payback period.

Remind participants of the initial NHER and running costs and compare these with the final outcomes in each case.

Insulating/heating grants



Ask the participants if they know of the Warm Deal and Central Heating Programme.

Describe these two grants, how they are administered, the level of each grant, what the grant can be used for and who is eligible.

Ensure that you stress how straightforward it is to access these grants as all the necessary paperwork and arrangements are dealt with by the Eaga Partnership and the installers and not by the client (hand out copies of the Warm Deal and Central Heating Programme leaflets).



(H/O 8: Insulation/Heating grants)

Answers to most of the key questions regarding the two grants can be found in the Warm Deal and Central Heating Programme leaflets or by contacting the Eaga Partnership Helpline.

Also point out and discuss the other forms of help and assistance referred to on H/O8 especially Priority Registers.



The key points are:

- **There are many forms of help and advice at both the local and national level.**
- **Many of these sources of advice are open to all members of the public.**
- **There are also numerous forms of practical assistance available to those who are vulnerable.**

In the time remaining ask the participants if they have any further questions they would like to raise before the end of the session.

Once you have answered everyone's questions remember to thank them for attending and, once again, thank anyone who has helped you organise the session.

Section 3

Training Materials

Training Materials

Health implications of cold and damp housing

The following pages contain all the required OHP's (overhead projector slides) and Handouts. The resources have been prepared so that they can be printed out directly from your computer as you view this training manual using Adobe Acrobat or Adobe Acrobat Reader. You can choose to print the required number of copies directly from your computer or print out a single set of Handouts and OHP's and photocopy onto paper (Handouts) or suitable acetates (OHP's).

Printing



- **Click the printer Icon** at the top left of the **Acrobat window** on your screen, this will open your Print dialogue box.
- **Select** the printer to use
- In the '**Print Range**' section, select '**pages from**' and in the input boxes **enter the range of pages you wish to print**. (see below).
- In the '**Copies and Adjustments**' section, **enter the number of copies** you require. **Do not** select either '**SHRINK**' or '**EXPAND**' options. **Do** select '**Auto-rotate and centre pages**'.
- **Click 'OK'**.

Page Ranges

Handouts and OHP's: print pages **39 - 66**

OHP's only: print pages **39 - 54**

Handouts only: print pages **55 - 66**

PowerPoint presentation

If the trainer has access to the necessary equipment to make a PowerPoint presentation then all the OHP's are available in this format on this CD-ROM and are accessible from the main menu when you insert the CD-ROM. The PowerPoint presentation may be used instead of printing OHP acetates.

Training equipment

Equipment list

- 1** Overhead projector (or a projector to display the PowerPoint presentation from a laptop or other PC)
- 2** Projector screen (or suitable wall space)
- 3** Flip-Chart stand
- 4** Flip-Chart pad
- 5** Flip-Chart pens
- 6** Paper and Pencils for each participant
- 7** Leaflets for each participant

The Warm Deal

The Central Heating Programme

Both published by the Eaga Partnership

- 8** Any local information, Helpline telephone numbers or leaflets that may be useful

OHPs

Load sheet

- 1** Course programme
- 2** Aims of the session
- 3** Condition of the Scottish housing stock
- 4** Fuel poverty definitions
- 5** Fuel poverty by tenure, income and the energy efficiency of the property
- 6** Hazards to health in the home
- 7** Health implications - research
- 8** Health implications of cold and damp housing
- 8a** Health implications of cold and damp housing (contd.)
- 9** Health implications of low temperatures
- 10** Dampness and mould growth in Scottish housing
- 11** Main causes of condensation dampness
- 12** Sources of energy advice, information and grants
- 13** Benefits of insulating the home
- 13a** Benefits of insulating the home (contd.)

(OHP 1)

The health implications of cold and damp housing

Course programme

- **Introduction and welcome to the course**
- **Condition of the Scottish housing stock**
- **Financial impact of poor housing and high fuel bills**
- **Health implications of cold homes, dampness and mould growth**
- **Sources of help, advice and heating/insulation grants**

Aims of the session

- **Aims of the session**

- To raise the awareness of front line health professionals to the health implications of cold, damp and mouldy housing.**

- To alert these front line health staff to the various sources of help, advice and financial assistance that are available to combat these problems.**

- **Objectives**

- To outline the condition of the housing stock in Scotland and its financial implications for householders.**

- To review the research to date linking ill health with cold, damp and mouldy housing conditions.**

- To highlight the range of initiatives available to the householder to improve the energy efficiency of their home.**

- **Learning outcomes**

- The participant will be able to identify householders vulnerable to fuel poverty.**

- The participant will be able to alert the client to sources of free and independent help and advice.**

- The participant will be able to inform the client of the range of financial assistance that is available.**

Condition of the Scottish housing stock

- **20% of the housing stock was built before 1919 and almost 60% was built before 1965**
- **14% of the housing stock does not have full central heating**
- **67% of properties have 100mm or less of loft insulation**
- **11% (229,000) of dwellings are affected by condensation dampness and 6% (131,000) are affected by rising or penetrating dampness**
- **The median NHER of dwellings in Scotland in 2002 was 6**

Fuel poverty definition

A household is in fuel poverty if, in order to maintain a satisfactory heating regime, it would be required to spend more than 10% of its income (including Housing Benefit or Income Support for Mortgage Interest) on all household fuel.

The report, Fuel Poverty in Scotland, estimated there to be 286,000 (13%) households in fuel poverty or 363,000 (17%) if Housing Benefit and Income Support for Mortgage Interest are removed.

There are 69,000 households in extreme fuel poverty (have to spend more than 20% of their income on fuel).

(OHP 5) updated 2004

Fuel poverty by tenure, income and the energy efficiency of the property

Fuel poverty and tenure

Tenure	Numbers of households in fuel poverty
Owner occupier	177,000 (62%)
Local authority	65,000 (23%)
Housing association	10,000 (3%)
Private rented	34,000 (12%)

Fuel poverty and income

Weekly income	Numbers of households in fuel poverty
< £100	86,000
£100 - £199	159,000
£200 - £299	29,000
£300 - £399	8,000

Fuel poverty and the energy efficiency of the property

NHER	Numbers of households in fuel poverty
Poor (0 - 2)	74,000 (26%)
Moderate (3 - 6)	181,000 (63%)
Good (7 - 10)	31,000 (11%)

Hazards to health in the home

- **Temperature in the home**
- **Level and type of dampness (humidity)**
- **Lack of air movement within the home (ventilation rate)**

Health implications - research

Research studies:

- **Health impact of cold homes**
- **Health impact of dampness in the home**
- **Health impact of mould and fungal growth**

Health implications of cold and damp housing

Research has demonstrated links between cold and damp housing with the following medical conditions:

- **Heart attacks**
- **Strokes**
- **Respiratory illnesses**
- **Hypothermia**
- **Domestic accidents**
- **Asthma**
- **Rhinitis**
- **Alveolitis**
- **Fever**
- **Headaches**
- **Wheezing**
- **Sore throats**
- **Aching joints**
- **Vomiting**
- **Diarrhoea**
- **Coughs**
- **Excessive tiredness**
- **Stomach problems**

Health implications of cold and damp housing (continued)

It can also:

- **Increase isolation/decrease socialisation**
- **Produce social/family difficulties in the home**
- **Increased emotional distress, depression, anxiety, lack of energy**
- **Lead to lost school and working days**

Research has also indicated that some groups in the community are particularly vulnerable to cold and damp housing conditions:

- **Elderly**
- **Young children**
- **Long-term sick**
- **Disabled people**
- **Those living in high occupancy households**

NB. Many of these are the same groups that are vulnerable to fuel poverty.

Health implications of low temperature

Hypothermia - core body temperature falls below 35 °C for a prolonged period

TEMP.

21 °C	Recommended room temperature for vulnerable groups
Below 16 °C	Reduced resistance to respiratory infection
Below 12 °C	Cardiovascular changes increase risk of myocardial infarction and stroke
Below 9 °C	Core body temperature drops and increased cardiovascular problems increase if exposure lasts for more than 2 hours
Below 5 °C	Significant risk of hypothermia

4,000 - 7,500 excess winter deaths in Scotland per annum

Dampness and mould growth in Scottish housing

- **Condensation dampness is present in 229,000 (11%) dwellings**
- **An almost similar number, 233,000, dwellings are affected by mould growth.**
- **131,000 (6%) dwellings in Scotland are affected by rising damp or penetrating dampness.**
- **Privately rented properties are most likely to report dampness and condensation.**
- **Dwellings with no central heating are more likely to report dampness and condensation.**
- **Dwellings with single-glazed metal-framed windows are more likely to report condensation dampness than dwellings with any other type.**
- **Households living in local authority/other publicly rented dwellings are more likely to report wet walls and mould on hard surfaces than households in other tenures.**
- **Single parents are more likely to report condensation and dampness problems than other household types.**
- **Households with respiratory problems are more likely to report mould on hard surfaces and wet walls than other households.**
- **Children with respiratory problems are more likely to live in dwellings with dampness and condensation than children who do not.**

Main causes of condensation dampness

Causes of condensation dampness

- **Excessive moisture production**
- **Poor heating**
- **Lack of adequate ventilation**
- **Cold surfaces, low levels of insulation**

Sources of excessive moisture production in the home

- **Cooking**
- **Bathing**
- **Drying clothes indoors**
- **Some forms of heating, especially paraffin heaters, bottled gas heaters and some gas radiant fires.**

Areas of the home where condensation dampness commonly occurs

- **Kitchen**
- **Bathroom**
- **Hallway, spare bedrooms, bay windows etc.**
- **Behind large items of furniture, especially those against external walls, built-in wardrobes.**

Sources of energy advice, information and grants

At the local level:

- **Energy Efficiency Advice Centre (EEAC)**
- **HECA lead officer/unit.**
- **Warm Deal/Central Heating Programme installers**
- **Citizens Advice Bureaux**

At a national level:

- **Energy Action Scotland (EAS)**
- **Energy Saving Trust (EST)**
- **Eaga Partnership**
- **energywatch Scotland**
- **Some fuel suppliers operate a customer help line or other similar advice service**

The benefits of insulating the home

Original house:

A house in Aberdeen, built in the 1950's, semi-detached, three bedrooms, cavity wall construction, suspended timber floors, single glazing, heated with open solid fuel fires. Two adults and two children.

- **Annual fuel bills £2,362**
- **NHER 2.1**
- **CO2 emissions 20.3 tonnes**

(OHP 13a)

The benefits of insulating the home

Measure	Cost £	Saving/yr	Payback
80mm hot water tank jacket	15		6-12 months
(DIY) 200mm loft insulation	270		2-4 years
Cavity wall insulation	475		4 years
Low energy light bulbs	50		1 year
Gas central heating + all controls + condensing boiler	2,800		1-2 years
Cumulative total	£3,610	£1,580	2 years

Final NHER - 7.2 CO₂ emissions - 6.3 Annual fuel bills - £782

80mm hot water tank jacket	15		6-12 months
(DIY) 200mm loft insulation	270		2-4 years
Cavity wall insulation	475		4 years
Low energy light bulbs	50		1 year
Electric storage heating system	2,000		2-3 years
Cumulative total	£2,810	£1,346	2-3 years

Final NHER - 4.7 CO₂ emissions - 12.6 Annual fuel bills - £1,016

Handouts

Load sheet

- 1** Aims, objectives and learning outcomes of the briefing session
- 2** Condition of the Scottish housing stock
- 3** Fuel poverty definitions and fuel poverty by tenure, income and the energy efficiency of the property
- 4** Health implications of cold and damp housing
- 5** Main causes of condensation dampness
- 6** Ways to reduce condensation dampness
- 7** Sources of energy advice, information and grants
- 8** Sources of heating and insulation grants

(H/O 1)

Aims of the session

Aims of the session

To raise the awareness of front line health professionals to the health implications of cold, damp and mouldy housing.

To alert these front line health staff to the various sources of help, advice and financial assistance that are available to combat these problems.

Objectives

To outline the condition of the housing stock in Scotland and its financial implications for householders.

To review the research to date linking ill health with cold, damp and mouldy housing conditions.

To highlight the range of initiatives available to the householder to improve the energy efficiency of their home.

Learning outcomes

The participant will be able to identify householders vulnerable to fuel poverty.

The participant will be able to alert the client to sources of free and independent help and advice.

The participant will be able to inform the client of the range of financial assistance that is available.

Health Implications of Cold and Damp Housing

(H/O 2) updated 2004

Condition of the Scottish housing

All the figures shown below are sourced from the Scottish House Condition Survey, 2002.

- There are 2,192,000 occupied dwellings in Scotland (only 4% of this total has been built since 1996).
- 19% of dwellings are detached, 21% semi-detached and 23% are terraced. 23% are tenements.
- 20% of the housing stock was built before 1919 and almost 60% were built before 1965.
- 84% of dwellings are in urban areas and 16% are in rural areas.
- 28% (612,000) dwellings are not connected to the mains gas (382,000 in urban areas and 230,000 in rural areas).
- 25% of dwellings have solid external walls and 74% have cavity walls.
- 62% are owner-occupier, 24% local authority, 6% housing association and 8% privately rented.
- 86% of households have full central heating, 68% full gas central heating.
- 96% of households have 200mm or less of loft insulation, 67% have 100mm or less.
- 13% (294,000) of dwellings have had cavity wall insulation installed.
- 8% (176,000) of dwellings have an NHER of 2 or less.
- 31% (697,000) of dwellings have an NHER of 7 or more.
- The median NHER for all tenures is 6.
- Housing association and local authority properties have the highest median NHER, 6, and privately rented have the lowest, 4. The median NHER for owner- occupier is 5.

Health Implications of Cold and Damp Housing

(H/O 2 page 2 of 2)

- Profile of households
- One third (682,000) of households contain only one member.
- 27% of households contain children.
- 16% (340,000) of households are single pensioners
- 6% (131,000) of households are single parents.
- Just over one third of households have at least one member with a long-term illness or disability.
- 17% (363,000) of households have one member with mobility problems or other physical impairment.
- 11% (240,000) of households have one member with respiratory problems and 12% (255,000) have a member with circulatory problems.
- 82% of dwellings have no adaptations, 11% have had one adaptation with the majority of these being handrails, followed by changes to the kitchen and bathroom.

(H/O 3) updated 2004

Fuel poverty definition

A household is in fuel poverty if, in order to maintain a satisfactory heating regime, it would be required to spend more than 10% of its income (including Housing Benefit or Income Support for Mortgage Interest) on all household fuel.

(NB The definition above is from the report Fuel Poverty in Scotland, 2004, it replaces the two definitions that were used at the time of the first version of this resource.)

The report, Fuel Poverty in Scotland, estimated there to be 286,000 (13%) households in fuel poverty or 363,000 (17%) if Housing Benefit and Income Support for Mortgage Interest are removed.

There are 69,000 households in extreme fuel poverty (have to spend more than 20% of their income on fuel).

Fuel poverty by tenure, income and the energy efficiency of the property

Fuel poverty by tenure

Tenure	Numbers of households in fuel poverty
Owner occupier	177,000 (62%)
Local authority	65,000 (23%)
Housing association	10,000 (3%)
Private rented	34,000 (12%)

Health Implications of Cold And Damp Housing

(H/O 3 page 2 of 2)

Fuel poverty and income

Weekly income	Numbers of households in fuel poverty
< £100	86,000
£100 - £199	159,000
£200 - £299	29,000
£300 - £399	8,000

Fuel poverty and the energy efficiency of the property

Fuel poverty and the energy efficiency of the property

NHER	Numbers of households in fuel poverty
Poor (0 - 2)	74,000 (26%)
Moderate (3 - 6)	181,000 (63%)
Good (7 - 10)	31,000 (11%)

Health Implications of Cold and Damp Housing

(H/O 4)

Health implications of cold and damp housing

Research has demonstrated links between cold and damp housing with the following medical conditions:

- Heart attacks
- Strokes
- Respiratory illnesses
- Hypothermia
- Domestic accidents
- Asthma
- Rhinitis
- Alveolitis
- Fever
- Headaches
- Wheezing
- Sore throats
- Aching joints
- Vomiting
- Diarrhoea
- Coughs
- Excessive tiredness
- Stomach problems

It can also:

- Increase isolation/decrease socialisation
- Produce social/family difficulties in the home
- Increased emotional distress, depression, anxiety, lack of energy
- Lead to lost school and working days

Research has also indicated that some groups in the community are particularly vulnerable to cold and damp housing conditions:

- Elderly
- Young children
- Long-term sick
- Disabled people
- Those living in high occupancy households

NB. Many of these are the same groups that are vulnerable to fuel poverty.

(H/O 5)

Causes of condensation dampness

Causes of condensation dampness

- Excessive moisture production
- Poor heating
- Lack of adequate ventilation
- Cold surfaces, low levels of insulation

Sources of excessive moisture production in the home

- Cooking
- Bathing
- Drying clothes indoors
- Some forms of heating, especially paraffin heaters, bottled gas heaters and some gas radiant fires.

Areas of the home where condensation dampness commonly occurs

- Kitchen
- Bathroom
- Hallway, spare bedrooms, bay windows etc.
- Behind large items of furniture, especially those against external walls, built-in wardrobes

Health Implications of Cold and Damp Housing

(H/O 6)

Ways to reduce condensation dampness

Reduce excessive amounts of moisture production

When cooking, especially on the hob part of the cooker, put lids on pans and close the door from the kitchen to other parts of the house. Keeping the door closed also applies to the bathroom when bathing or showering. If possible try not to dry clothes indoors and do not use paraffin heaters or bottled gas heaters.

Improve heating

If the air in the home is warmer it can hold more water vapour so try to keep all parts of the home to a reasonable background temperature, even if the room is not used on a frequent basis.

Increase ventilation

Although householders should be encouraged to keep doors closed from some rooms to other parts of the home it is important to ventilate these areas of high moisture production. The simplest way to do this is by opening a window. If, for some reason, this is not possible, then a mechanical or automatic ventilation system can be installed. For example, trickle vents are usually fitted into the frames of double glazed units of kitchen windows.

Insulate cold surfaces

For condensation to occur there must be cold surfaces on which the water droplets form. These areas can be warmed up by installing various types of insulation.

NB It is important that the householder is encouraged to adopt all these methods if possible and not to rely on only one. Clearly, it is also vitally important that they tackle the excessive moisture production, as this is the source of the problem in the first place. This may require them to change the way they do some things around the home.

Health Implications of Cold and Damp Housing

(H/O 7 page 1 of 2)

Sources of energy advice, information and grants

At the local level:

Energy Efficiency Advice Centre (EEAC) tel. 0800 512 012

There is a network of EEAC's throughout Scotland, they provide free, independent information and advice on all aspects of energy in the home. They can also provide information regarding insulation and heating grants.

Citizens Advice Bureau (CAB) check local office numbers.

CABx provide help and information with paying fuel bills, fuel debt, etc.

Warm Deal Installers - local contact details are available from the Eaga Partnership Scotland Office (0131 777 2500).

Locally based Warm Deal Installers are responsible for installing insulation materials paid for by the Warm Deal grant and new central heating systems under the Central Heating programme.

HECA lead officer/unit

(insert your local HECA officer contact details here)

At a national level:

Energy Action Scotland (EAS) tel. 0141 226 3064

EAS was established in 1983 to raise public and political awareness and action regarding the scale of fuel poverty in Scotland. EAS can provide information and advice on many aspects of energy in the home.

Energy Saving Trust (EST) tel. 0131 244 7683

EST funds many energy efficiency initiatives. EST also funds and co-ordinates the network of EEAC's throughout Scotland. EST operates an

Health Implications of Cold and Damp Housing

(H/O 7 page 2 of 2)

interactive web site for identifying appropriate grants and other assistance (www.saveenergy.co.uk)

Eaga Partnership tel. 0131 777 2501

Eaga Partnership Scotland is responsible for the administration and monitoring of the Warm Deal scheme and the Central Heating Programme. Eaga can provide free leaflets on both these grants (in a range of different languages) and give contact details regarding local Warm Deal and Central Heating Programme installers.

energywatch Scotland tel. 0141 204 7255/0800 88 77 77.

energywatch Scotland was launched in 2000 and was the result of the combination of the Gas Consumers' Council and the Electricity Consumers' Council. energywatch provides a wide range of information on fuel prices, switching fuel supplier and assisting with complaints etc..

Office of Gas and Electricity Markets (Ofgem) tel. 020 7901 7000

Ofgem, the regulatory body for gas and electricity, operates a web site that can provide advice on switching fuel suppliers and how to find the best deal for your circumstances, www.ofgem.gov.uk and look under customer information.

Some fuel suppliers operate a customer help line or other similar advice service.

Priority Service Registers

All fuel suppliers must operate a Priority Service Register. Those customers eligible to join the register include those of pensionable age or the disabled or the chronically sick or visually impaired or deaf or hearing impaired. Services to those on the register include a free annual gas safety check, regular meter readings, a unique password scheme, special controls and adapters plus several other benefits. Contact energywatch Scotland for details (see above).

Health Implications of Cold and Damp Housing

(H/O 8 page 1 of 2) updated 2004

Sources of heating and insulation grants

Warm Deal Programme

Launched in July 1999 this Scottish Executive - funded programme provides grants of up to £500 for a range of insulation measures and energy advice to all eligible households regardless of the type of housing they occupy. Contact Eaga Partnership tel. 0800 072 0150 for further details.

Central Heating Programme

This new scheme was launched in April 2001 by the Scottish Executive. Under the initiative a grant averaging £2,500 for central heating and insulation will be provided to certain householders over the age of 60 and who do not already have a working central heating system. Contact Eaga Partnership tel. 0800 316 1653

In relation to both the above grants tenants of a local authority or housing association will be contacted by their landlord.

Fuel suppliers

Every fuel supplier (e.g. Scottish Power, Scottish Gas, Scottish and Southern, etc.) has an obligation to promote energy efficiency and often they will have schemes that provide grants for insulation and other measures. The level and range of these grants vary over time, but usually a householder will only be eligible for grants offered by their own fuel supplier (s).

Local authority grants and assistance

Numerous local authorities provide assistance to householders in their area to improve the energy efficiency of their home. For further information contact the local HECA Officer within the local authority.

(H/O 8 page 2 of 2)

Heating related benefits

The Winter Fuel Payment and the Cold Weather Payment are both national programmes administered by the government. The Winter Fuel Payment provides £200 to all households where there is at least one person over 60. Those households where at least one person is over 70 will receive £300 and where one person is over 80 they will receive £400 (from November 2004). This is usually paid automatically in November/early December every year. The Cold Weather Payment is paid to anyone receiving Income Support or income-based Job Seekers Allowance or who is aged 60 plus or has a child aged under 5 or someone who is long-term sick or disabled. Payments are made automatically following periods when the average temperature is recorded, or forecast to be, 0°C or below for seven consecutive days. Currently the payment is £8.50 per 7 day cold period.



Section 4

Appendices

Appendix 1

Draft flyer/advert promoting the training session

WINTER IS COMING !

Another 4,000 - 7,500 extra deaths in Scotland

The health implications of cold and damp housing and what can be done to reduce these problems

This briefing session will be of particular interest to all those in the primary health care team including:

- health visitors
- district nurses
- practice nurses
- occupational therapists
- community staff nurses
- health assistants
- other front line health professionals

The two hour briefing session will look at:

- The condition of the housing stock in Scotland
- High fuel bills and the financial impact of cold and hard to heat homes
- The health implications of cold and damp housing - especially for young children, the long term sick, anyone with respiratory and coronary problems, the disabled and the elderly
- Practical information explaining how your clients can access further information and advice on energy matters within the home and how they can apply for financial assistance for such things as insulation and even a new central heating system.

This session will be held on:

At:

In:

Contact:

By:

Tel:

Appendix 2

HECA officer contact details

Appendix 2

HECA officer contact details

The officers on the list below are very useful points of contact at a local level, they are well placed to direct enquirers on energy efficiency to the relevant sources of help and advice.

Aberdeen

Janice Lyon
Aberdeen City Council
Housing Department
St Nicholas House
Upperkirkgate
Aberdeen
AB10 1AX
Tel. 01224 523 512

Aberdeenshire

David Cooper
Aberdeenshire Council
Planning & Environmental
Services
Gordon House
Blackhall Road
Inverurie
AB51 3WA
Tel. 01467 620 981

Angus

John Morrow
Angus Council
Housing Department
County Buildings
13 Market Street
Forfar
Angus
Tel. 01307 473 983

Argyll & Bute

Kenny McAdam
Argyll & Bute Council
1 Union Street
Rothesay
Isle of Bute
Tel. 01700 501 300

Clackmannanshire

Campbell Hall
Clackmannanshire Council
Limetree House
Alloa
FK10 1EX
Tel. 01259 452 385

Appendix 2

Dumfries & Galloway

Scott Kerr
Dumfries & Galloway Council
Carmont House
Housing Department HQ
Crichton Estate
Bankend Road
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DG1 4ZJ
Tel. 01387 245 126

Dundee

Anne Clark
Dundee City Council
Housing Department
Improvement & Maintenance
Unit
1 Shore Terrace
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Tel. 01382 434 872

East Ayrshire

George Malone
East Ayrshire Energy Advice
Project
Council Offices
Lugar
Cumnock
KA18 3QJ
Tel. 01563 555 224

East Dunbartonshire

Gerry Murphy
East Dunbartonshire Council
Roads & Infrastructure
1 Grange Avenue
Milgavie
G62 8AQ
Tel. 0141 578 8779

East Lothian

Mark McArthur
East Lothian Council
Social Work & Housing
Department
9-11 Lodge Street
Haddington
EH41 3DX
Tel. 01620 827 862

Edinburgh

Douglas Esslemont
City of Edinburgh Council
Housing Department
23 Waterloo Place
Edinburgh
EH1 3BH
Tel. 0131 529 7936

Appendix 2

Falkirk

Frank Cowie
Falkirk Council
Development Services
Abbotsford House
David's Loan
Falkirk
FK2 7YZ
Tel. 01324 504 862

Fife

Osato Osaghae
Fife Council
Housing energy Management
Services
3 Falkland Place
Glenrothes
Fife
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Tel. 01592 413 938

Glasgow

Maureen Mulvey
Glasgow City Council
Housing Services
Wheatley House
25 Cochrane Street
Glasgow
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Tel. 0141 287 4376

Highland

Mary Souter
Highland Council
Housing Service
Glenurquhart Road
Inverness
IV3 5NX
Tel. 01463 702 862

Inverclyde

Graham McLennan
Inverclyde Council
Housing Services/Policy & Grants
Municipal Buildings
Wallace Place
Greenock
PA15 1LY
Tel. 01475 712 541

Midlothian

Ray Emmerton
Midlothian Council
Commercial Services
Dundas Buildings
62A Polton Street
Bonnyrigg
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Tel. 0131 561 5310

Appendix 2

Moray

John McDonald
Moray Council
Planning & Development
Section, DLO
Unit 6
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North Ayrshire

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North Ayrshire Council
Technical Services
Perceton House
Irvine
KA11 2AL
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North Lanarkshire

Jim Anderson
North Lanarkshire Energy Unit
Fleming House (7th Floor)
2 Tryst Road
Cumbernauld
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Tel. 01236 616 361

Orkney Isles

John Wells
Keep Orkney Warm
Orkney Islands Council
Grainshore Training Centre
Garrison Road
Hatston
Kirkwall
KW15 1GN
Tel. 01856 870 536

Perth & Kinross

Alastair Doig
Perth & Kinross Council
Housing Services
Pullar House
35 Kinnoull Street
Perth
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Renfrewshire

John Ritchie
Renfrewshire Council
Energy Advice Unit
North Building
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Tel. 0141 840 3704/5

Appendix 2

Scottish Borders

Bob Renton
Scottish Borders Council
Economic Development &
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Tel. 01835 825 069

Shetland Isles

John Simpson
Shetland Islands
Environment & Transportation
Department
Grantfield
Lerwick
Shetland
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South Ayrshire

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South Ayrshire Council
County Buildings
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Ayr
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Tel. 01292 616 192

South Lanarkshire

Pat Newman
South Lanarkshire Council
Energy Unit
Atholl House
Housing & Technical Resources
Churchill Avenue
East Kilbride
G74 1LU
Tel. 01355 806 824

Stirling

Ron Mould
Stirling Council
Housing & Environmental
Services
Viewforth
Stirling
FK8 2ET
Tel. 01786 442 931

West Dunbartonshire

Tim Holmes
West Dunbartonshire Council
Councill Offices
Garshake Road
Dumbarton
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Appendix 2

West Lothian

Stephen Cunningham
West Lothian Council
Room 8, 2nd Floor
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Owen Square
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Tel. 01506 773 744

Western Isles

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Comhairle Nan Eilean Siar
Housing Department
Sandwick Road
Stornoway
Isle of Lewis
HS1 2BW
Tel. 01851 709 361

Energy Efficiency Advice Centres (EEAC) contact details

There is a network of EEAC's across Scotland. To get in touch with your local EEAC you should telephone **0800 512 012**. This will direct your call to the EEAC for your area.

Appendix 3

Summary of research studies

Appendix 3 is an extract from Fuel poverty and ill health - a review, by William Baker, Centre for Sustainable Energy

Health Project

Project/Partners	Time frame/Funding	Aims and Objectives	Core activities	Evaluation
<p>HECA Action for improved health and housing</p> <p>Telford & Wrekin Council Shropshire Health Authority</p> <p>Telford EEAC</p>	<p>Started 1997</p> <p>£50,000 - HECA Action</p> <p>£8,200 - joint finance</p> <p>£5,300 - Council's Home Repairs Assistance Grants</p>	<p>To work with local health professionals and GPs to increase awareness of energy efficiency and associated health benefits by</p> <ul style="list-style-type: none"> • Providing training for GPs and health professionals about energy efficiency • Developing an energy efficiency information pack for health professionals • Enabling health professionals to encourage patients to be energy efficient at home, including help with referrals for installation of measures 	<ul style="list-style-type: none"> • GPs not included in training - primary care teams considered better placed to identify patients in need of improved energy efficiency • Energy/health information pack for GPs and health care workers developed to help assess risk from cold homes. These were widely disseminated in health outlets • A simple referral form was developed by Council and piloted in 2 primary health teams • Model exhibition on health and energy efficiency toured GP surgeries 	<ul style="list-style-type: none"> • No monitoring of impact on number of visits to GP surgeries • Difficulty in getting GP involvement • Involvement of Community Health Trust might have helped ensure training was included in health workers' training schedules

Health Project

Project/Partners	Time frame/Funding	Aims and Objectives	Core activities	Evaluation
Energy Action for Health Doncaster MBC Doncaster NHS Healthcare Trust	Started 1997 £172,000 from HECA Action (for other work as well)	To improve the health of local people through provision of energy advice, improved awareness and increased referrals for grant aid by <ul style="list-style-type: none"> • Enabling health visitors to identify households in need of grant aid (generally the fuel poor) • Developing an existing energy efficiency data base of households to identify priority 'fuel poor' groups • Holding energy advice surgeries for members of the public in GP surgeries 	<ul style="list-style-type: none"> • A manual was developed for health visitors attending training and a separate manual for receptionists at GP surgeries • Publicity materials were produced, including thermometers promoting the scheme • Energy advice surgeries held in 40 GP practices • Patients referred for either HEES grant or local authority HRA grant • HEES referrals increased by 15% as result of scheme 	<ul style="list-style-type: none"> • Training well received by health visitors, although shortened to ensure not too burdensome • Important to provide refresher training • No monitoring of impact on health, although research planned to correlate energy rating data with hospital admissions • Difficulty of obtaining short term results on health gain • Ongoing consultation and tailoring of scheme essential • Feedback to health professionals helps ensure ongoing involvement

Health Project

Project/Partners	Time frame/Funding	Aims and Objectives	Core activities	Evaluation
<p>Energetic Homes</p> <p>Leicestershire Health Authority</p> <p>Midlands Asthma & Allergies Research Association</p> <p>Hospitals</p> <p>De Montfort University</p>	<p>Started 1997</p> <p>£32,000 HECA Action</p> <p>£300,000 ERDF Article X for energy efficiency grants in 14 wards (half of City)</p> <p>Funding fully subscribed by 1999 team ceased taking referrals after this date</p>	<p>To reduce the incidence of asthma by improving the energy efficiency and ventilation of asthmatics' homes by:</p> <ul style="list-style-type: none"> • Conducting a methodologically robust study on the links between housing and asthma • Offering grant aid to asthmatic households who have been referred by their doctor 	<ul style="list-style-type: none"> • Extensive promotion of scheme by Health Authority to GPs in 14 wards • GPs sent pro-forma to asthmatic patients • 'Open days' in renewal offices on asthma and preventative measures • Allergen avoidance advice given to people receiving grant aid • Patients contribute 50% towards cost of works, or 25% if on Benefits • Package includes standard insulation work plus heat recovery fans 	<ul style="list-style-type: none"> • Response from GPs varied considerably • Original research project abandoned because HECA Action timetable did not fit in with timescale of BMA Ethics Committee. This reduced credibility of scheme with some GPs • Some GPs did not consider this approach 'primary care' and charged for referrals • GPs in hospital clinics were more committed than GPs in surgeries • Client contribution represented a considerable barrier to take up

Health Project

Project/Partners	Time frame/Funding	Aims and Objectives	Core activities	Evaluation
SNUG and healthy homes Birmingham CC Family Health Services Birmingham Health Authority Home Improvement Agencies	Started 1995 £150,000 for SNUG and £150,000 for 'Healthy homes' (from Health Authority)	Each project aims to improve the health of older people in the Ladywood (SNUG) and Hodge Hill (Healthy homes) areas of Birmingham by: <ul style="list-style-type: none"> • Improving the homes of frail older people at risk of hospitalisation • Improving links between the local authority and GPs • Involving Home Improvement Agencies in technical support • Providing welfare rights advice to maximise benefit take up 	<ul style="list-style-type: none"> • Eligible households on low incomes are referred by their GP or paramedic for a grant of up to £1500 in Ladywood or £2,500 in Hodge Hill to carry out works that will reduce likelihood of hospitalisation, or an amelioration of their condition in the case of chronic illness • GPs used a standard form to help identify eligible households, where works could be prescribed as an alternative to medicine or treatment • Referrals are recorded by the Council and passed to a Care & Repair Agency to inspect the home and produce a work specification • The Agency also provides welfare rights advice at the time of inspection • GPs carry out a clinical review several months after the home improvements undertaken to assess impact on patients' health • Marketing involved GP seminars, including Continued Professional Development credits, canvassing of GPs by FHSA practice support teams and publicity in the medical press and radio 	<ul style="list-style-type: none"> • After slow start, a high proportion of GPs became involved • Poor response from health visitors • Better response from GPs in Ladywood than Hodge Hill possibly because more single practitioners in Hodge Hill. Problem was overcome by identifying cases and then asking for GP approval • Some monitoring of health impact

Health Research

Study	Issue	Study Method	Main Results	Conclusion
Platt, S et al (1989)	To examine the relation between damp and mould growth and symptomatic ill health	<ul style="list-style-type: none"> • Cross-sectional study of random sample of households containing children • Separate and independent assessments of housing conditions (by surveyor) and health (structured interviews) • Adult households (94% women) and 1169 children in 597 households • Public housing in Glasgow, Edinburgh & London 	<ul style="list-style-type: none"> • Damp found in 31% of dwellings and mould growth in 46% • Adult respondents living in damp and mouldy dwellings were likely to report more symptoms overall, including nausea, breathlessness, backache, fainting and bad nerves, than respondents in dry dwellings • Children in damp dwellings had a greater prevalence of vomiting, wheeze, irritability, fever and poor appetite under damp conditions than those in non-damp dwellings • Children in mouldy dwellings had a greater prevalence of respiratory symptoms (wheeze, sore throat, runny nose), headaches and fever than those in non-mouldy dwellings • The mean number of symptoms was higher in damp and mouldy houses and positively associated with increasing severity of dampness mould (dose response relation) • All differences persisted after controlling for household income, cigarette smoking, unemployment and overcrowding 	Damp and mouldy living conditions have an adverse effect on symptomatic health, particularly among children

Health Research

Study	Issue	Study Method	Main Results	Conclusion
Howieson et al (2001)	To evaluate strategies for reducing indoor water vapour pressures, allergen reservoirs and dust mite activity within energy efficient and inefficient dwellings and measure any effects on the respiratory health of asthmatics	<ul style="list-style-type: none"> • Intervention study using a triple blind, placebo controlled protocol • 3 phases - only 1st phase largely complete • Phase I investigated the impact of allergen avoidance techniques plus Mechanical Heat Recovery Ventilation (MHRV) to reduce water vapour pressures and inhibit re-colonisation (of dust mites) • 68 asthmatics in 45 dwellings in N. Lanarkshire over 2 year period • Cohort split into 2 active groups and 1 control group 	<ul style="list-style-type: none"> • Initial findings suggest some improvements in lung function, although findings still have to be correlated with any changes in drug use • This suggests that allergen avoidance measures plus MHRV can reduce allergen reservoirs which in turn may have a significant effect on asthmatics' lung function • Full report available in summer 2001 • Phase I will feed into Phase II of the study this will aim to identify and compare changes in allergen reservoirs, hygrothermal conditions and respiratory function of an active and control cohort of around 40 asthmatics per group 	The research aims to establish whether ventilation and allergen avoidance measures should be made integral to energy efficiency measures to ensure respiratory health of asthmatics is improved

Health Research

Study	Issue	Study Method	Main Results	Conclusion
Eurowinter Group (1997)	To assess whether increases in mortality per 1°C fall in temperature differ in various European regions and to relate any differences to usual winter climate and measures to protect against cold	<ul style="list-style-type: none"> • Percentage increases in deaths per day per 1°C fall in temperature below 18°C (indices of cold-related mortality) were estimated by linear modelling • Through use of surveys, protective factors were adjusted by regression to 7°C outdoor temperature • Cause-specific data gathered from 1998-1992 were analysed by multiple regression for men and women aged 50-59 and 65-74 in N. Finland, S. Finland, Baden-Wuttemberg, the Netherlands, London and N. Italy (24 groups) and for 1992 data in Athens and Palermo 	<ul style="list-style-type: none"> • The percentage increases in all-cause mortality per 1°C fall in temperature were greater in warmer regions than colder • At an outdoor temperature of 7°C, the mean living-room temperature was 19.2°C in Athens and 21.7°C in S. Finland. 13% and 72% of people in these regions, respectively, wore hats when outdoors at 7°C • Multiple regression analyses showed that high indices of cold-related mortality (all causes and respiratory) were associated with high mean winter temperatures, low living-room temperatures, limited bedroom heating, low proportions of people wearing hats, gloves and coats and inactivity and shivering when outdoors at 7°C • Data was standardised for sex and age in the 6 regions with full data 	Mortality increased to a greater extent with a given fall of temperature in regions with warm winters, in populations with cooler homes, and among people who wore fewer clothes and were less active indoors

Health Research

Study	Issue	Study Method	Main Results	Conclusion
Collins, K (2000)	To review evidence on the respective contributions of indoor and outdoor cold to seasonal respiratory and cardiovascular disease and mortality	<ul style="list-style-type: none"> • Review of recent laboratory and epidemiological studies into: • relationship between ambient temperatures, cold-related respiratory illnesses, cold housing and respiratory health • the extent to which respiratory disease is a component of excess winter mortality 	<ul style="list-style-type: none"> • Though of different intensity, outdoor and indoor cold temperatures both have the potential for promoting respiratory illnesses in the presence of respiratory pathogens • Severely cold outdoor temperatures may directly affect the natural defences of the respiratory system • Cold dwellings can have indirect effects through conditioning the humidity of the indoor environment and infectivity of micro-organisms • Dust mites are commonly associated with warm, damp homes, whereas mould is associated with cold and damp • Whilst many UK homes are damp and/or cold, it is methodologically difficult to disentangle the different importance of mould and dust mites in causing asthma and to show a definitive link between home temperatures and specific health outcomes • It is difficult to interpret the causes of excess winter mortality due to the blurring of the distinction between respiratory and cardiovascular deaths • Recent epidemiological studies show direct associations between a reduction in mortality indices and increased protective measures against the cold 	

Health Research

Study	Issue	Study Method	Main Results	Conclusion
Goodwin, J (2000)	To review the relationship between cold stress and health of older people, with particular reference to circulatory disease	<ul style="list-style-type: none"> • Review of relative contribution of indoor and outdoor temperatures and physical activity in circulatory illness among older people • Review of causes of excess winter mortality 	<ul style="list-style-type: none"> • Hypothermia represents a minor cause of excess winter mortality • Respiratory disease accounts for half of excess cold-related deaths with ischaemic heart disease and cerebrovascular disease accounting for the remainder • Inadequately protected exposure to outside cold contributes to winter mortality • However, indoor temperatures play an important role in mitigating the effects of winter cold on older people • Cold stress may explain the link between the relative contribution of outside and indoor temperatures • The shock of cold mornings can cause excessive cardiovascular strain, particularly if leaving a cold dwelling. The effect is less if leaving a warm dwelling • Older people experience increased blood pressure and heart rate in winter compared to summer at precisely the times of day (early morning and early evening) that correspond to the times of greatest risk of the acute onset of thrombotic disease • Physical activity and fitness generally have beneficial health outcomes however the above suggests that older people should avoid vigorous activity at certain times of the day, particularly in winter, and they should moderate outdoor excursions into the cold 	

Health Research

Study	Issue	Study Method	Main Results	Conclusion
Somerville, M et al (2000)	To evaluate the use of NHS money to improve health by improving housing conditions	<ul style="list-style-type: none"> • Pilot study assessing health outcomes before and after housing conditions were improved • Intervention involved installation of central heating (funded by Health Authority) in the homes of asthmatic children • 72 children with previously diagnosed asthma living in 59 damp houses in Cornwall 	<ul style="list-style-type: none"> • Energy efficiency improved by a mean of 2.1 on the NHER scale • Initially 92% of children's bedrooms were unheated and 61% were damp. Following improvements, the proportions were 14% and 21% respectively • All respiratory symptoms were significantly reduced after intervention; the greatest reduction was seen in nocturnal cough from a median score of 3 (most nights) to 1 (on one or several nights) in the previous month • School age children lost significantly less time from school for asthma in the previous 3 months but not for other reasons • Lack of a control group meant that effects of age, season and biased reporting could not be eliminated 	Housing improvements appear to have a positive impact on children's health, particularly respiratory problems. Further work is under way to substantiate these findings

Health Research

Study	Issue	Study Method	Main Results	Conclusion
Khanom, L (2000)	To assess the health impact of energy efficiency improvements on households suffering fuel poverty in public sector houses in Tower Hamlets (initial results from ongoing study)	<ul style="list-style-type: none"> • Structured questionnaires and 2 in-depth interviews on people's perceptions and understanding of relationship between home heating practices, consumption of fuel and self-reported ill- health in the household • Random sample of public sector Housing Benefit recipients within Tower Hamlets • 89 respondents (out of a sample of 188) in first stage. • 24 respondents in 1st in-depth interview (all households in fuel poverty within sample). • Weaknesses in data include small sample, reliance on self-reporting of symptoms, lack of control group and only taken from 1st stage of research. 	<ul style="list-style-type: none"> • Most respondents had difficulty paying their fuel bills. Most paid their bills quarterly leading to financial difficulties at particular times of the year. • 23 (of 89) households reported wallpaper peeling off the walls which they had difficulty affording to re-decorate. • 11 of these households reported mould growth causing regular damage to clothes and furniture. • 67% of sample (89) reported depression; 63%, regular headaches; 57%, coughing; 47%, aches and pains. • 68% reported their children suffering fever; 51% of children, sore throat; 40%, wheezing; 31% skin irritability; 18%, vomiting. • Most of these respondents felt their children's health problems were related to lack of warmth in the home. • Adults reporting depression stated this was due to worrying about other severe illnesses such as diabetes, asthma and long-term illnesses or problems at home and with their children. • Depression was strongly correlated with poor housing conditions; many also claimed this was due to 'helplessness' at not being able to do anything to improve their living conditions. • Vomiting in children was strongly correlated with mould on walls in the home. 	Initial results suggest a strong relationship between poor housing conditions and certain health conditions, particularly with depression and with vomiting in children; depression is related to worries over fuel bills and a feeling of helplessness in not being able to improve their housing conditions.

Health Research

Study	Issue	Study Method	Main Results	Conclusion
Green et al (2000)	To establish the strength and significance of any relationship between improved energy efficiency in 4 tower blocks in Sheffield and health status of the tower blocks' residents	<ul style="list-style-type: none"> • Cross-sectional survey of 135 residents of improved blocks and matched sample of 140 residents of 'unimproved' blocks to assess the impact of energy efficiency improvements on damp and mouldy conditions and the warmth, comfort and health status of residents • Most potential compounding factors were recognised and accounted for, apart from higher proportion of unemployed people and larger families in unimproved blocks • Improvements included replacement of underfloor electric heating with gas-fired district heating, improved thermal insulation (each tower block was encased in mineral wool insulation with an outer skin of rainscreen cladding) and improved ventilation measures • Average expenditure: £29,000 per unit 	<p>The following significant differences were found between improved and non-improved blocks:</p> <ul style="list-style-type: none"> • Room temperatures in improved blocks were substantially higher, whilst fuel consumption levels in improved and unimproved blocks were roughly the same • Residents responded to energy efficiency improvements by increasing warmth and comfort rather than reducing consumption. • Damp and mould in improved blocks was virtually eliminated, compared to 40% of unimproved blocks suffering damp or mould in one or more rooms • Residents of improved blocks had higher mean scores on all 8 dimensions of SF-36, indicating better health, than residents of unimproved blocks, with the exception of 'general health perceptions' (which were roughly the same). • The mean scores for residents of improved blocks on SF-36 were also higher than the City average, despite the fact that average incomes were well below the City average • With respect to specific health dimensions within SF-36, there were significant differences between the mean scores for physical role at 1% level and between energy/vitality and emotional role at 5% level 	<p>Capital investment in 4 Sheffield tower blocks had a dramatic impact on the lives of their residents. Housing investment can break the vicious circle of low incomes, poor housing and poor health. However, results have to be qualified because of difficulties in obtaining a good match between the two groups of residents of forthcoming longitudinal study of housing investment and health in Liverpool</p>

Health Research

Study	Issue	Study Method	Main Results	Conclusion
<p>Energy Action Scotland (1999)</p>	<p>To examine whether there is an identifiable link between poor housing, fuel poverty and health status and to estimate the likely scale of additional costs to the NHS</p>	<ul style="list-style-type: none"> • Two stage study based on 2 GP surgeries in Glasgow: 1 serving a large public sector housing estate; the other a more mixed and varied constituency • 1st stage involved self completion survey by 440 patients awaiting consultation (questionnaires were delivered after a period of cold weather) • 2nd stage involved detailed questionnaires of 95 households (199 people) reporting symptoms known to be associated with damp or cold living conditions; 72 of these also had energy audits • Sample was not representative, due to self-selection nature. For example, patients were of poorer health than population of Scotland as a whole and were twice as likely to present themselves to GPs 	<p>Phase I (444 respondents)</p> <ul style="list-style-type: none"> • 40% of respondents reporting problems with condensation damp, mould and draughts went to their doctor 10 times a year (average for all respondents was 6.1 and for Scotland, 3.1) • 72% of those who had central heating (and used it) had either not visited their doctor or had been less than 3 times during the previous year • 27% of those without central heating had been to their doctor 10 or more times in the previous year. This compared to a figure of 9% for those with central heating • Cost to NHS of extra presentations to GPs resulting from dampness estimated at £263 per person per annum <p>Phase II (95 households, 199 people, 72 energy audits)</p> <p style="text-align: center;">NB Continued on following page</p>	<p>Despite the small sample size, poor health status in children appears to be convincingly associated with dampness</p> <p>The rate of asthma was above the national average, although incidence was much lower in houses that were cold and draughty</p> <p>Investment in housing renewal may be cost effective, given the recurring additional costs to the NHS of poor housing</p>

Health Research (Continued)

Study	Issue	Study Method	Main Results	Conclusion
			<p>Phase II (95 households, 199 people, 72 energy audits)</p> <ul style="list-style-type: none">• 60% reported that a member of their household had visited their GP on 10+ occasions over previous year• 37% of households included someone who had been admitted to hospital over previous year• 26% of households included someone with asthma and 39% reported family members with a long-term illness• 57% reported one or more health problems associated with dampness• The level of asthma was 1.6 times higher in households that reported dampness, than in households without dampness. For children, 19% were reported as having asthma as were 8% of adults (national figures, 14% and 4% respectively)• Respondents living in dwellings reported as being cold and draughty, rather than damp, were significantly less likely to report a member of the household with asthma• Children who were absent from school for more than a week in the previous year lived in dwellings which reported twice as much dampness problems as those where children had been off for one week or less	

Health Research

Study	Issue	Study Method	Main Results	Conclusion
<p>Critchley R et al (2000)</p>	<p>To demonstrate the sort of modifications suitable for existing social housing to improve the health of asthmatics</p>	<ul style="list-style-type: none"> • Before and after study of the impact of heating, ventilation and insulation modifications on health, energy use, comfort and dust mite rates • 7 Council homes occupied by at least one asthmatic • Level of funding prevented more representative sample size 	<ul style="list-style-type: none"> • Perceived health, as measured by SF-36, improved by 12%; effectiveness of lungs of 4 asthmatics improved by mean of 20%; medication or symptoms reduced for 3 out of the 4 asthmatics where this was recorded • Dust mite rates reduced to insignificant levels, probably due to relative humidity being reduced to below 50% • NHER ratings increased on average by 2.1 • Poor standard of installation of ventilation systems • Successful installation of heating and ventilation improvements requires a 6 stage process including tailored surveys of measures required, energy survey (eg NHER), consultation with occupants over suitable measures, detailed specifications of measures and close supervision of installation • SF-36 was appropriate for assessing adult health but not child 	<p>Improved housing conditions can improve health, particularly for asthma sufferers providing measures are properly planned and executed</p> <p>New HEES may raise moisture levels, leading to increased dust mite rates and risk of asthma, since ventilation is not included in the package</p>

Health Research

Study	Issue	Study Method	Main Results	Conclusion
<p>Ambrose, P (2000)</p>	<p>To assess and if possible measure the improvements in health of a sample of the population who have been re-housed, or had their existing accommodation improved, as part of SRB (Single Regeneration Budget)</p>	<ul style="list-style-type: none"> • Before (1996) and after (2000) survey of random sample of 525 households to assess self-reported health status and perspectives on related issues eg access to health care, fear of crime, satisfaction with housing and other services • Comparator household survey conducted in area of improved housing in Paddington in 1996 • Survey of local service providers in fields of housing, health, education, crime etc to ascertain views on the relationship between health standards and housing conditions and broader effects of SRB intervention 	<ul style="list-style-type: none"> • The second sample surveyed in 2000 was only half the size of the original sample however the 2nd sample showed very similar demographic, benefit dependence and other characteristics to the 1st. Health improvements were therefore taken as 'real' • The incidence of illness episodes was higher, although fewer of them resulted in a visit to the GP or medication • The average length of illness episodes was much shorter, and very few people said they felt ill all the time • The rate of illness days/person/day fell from 0.37 to 0.05, whilst the pattern of main symptoms remained the same • There was a high level of satisfaction with the new housing and estates generally • Damp and cold conditions were much less prevalent but still affected around 1/3 of the population • The research also contextualises the results within the broader picture of health inequalities within Stepney and London and suggests these limit the potential benefit of area-based initiatives such as SRB 	<p>The SRB housing renewal programme has contributed to a considerable improvement in the health of residents within the SRB area. However health gain is only confined to a very limited area unless more fundamental changes are made to benefit and fiscal regimes</p>

Appendix 4

Reading list

Reading list

Condition of the Scottish housing stock

Scottish House Condition Survey, Communities Scotland 2004

Fuel poverty

The UK Fuel Poverty Strategy, Nov. 2001, DTI (Chapters 1 and 5) (see <http://www.dti.gov.uk/energy/fuelpoverty/index.htm/>)

Fuel Poverty in the UK, 2002, NEA and Energy Action Scotland

Fuel Poverty Scotland, 2004, Communities Scotland

Boardman, B. (1991), Fuel Poverty: from cold homes to affordable warmth, Bellhaven Press

Hunt, S. and Boardman, B. (1994), Defining the Problem, in Markus, T. A. (Ed) Domestic Energy and Affordable Warmth, Report No. 30. - The Watt Committee on Energy, Chapman and Hall

Whyley, C. and Callender, C. (1997), Fuel Poverty in Europe: Evidence from the European Household Panel Survey, A report for NEA by the Policy Studies Institute

Henwood, M. (1997), Fuel Poverty, Energy Efficiency and Health, A report to the Eaga Partnership Charitable Trust

Eaga Charitable Trust (2002), Rural Fuel Poverty: Hidden Hardships - Proceedings of a conference on 16 April 2002 at the Killyhevlin Hotel, Enniskillen

Health implications of cold and damp housing

Health policy

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Ofgem - the fuel regulator has a large quantity of very relevant information on its website, www.ofgem.gov.uk

Appendix 5

National Home Energy Rating (NHER)

National Home Energy Rating (NHER)

The National Home Energy Rating (NHER) scheme is one of a number of ways to measure the energy efficiency of a domestic dwelling. A wide range of relevant data items are collected about the property by a qualified assessor and this information is used to calculate the energy efficiency of the home and the anticipated annual fuel bills.

The home is rated on a scale 0 to 10, where 0 is very poor and 10 is very energy efficient. A score at the lower end of the scale signifies a home that would be hard to heat and the fuel bills would be very high. In contrast, a home that scores at the higher end of the scale would be very easy to keep warm and dry and the fuel bills would be very low.

Current building regulations require a building contractor to complete a home to the equivalent of about NHER 8.

For further information on the NHER scheme contact:

NHER
The National Energy Centre
Davy Avenue
Knowlhill
Milton Keynes
MK5 8NA

Tel. 01908 672787

Fax. 01908 662296

email: enquiry@nesltd.co.uk

web: www.nher.co.uk

Appendix 6

Useful Websites and Contacts

Useful Websites and Contacts

NHS Education for Scotland

2nd Floor
Hanover Buildings
66 Rose Street
Edinburgh
EH2 2NN
Tel. 0131 225 4365
Fax. 0131 225 5891
Web. <http://www.nes.scot.nhs.uk>

NHS Health Scotland

Clifton House
Clifton Place
Glasgow
G3 7LS
Tel. 0141 300 1014
Fax. 0141 300 1020
Web. <http://www.show.scot.nhs.uk/phis>

Eaga Partnership Scotland Office

Suite 2
74 Commercial Street
Commercial Quay
Edinburgh
EH6 6LX
Tel. 0131 777 2501
Fax. 0131 777 2502
Web. <http://www.eaga.co.uk>

Energy Efficiency Advice Centres (EEAC's)

Tel. 0800 512 012

energywatch Scotland

1st Floor

Delta House

50 West Nile Street

Glasgow

G1 2NP

Tel. 0141 204 7255

Web. <http://www.energywatch.org.uk>

Energy Action Scotland (EAS)

Suite 4a

Ingram House

227 Ingram Street

Glasgow

G1 1DA

Tel. 0141 226 3064

Fax. 0141 221 2788

Web. <http://www.eas.org.uk>

Energy Saving Trust (EST)

1 H North Victoria Quay

Edinburgh

EH6 6QQ

Tel. 0131 244 7683

Fax. 0131 244 0384

Web. <http://www.est.org.uk>

Centre for Sustainable Energy (CSE)

Create Centre
B-Bond Warehouse
Smeaton Road
Bristol
BS1 6XN
Tel. 0117 929 9950
Web. <http://www.cse.org.uk>

Association for the Conservation of Energy (ACE)

Westgate House
Prebend Street
London N1 8PT
Tel. 020 7359 8000
Web. <http://www.ukace.org>

Age Concern Scotland

113 Rose Street
Edinburgh
EH2 3DT
Tel. 0131 220 3345
Fax. 0131 220 2779
Web <http://www.ageconcernscotland.org.uk>