Bryn Jones Memorial Lecture

Risk, Health, Housing and the EHP: the need for advocacy and action

Introduction

Thank you for inviting me to give this memorial lecture. I first met Bryn when I was working for the then Institution. I had started in 1980 and he was first elected on to the General Council in 1983.

As Director of Environmental Health at Torfaen District Council in the 1980s he had real problems on his doorstep with the impact of the controversial Rechem chemical and toxic waste incineration plant. I remember being asked to give an after dinner speech at the week-end school in Llandridrod Wells in the '80s. Bryn picked me up from Newport Station to drive me up there through Cwmbran past the plant which he took great delight in showing me even in the dark. When I eventually arrived the less said about the speech the better.

The title of this lecture rather gives the game away so far as my thinking is concerned. Housing and how it affects public health and indeed how it can reinforce health inequalities has been one of the motivations throughout my career. From when I trained as a pupil public health inspector in Liverpool to my work as a freelance environmental health consultant I have thought that decent housing as fundamental to people's health and wellbeing. I have always believed that as a profession we can do much to improve the conditions in which those who are disadvantaged live. I came to housing rather by accident as the result of my training in Liverpool but my concerns remain the same.

Throughout the last century, no doubt significant health improvements have been associated with increased quality of housing and urban settlements. One has only to think of "Homes fit for heroes" after the First World War, and the Garden City Movement and the positive aspects of housing renewal in the 1970s. In the 19th century, local governments in many European countries established housing improvement campaigns to respond to insanitary conditions, including overcrowding. The traditional risks are still prevalent in some parts of Europe, but also modern risks have made their appearance. In some European countries, accidents in poorly designed homes kill more people than do road accidents, and indoor pollutants or

mould cause asthma, allergies or respiratory diseases[1], which affect an increasing proportion of the population. Indeed when we look at Britain there are something over two and a half million home accidents requiring hospital treatment, compared to 200,000 road casualties and 100,000 accidents at work.

Housing is accepted as a social determinant of health. The Commission on Social Determinants of Health[2] concluded that social inequalities in health arise because of inequalities in the conditions of daily life and the fundamental drivers that give rise to them: inequities in power, money and resources. There is a graded relationship between the socioeconomic characteristics of neighbourhoods where we live and both life expectancy and disability-free life expectancy. Not only are there dramatic differences between the best off and worst-off, but the relationship between social circumstances and health is also a graded one - the social gradient in health. This gradient is demonstrated again if one classifies individuals by their level of education, occupation, or housing conditions. As Michael Marmot has said the higher one's social position, the better one's health is likely to be"[3]. The degree of control we have over our lives is reflected in health status

In case you think that I am only talking to those who "do housing" over the past decade or so there has been a growing recognition of the involvement of the home in gastro-intestinal illness. The role of the home in the transmission and acquisition of food borne disease is now recognized as a key issue. As a paper in the Canadian Journal of Infectious Disease[4] has pointed out although food borne disease data collection systems often miss the mass of home-based outbreaks of sporadic infection, it is now accepted that many cases of food borne illness occur as a result of improper food handling and preparation by consumers in their own kitchens. It has been said that food safety in the home is the last line of defence against food borne disease, and it is likely that this will remain true for the global population in the foreseeable future.

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[1] Braubach M, Jacobs DE, Ormandy D. 2011, Environmental burden of disease associated with inadequate housing, WHO Europe

[2] WHO, 2008, Commission on Social Determinants of Health Final Report 'Closing the gap in a generation – health equity through action on the social determinants of health' Geneva

[3] Marmot M, 2010, "Fair Society, Healthy Lives", The Marmot Review – strategic review of health inequalities in England post 2010, UCL, London

[4] Scott E, 2003, Food safety and foodborne disease in 21st Century homes, Can J Infect Dis. 2003 Sep-Oct; 14(5): 277–280.

With housing as a social determinant of health, it is also a risky place to be as I have shown by reference to accident data. And who spends most time at home? It is the elderly, the very young those who are carers and those who have no work or short-time working on low incomes. I therefore pose the question, are we as a society and profession focusing our attentions (and resources) in the right place?

Let us think of those lower down the social gradient of health, often living in cold homes and in a state of energy precariousness as the result of high housing (and energy) costs and low incomes, we see that not only will they have difficulty maintaining a health indoor but also will have a problem providing hot water for personal and domestic hygiene as well as the hygienic preparation of food. Where will those on low incomes be acquiring their food and of what quality, if quality only comes at a price?

As an aside high housing costs result in part from a lack of supply, and we now have a situation where government expenditure on housing is 5% on construction and 95% towards supporting rents. Rather than reduce housing costs the pressure is to cut benefits. By comparison in the 1970s 80% of expenditure went on building houses – and think how much better that is all round!

Some definitions and terms.
We often think about house and home as interchangeable terms. However the WHO has suggested that dwelling, house, or dwelling house, is the physical structure providing shelter and the necessary space, facilities and amenities for the household living there. Any unsatisfactory condition of the dwelling may lead to one or more direct or indirect health effects.

The home is the social, cultural and economic structure created by the household. It represents a refuge from the outside world, enables the development of a sense of identity and attachment – as an individual or as a part of the household – and it provides space to be oneself. Any intrusion of external factors or stressors strongly limits the psychosocial feeling of safety, intimacy and control, so inhibiting the mental and social function of the home. Lack of security in the private rented sector and lack of control as the result of short-term tenancies makes the establishment of a home ever more difficult, and poor conditions exacerbate the problem.

We should expect a dwelling to enable the establishment of a healthy home. The WHO has referred to the issue of control, as the Whitehall studies (undertaken by

Marmot and colleagues)[5] indicated, the sense of control over their work seemed to make the most difference to the health of the different grades of civil servants – low social status has a clear impact on health and not just for people at the very bottom of the social hierarchy.

Turning to "risk", although EHPs think they understand what is meant by risk, because the risk-based approach is supposedly inherent in our approach to food safety and occupational health and safety; but is that actually true? How much of the work, particularly in housing is led by complaint that may not lead to the worst or most hazardous housing conditions being addressed? How well have EHPs been involved in developing housing strategies to address the 'real' risks in housing?

Experts judge risk in terms of quantitative assessments of morbidity and mortality. Yet most people's perception of risk is far more complex, involving numerous psychological and cognitive processes. People tend to be intolerant of risks perceived as being outside their control, having catastrophic potential, having fatal consequences, or bearing an inequitable distribution of risks and benefits. Anxiety about risk however may in some cases be a proxy for other social concerns. Many perceptions of risk are, of course, also socially and culturally informed. Perception that influences behaviour or adaptive actions are motivated by awareness of the hazard, knowledge of how it can affect the community, and feelings of personal vulnerability to the potential consequences. This may be why people are more concerned with mould on the walls that does not kill rather than the state of the property that makes it cold or increases the risk of falls that can kill. As Slovic has said "intuitive feelings are still the predominant method by which human beings evaluate risk"[6]. And that should not be ignored.

So we know public perception of risk can therefore seem distorted, and not reflect scientific analysis. But what about members of the EH profession, whose job it is both the assess risk and explain the issues to the public (or clients) and indeed to that very peculiar part of the public – elected members? Do we understand the issues sufficiently well to explain risk effectively? When politics comes into play the issue of risk takes on a wholly different complexion and there is always a balance or trade-off between different risks. There is also a difference between risk assessment, and risk management.

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[5] For example, Bosma H, Marmot MG, Hemingway H, Nicholson AC, Brunner E, & Stansfield SA. 1997, 'Low job control and risk of coronary heart disease in Whitehall II (prospective cohort) study, British Medical Journal 314 (7080): 558-65

[6] Slovic P, 1987, Perception of risk, *Science*, New Series, Vol. 236, No. 4799. (Apr. 1987), pp. 280-285

What we do know is that in general the greatest risks in housing are endured by those who are least able to “buy” their way to safer conditions, whether in the dwelling or the environment in which it is located. Ironically, climate change may be the one thing that changes that; at least in some small way, as extremes of weather may affect a wider cross-section of the population, and be less a respecter of “means”.

So the term hazard in the housing context is any risk of harm to the health and safety of an actual or potential occupier and harm is an adverse physical or mental effect. Which brings me the next definition.

What do I mean by “health”? This is really in accord with that in the Housing Act 2004 and associated guidance documents. “Health” is an individual’s state of physical, mental and social well-being. It is not limited to the presence or absence of disease, infirmity or physical injury, but includes psychological injuries and distress. I also take it to include social well-being, and takes account of the impact of the environment in the immediate vicinity of the dwelling.

Health at least in the housing context has been defined, in such a way as we now, to all intents and purposes, have in legislation the WHO definition of health. Health clearly includes mental health, and so we are able to deal with hazards in the home whose main effect is on mental health, and this includes stress. It should also be noted that one of the general principles underpinning the Housing Health and Safety Rating System (HHSRS is that the dwelling should provide adequate protection from all potential hazards prevailing in the local external environment. This includes ‘normal’ local weather conditions, ground conditions and pollution, (including noise, air pollution and radiation).

Health Inequalities (or Health Inequity)

Earlier I referred to the original Whitehall studies by Michael Marmot and his team that demonstrated the social gradient of health. The Marmot Review argues that reducing health inequalities is a matter of fairness and social justice, with health inequalities resulting from social inequalities. In England, people living in the poorest neighbourhoods, will, on average, die seven years earlier than people living in the richest neighbourhoods and there is no reason to believe there is any significant difference in Wales.

On the wider public health front, and issues beyond housing Wilkinson and Pickett have pointed out the levels of obesity tend to be lower in countries where income differences are smaller.

Now EHPs may not be able to address all the social determinants of health, but where one lives, and the accommodation occupied, is one where EHPs can act. Interventions on housing conditions also have benefits beyond the most obvious, of making life at home safer or healthier and reducing the burden of disease. However the view that some of the problems of ill-health are caused directly by poor material conditions such as poor housing implies that rich countries like ours do better than others, but that misses the point. Indeed Wilkinson and Pickett argued this to be a long way from the truth. Their analysis of data shows that many of the problems are not caused by the society not being rich enough but because the scale of material differences between people in society is too great.

Marmot proposed that reducing health inequalities requires action on six policy objectives. These include:

- Ensuring a healthy standard of living for all
- Creating and developing healthy and sustainable places and communities
- Strengthening the role and impact of ill health prevention

So local authorities and EHPs do have a role in addressing health inequity, but nothing can be achieved by any profession or agency working in isolation.

More on where housing fits in public health

Public health and the EHP's role as part of the public health workforce can appear problematic not least because public health means different things to different people depending upon their background and professional discipline. Geoff Rayner and Tim Lang[7] have suggested that public health is about the condition of society, yet the reflex is to think in medical terms and technical support. People experience public health through a set of services which provide public health infrastructure – water, clean air, energy to houses, - and through health care, yet, they argue, public health improvements arrive by social movements for reform. They say that public health has to be seen as a movement or it is nothing.

Rayner and Lang outlined five models of the public health

1. The *Sanitary-Environmental* – addressing a world of concentrated populations and growing industrial and economic activity;

[7] Rayner G, & Lang T, 2012, Ecological Public Health – reshaping the conditions for a good health, Routledge (Earthscan)

2. The *Social – Behavioural* – addressing the world of belief and behaviour appropriate for a world apparently resolving the Malthusian scarcity problem[8;]
3. The *Bio-Medical* - offering workable interventions for newly understood micro-biological problems;
4. *Techno-economic* - drawing from the alliance of scientific knowledge and capital to offer focussed technical answers to mass public health problems; and
5. *Ecological Public Health* – which stresses the integration of different spheres of existence, suggesting interdisciplinary knowledge and a society wide framework of intervention and action. This is surely of relevance and interest to the EHP

The ecological model has advantages in that it is unifying; it looks at interactions and addresses divisions between human health and the working of the natural environment. For want of a better term it is "holistic' and is not this approach consistent with how EHPs see things even if we are forever being forced into specific streams or areas of work. The oversimplified tick box or technocratic approach (mentality) to management and enforcement of regulation can be totally at odds with this approach.

The ecological model champions a rebalancing of what is meant by health activity, away from healthcare as the primary focus to prevention, and indeed back to the causes of the causes. It requires "upstream" thinking and action to prevent "downstream" problems. The difficulty is that public and politicians alike are often happier to show commitment to hospitals and healthcare (and waiting lists) than to what seems long-term or diffuse effort in prevention work. Both are needed but public health tends to be less visible. Ecological public health emphasises prevention but does not pose a false dichotomy between prevention and cure. Ecological public health "restores the vision of public health as about the condition of daily lives – housing, food, air, work". There is clearly no one lever or one single institution that can have "responsibility" for public health if public health is multi-sectoral and complex. The ecological approach integrates and overlaps the best of the models listed above. Too often the public and politicians are looking for the "silver bullet" or technical solution that solves a problem.

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[8] Malthus proposed the principle that human populations grow exponentially (i.e., doubling with each cycle) while food production grows at an arithmetic rate (i.e. by the repeated addition of a uniform increment in each uniform interval of time. This scenario of arithmetic food growth with simultaneous geometric human population growth predicted a future when humans would have no resources to survive on. To avoid such a catastrophe, Malthus urged controls on population growth

So the home environment is an essential element of public health and indeed I would argue it is fundamental not only in terms of prevention of disease and ill-health (including physical and mental ill-health). It is actually fundamental to sustainable and healthy communities. To see housing in isolation as nothing more than an investment for an owner is to undermine public health and store up problems for the future of society by further exacerbating inequalities, as Danny Dorling has pointed out "housing as an asset to be traded is a collective failure that is preserving inequality"[9].

Housing conditions in Wales and the real cost of poor housing

That said let me turn to the more familiar approach to housing. At March 2013 in Wales, only 60 per cent of social housing 133,786 dwellings were compliant with the Welsh Housing Quality Standard (including falls). Wales has a significantly higher proportion of poor housing than England: 29 per cent of homes have at least one Category 1 (most serious) hazard, as identified using the Housing Health and Safety Rating System (HHSRS) compared with 22 per cent of homes in England.

In 2012-13 dwelling stock estimates for Wales indicated there were almost a million owner-occupied dwellings, just under 200,000 privately rented dwellings, and local authorities and RSLs together owned about 220,000 dwellings. However the highest percentage of poor housing is in the private rented sector (as in England) where nearly 40 per cent or almost 76,000 homes, have at least one Category 1 hazard. For owner occupied dwellings the proportion is 30 per cent (or 295,000), it is about 1 in 5 local authority owned and for housing association owned it is13 per cent (just under 18,000).

Over 11 per cent of homes in Wales have a SAP rating of 35 or less. Around 5 per cent of homes in Wales had rising damp and 7 per cent had penetrating damp, compared with 3 per cent and 4 per cent respectively in England. Homes in rural locations are more likely to have Category 1 hazards than homes in urban area. The cost of poor housing in Wales[10] using a methodology based on the HHSRS and first used in England has demonstrated that the continuing health and societal impacts of poor housing in Wales are substantial. If works were targeted to reduce the worst health and safety hazards in those homes to an acceptable level, it was estimated that would benefit to the NHS to the extent of £67 million per year.

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[9] Dorling Danny, 2014, All that is solid – the great housing disaster, Allen & Lane, London

[10] Davidson M, Nicol S, Roys M, & Beaumont A. 2011, The Cost of Poor Housing in Wales, BRE Press

This is an annual saving for a one-off cost to deal with the hazards. This potential saving is doubled if the definition of poor housing is widened to include all homes with a SAP rating of 40 or less and basic heating and insulation improvements are targeted to these homes. In addition to the direct costs to the NHS, poor housing also results in broader economic consequences and costs for society in Wales – including poorer educational attainment and life chances – which can be estimated at costing a further £100 million per year.

Around half of the £1.5 billion required to bring all poor housing in Wales to an acceptable condition is associated with cold homes. A further quarter is associated with reducing risks of fall hazards. Around one sixth is associated with remedial works for damp and mould.

BRE has found that 20 per cent of homes with Category1 hazards could be made acceptable for a cost of less than £520, and half for less than about £1,600.

The BRE study also shows that if the investment was made to eliminate all the most serious hazards the total payback time to the NHS would be 22 years. Some categories, such as falls, would be paid back in a much quicker time period. Investment in addressing dangerous stairs, for example, would be paid back in 5.7 years.

Looking at the total cost to society of the hazards (not just the assessed costs to the NHS), the one off investment in remedying these hazards would be paid back in nine years.

To put those figures into context the Welsh Assembly Government figures report that expenditure on private sector renewal activity (excluding DFGs) continued to fall in 2012-13. Private sector renewal activity (excluding DFGs) was around £14.8 million, down by 20 per cent on 2011-12.

It is estimated that approximately 332,000 households, or 26 per cent of all households in Wales, were experiencing fuel poverty in 2008 which was an increase of around 198,000 households since 2004, when the previous figures were published. It is estimated that approximately 60,000 households, or 5 per cent of all households in Wales, spend over 20 per cent of their income on fuel, and are considered to be in severe fuel poverty.

So what action is being taken?

According to Welsh Assembly Government figures[11] in 2012-13 local authorities inspected a fifth more dwellings under the HHSRS than in the previous year. Yet of those the percentage that contained at least one Category 1 hazard fell from 40 per cent in 2011-12 to 36 per cent in 2012-13 (it was 47% in 2010-11). Why was this? Housing conditions have not obviously improved so much, so are the right properties being inspected? Why or how did they come to the local authority's attention?

At the same time there has been an increase in both the number and proportion of assessed dwellings where Category 2 hazards were found, with 71 per cent of dwellings containing at least one Category 2 hazard during 2011-12. What has changed and what factors are at play?

During 2012-13, action by the local authority resulted in Category 1 hazards being resolved in 1,682 dwellings, of which 1,188 were non-HMOs. While the number of hazards remediated is up by over a quarter on those recorded in 2011-12 overall they are 31 per cent lower than in 2010-11.

Looking at Category 1 hazards for single household dwellings the most common has been 'Excess Cold' which accounted for 31 per cent of all Category 1 hazards found in 2012-13. 'Damp and mould' has been consistently the second most frequent Category 1 hazard found in single household dwellings at 17 per cent followed by 'Falling on stairs' and 'Fire' (9 and 8 per cent of the Category 1 hazards identified).

For the less serious Category 2 hazards, the most common type for non-HMOs was 'Damp and Mould' which accounted for just over a quarter with 'Fire the second most common type of Category 2 hazard, and in recent years Excess cold has been identified with a similar frequency and with 'Electrical Hazards' as the fourth most frequent Category 2 hazard identified.

There do seem to be some marked variations between authorities. In 2012-13, one of the larger authorities carried out 1,173 HHSRS assessments, while the lowest figure was for a more rural authority, was just 49 inspections/assessments. One authority identified a Category 1 hazard in 81 per cent of assessments and another in just 11 per cent of all their assessments. Another authority had found Category 2 hazards in 99 per cent of their assessments. These variations do not appear to match the data on housing conditions, and while there may be some valid reasons for these, they

[11] http://wales.gov.uk/docs/statistics/2014/140130-housing-demolitions-hazards-2012-13-en.pdf

also pose questions as to whether other extraneous factors are being taken into account in rating the hazards identified, and on the quality of the hazard ratings.

In that the analysis of the Freedom of Information requests by Karen Buck MP[12] on the use of the HHSRS, of the 15 local authorities in Wales responding at that time six had no information they could provide on the number of inspections undertaken in the PRS in the years 2007-08 to 2009-10. There was more information on action taken. In 2009-10, 44 Prohibition Orders were reported as being made and some 342 Improvement Notices were served under Part 1 of the Housing Act. According to the returns one authority made 17 Prohibition Orders, and the number of Improvement Notices served ranged from 0 to 113 with an average of 24. There were just 15 prosecutions taken by six local authorities, although eight authorities reported they had carried out work in default. Now this has to be treated with caution but the number of referrals to the local authorities was substantially greater than action taken. For most authorities the former were measured in hundreds (only two less than one hundred). So the question is why this steep drop off between referrals and action taken?

As the report indicated "given the general level of security of tenure (or lack of it) in the PRS it might be reasonable to assume that there must be obvious problems with the condition in the dwellings that lead the occupier to make a complaint or referral to the LHA." Furthermore "the figures obtained indicate a general reluctance to use the powers available". It seems from this and other studies that local authority interventions are "complaint" led. So local housing authorities need to find different ways of working and managing information to ensure that they are better able to protect the health and safety of those who are tenants of less responsible landlords.

Why does housing not figure higher in the consciousness of EHPs?
It seems to me from observing the EH profession over the years (including students) that housing and health does not figure high in the issues that engage the profession. Why should this be? I will be interested to hear.

I come back again to the interconnectivity of the issues with which EHPs are concerned. If someone is living in poor housing conditions, cold or damp or even has sleep disturbance because of poor sound insulation and noise problems, how much more likely are they to have an accident at work (if they have employment)?

[12] Battersby SA, 2011, "Are Private Sector Tenants Being Adequately Protected? A study of the Housing Act 2004, Housing Health and Safety Rating System and Local Authority Interventions in England", accessible at http://sabattersby.co.uk/documents/HHSRS_Are%20tenants%20protected.pdf

Of course I would say that wouldn't I but if we are concerned with public health and health inequalities then housing must figure more widely in the concerns of the profession.

Need for greater action and advocacy

Karen Buck MP who has a very keen interest in housing recently carried out a survey in her constituency of the private rented sector. She found among other things that there was a substantial lack of knowledge about the services a local authority provided to make landlords carry out repairs and deal with conditions; "the majority of people, even when faced with repairs and other issues did not seek assistance from outside agencies or Westminster's Environmental Health Team". This was despite a high level of dissatisfaction with the housing conditions.

This raises a number of issues, as we have seen the level of action is merely scratching the surface of the housing conditions in Wales. If people do not know what can be done, and action is at such a relatively low level, how can the service be maintained at a time of severely limited finance? There is a need to make savings, but the danger is this leads to a more mechanistic and blinkered and indeed fragmented approach, which stores up future problems. The strength of EHPs is, or should be that they can see the interconnectedness of factors that affect public health. If you accept that view then there is a need for greater advocacy.

What do I mean by advocacy? Advocacy is the process by which an individual or group aims to influence policy and resource allocation decisions within political, economic and social systems and institutions. As allocation of resources is political, environmental and public health must be political. That is not to say that there should not be a principled approach, in fact the reverse is true. We must stick to and argue for the basic principles that established the environmental health profession and while recognizing realities must not blow in the breeze of party political expediency. Advocacy can include many activities that a person or organization undertakes, including media campaigns, public speaking, commissioning and publishing research.

In this context we need advocacy on behalf of those living in poor housing and lower down the social gradient in health who may not be able to articulate their concerns or take action themselves. This also involves working with other agencies and NGOs who provide advice and support or even come into contact with those living in the poor housing such as GP.s. Secondly by EHPs on behalf of themselves (individually & collectively via CIEH?) – telling decision makers what they do, and what they could do better via upstream interventions, given proper support.

The legal framework does not dictate your actions on housing it provides a toolkit and great flexibility. It does not impose a strategy for dealing with unhealthful housing. That is something that local authorities are free to develop, so that the legal framework is used most effectively to address problems of housing conditions. The development of that strategy should involve advice agencies such as Shelter Cymru and Citizens Advice and other public health professionals. They have knowledge and insights that can help develop more coherent approaches. Working with such agencies is essential, how can they advise people properly if they are unaware of what powers local authorities have, their housing strategy or how local authorities will help clients should they be referred? I ask, how does your authority respond to representations from such advice agencies about housing conditions at the moment? Are they a partner or seen as the enemy because they sometimes challenge decisions or approaches?

Conclusion

Housing is a social determinant of health; the legislation enables you to address problems. Even where there is a Category 1 hazard it only says there is a duty to take one of the courses of action in Part 1, whichever is appropriate in all the circumstances (not to do so would be a breach of statutory duty). The Housing Act 2004 for all its faults does not impose a straightjacket – too often that is imposed internally. The provision allows you to at least address the risks to health and safety in the dwelling and make a contribution to addressing health inequalities if used strategically.

The questions or challenges I pose are:

- Do those most in need of the support and help from EH teams know about the service? If not, why not?
- Are interventions focused on the greatest risks - and how do you explain this approach to those affected and others as well as the public at large?
- How well do you work with other agencies?
- How do you know that your actions and interventions are contributing to reducing health inequities?

Finally although we talk about evidence-based policy, we should not confuse evidence with knowledge. There was evidence by way of mathematical models to support the various financial products that led to the crash in 2008; they failed to take account of human behaviour. Knowledge is reached when uncertainty is reduced sufficiently for action to be taken and takes account of accumulated experience and understanding of behaviour, but there is fallibility.

We now have sufficient knowledge to be taking concerted action to reduce the impact of housing conditions on health and reduce health inequalities. So are we taking such necessary action?