The health consequences of fuel poverty: what should the role of primary care be?

THE Chief Medical Officer (CMO) for England has recently asked all primary health care professionals to identify people whose health is at risk from cold and damp housing and to refer them to the new Home Energy Efficiency Scheme.[1] This is part of the Government's commitment to reducing the health effects of fuel poverty, but can the primary health care team really make a difference to this largely social problem? Fuel poverty is generally defined as the inability to afford adequate home heating, or more specifically as the need to spend 10% or more of household income on heating the home to an acceptable standard.[2] Even with the most rigid government definition, 4.4 million households in England live in fuel poverty.[3] A recent report using evidence from the European Household Panel Survey found that the proportion of households in the United Kingdom (UK) and Ireland that reported being unable to keep their home adequately warm was more than five times that in Germany or the Netherlands.[4]

Although fuel poverty is associated with low income, it arises from the combination of low household income with inadequate and expensive forms of heating and energy inefficiency in the home. The solution lies as much in capital investment to improve the quality of housing as it does in increasing income.[2] This distinction from poverty in general may explain why excess winter mortality in England has not been found to be associated with standard measures of deprivation.[5,6]

A direct causal link between cold homes and ill health is difficult to establish, but associations between cold homes and poor mental health, respiratory disease, heart disease, and early deaths have been found.[2,7,8] In addition, fuel poverty may lead indirectly to poor health through social isolation or the need to spend more income on fuel at the expense of, say, a healthy diet.[2]

Many of the health consequences are the direct result of cold exposure and one of the major health risks associated with cold housing, and that which most concerns the Government and CMO in the UK, is excess winter mortality.[8-10] In the UK, deaths in winter are nearly 20% higher than during the rest of the year.[9] The phenomenon of excess winter mortality is seen in many countries but is greater in the UK than in areas with much colder climates, such as Scandinavia, which suggests that these deaths are preventable.[8-10]

The contribution of cold housing to excess winter mortality has been debated for some years. A study in the 1980s found that providing unrestricted central heating to elderly residents of housing association homes had no impact on winter mortality.[11] The proportion of households with central heating in England and Wales has increased substantially since the 1960s but has not been accompanied by an acceleration in the already downward trend in excess winter mortality from the 1940s.[9] However, central heating may not affect winter mortality if the house remains cold because it is poorly insulated and/or the household can not afford to have the heating on. Recent international ecological data suggests that both indoor and outdoor cold exposure are important, and that excess winter mortality in the UK could be reduced by improving indoor temperatures and persuading individuals to dress adequately when outdoors in the cold.[8,10]

So what should the role of primary care be in combating the health consequences of fuel poverty? Some areas of the UK have already made attempts to follow the CMO's recommendations. For example, a scheme already exists in Brighton, in the South of England, which trains primary care workers to identify vulnerable households and refer them to the appropriate agencies for help. In Bradford, in the North, there are plans to set up a similar project. There are, however, several problems with this approach. There is no good quality evaluation of its impact on health or cost-effectiveness. Such an evaluation should use techniques being developed to assess health impact in areas traditionally seen as outside the health service[12] but would still face the difficulties of identifying a suitable control area, avoiding contamination, and controlling for confounding factors. Unless such a scheme is set up nationally and the evaluation is carried out at this level, many decades would need to pass before an effect on excess winter mortality could be detected in one district. As well as the problems of evaluation, primary care workers in general, and general practitioners in particular, may not be receptive to taking on this wider health role[13] — fuel poverty is but one of many social issues that are seen in primary care. Others may be more obvious in the consulting room, where most contact is made, and seem more readily amenable to interventions by health professionals.

Most importantly it is unlikely that such activities will have a substantial effect and they may simply serve as a smoke screen for the government. Committed political interventions, such as capital investment to systematically renew the UK's old and poor quality housing stock, abolition of value-added tax (VAT) on fuel, and changes to housing legislation that makes energy efficiency a priority, are likely to be the most effective means of reducing the consequences of fuel poverty.[3,7] Therefore, perhaps the most important role for health professionals is to act as advocates of the fuel poor, putting pressure on the government to undertake the large scale changes to British housing needed to enable all households to be able to afford to keep warm during the winter.

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Why inequalities in health matter to primary care

IN spite of huge health improvements in the 20th century, the devastating effect of poverty on health remains. The risk of death below the age of 14 years is around 10 times greater in a poor country compared with a rich country; the risk of a woman dying in childbirth is 500 times greater.[1] In the United Kingdom over the past two decades, even as the mean household disposable income has increased, inequalities in income distribution have widened markedly.[2] It is therefore not surprising that health inequalities between rich and poor people have continued to grow.[3]

Health inequalities occur because of the way society is organised, in particular because of inequalities in incomes. Reducing health inequalities requires action on many fronts, far beyond the confines of health care.[3,4] Does this mean that the health service, and primary care in particular, has no role to play in tackling health inequalities? Here we present the opposite argument: there is an urgent need to tackle health inequalities and primary care has a central role to play.

No matter what viewpoint one takes, it is clear that social position is one of the most important factors affecting health, both at the individual and population levels. Taking cardiovascular disease as an example, the population attributable risk fraction (i.e. the proportion of disease that can be attributed to a risk factor) is similar for low socioeconomic status and for smoking. We have witnessed the benefits of actively addressing the malign effects of smoking. Yet we continue to neglect, or even ignore, the equivalent effects of low socioeconomic status. There is broad agreement that interventions for the prevention of cardiovascular disease should be based on an assessment of absolute risk. However, no established risk assessment method includes socioeconomic factors.

Many other major causes of ill health and suffering also have their roots in how the world is organised and their underlying solution in political action,[5] such as the terrible effects of war or famine exacerbated by the burden of international debt. On a more mundane level, tobacco advertising and the amount of salt the food industry is legally permitted to add to processed foods are key determinants of cardiovascular disease. Fiscal and legislative action is likely to be far more effective in preventing coronary heart disease than any attempts at health promotion.[6] Should we therefore ignore the effects of war and famine? Should we give up trying to prevent and treat cardiovascular disease? How can it be argued that social inequalities in health are beyond the remit of primary care because of the political roots of their causation and possible prevention?

Another powerful argument for the involvement of health care professionals in efforts to reduce social inequalities in health is the urgent need to counteract the role that the health services currently play in *increasing* inequalities, in particular because of inequalities in access to health care.[7,8] We need to become part of the solution, not be part of the problem. In Brazil, limited access to preventive health care for poorer people led to health inequalities that were reduced as access to services was improved.[9] In the UK, health promotion claims by GPs in London show a remarkably close inverse correlation with Jarman scores, with lower health promotion activity in poorer areas.[10] Yet it is in the poorer areas that people have most to gain from health promotion. Universal access to health care that is free at the point of delivery has helped prevent some of the gross inequities in health care provision seen in countries without such a system; for example, the United States.[8] Any attempt to dismantle this free and universally accessible service is likely to exacerbate existing inequities. The introduction of any kind of user charges will always affect the poor, adversely and disproportionately. Efforts to address inequalities in care must be based on the targeting of resources to those in most need. Simply increasing the resources allocated to an area of the health services, relying on equal distribution and

ignoring issues of need, will often increase inequalities; it will almost never reduce them. This is particularly true for preventive interventions from which the better off benefit preferentially. For Primary Care Organisations (PCOs) this will inevitably require redistribution of resources from richer areas to poorer areas, both between and within PCO areas. We will have to wait and see if there is the political will to make this happen.

One claim put forward to argue that the health sector has no role in tackling health inequalities is that health care has little impact on the public health. This is simply not true. Recently, it was estimated that around half of the reduction in coronary heart disease mortality and morbidity in Europe over the past 10 years could be attributed to improvements in health care.[11] Similarly it was estimated that improved health care has prevented around 25% of the breast cancer deaths in middle age that would otherwise have happened in Europe and the USA.[12] Given that 90% of patient contacts with the health service occur in primary care,[13] it is clear that primary care has great scope to affect health.

Despite the enormous importance of the problem, there is remarkably little good research into interventions to tackle health inequalities.[14,15] However, successful and cost-effective interventions do exist.[16,17] Recurring themes of the more successful interventions are: targeting of high-risk groups; outreach programmes, especially home visits; and programmes aimed at overcoming barriers to services. Many of these effective interventions directly involve primary care. For example, a programme of home visits for socially disadvantaged women during pregnancy, and for 24 months following birth, improved health outcomes for the women and children both in the short term and at 15-year follow-up.[18]

Tackling health inequalities demands a combination of upstream and downstream solutions. Upstream, societal changes are required to prevent further damage, while downstream, the existing damage demands improved medical treatment for those already affected. Services in deprived areas face formidable problems on both fronts. First, people living in deprivation may have received little in the way of systematic health care, and low levels of preventive care. The clinical workload generated by the uncovering of previously unrecognised pathology, and the effort required to implement effective preventive health care programmes in deprived areas, cannot be underestimated. Secondly, the greater a practice population's need for social support, the less is its community likely to be able to offer. Local agencies are likely to be overstretched, impairing effective liaison and joint working. There is an urgent need to find ways of reflecting this pervasive double jeopardy in the allocation of resources.

The current extent of health inequalities stands as an indictment of our society. Ensuring an adequate response to the malign effect of poverty on the health of our patients is the greatest contemporary challenge facing the discipline of general practice. General practitioners strive to approach their patients closely, to understand the detail of the experience of illness and distress; not only to listen to stories but to hear them. This closeness, this hearing becomes, as we share our patients' frustration and anger, a sort of solidarity. Once suffering is expressed, it becomes tangible and demands redress. If we simply hear the story of suffering but make no move to work alongside the sufferer for redress, we abandon our task.[19]

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