Peach paper – Health Impacts

- **The Welfare Reform Act is likely to have a negative impact on a wide range of physical and mental health conditions**

Low/reduced income/income inequalities

We know that a variety of social and economic factors play strongly into health at a population level (Cummings et al, 2005) and that, for example, low income and income inequalities are amongst these factors (Gresenz 2001, Martikainen et al, 2003; Mangalore et al 2007; Kondo et al, 2009).

A recent, very large cross-sectional study which covered about a third of the Scottish population and looked at 40 morbidities identified a strong association between deprivation and multimorbidity.

> "…*Onset of co-morbidity occurred 10 – 15 years earlier in people living in the most deprived areas compared with the most affluent with socioeconomic deprivation particularly associated with multimorbidity that included mental health disorders*…" (Barnett et al, 2006, P1)

The mechanisms by which income affects health appear to be complex.

> *"At one extreme it could be hypothesised that [*the effect of income on health*] only reflects the material necessities of life, for example, ability to purchase good nutrition and adequate housing. However, it is also likely that income is a marker of, or leads to, other factors, for example, health related behaviours and psychosocial wellbeing that influence health"* (Martikainen et al, 2003, 718)

Bruner and Marmot (2009) postulate the possible biological mechanisms by which psychosocial factors such as stress, financial insecurity, lack of control, social isolation and hopelessness may act to influence a wide range of biological/medical/health conditions including:

- Cardiovascular disease
- Diabetes
- Rheumatoid arthritis
- Infection
- Immunity
- Hypertension
- Growth deficiencies
- Learned helplessness

They conclude that:

> "*Disturbance of the usual homeostatic equilibrium by the repeated activation of the flight-or –fight response may be responsible for social differences in neuroendocrine, psychosocial and metabolic variables which are the precursors of ill health an disease.*" (Bruner and Marmot 2006, P27)

Wadsworth and Butterworth show that the process leading towards ill-health begins during foetal development. Poor grown before birth and in the early months and years can lead to increased incidence of ill health in adulthood including:

- Cardiovascular and respiratory function
- Cognitive function
- COPD
- Schizophrenia
- Psychological function and susceptibility to stress
- Diabetes
- Serum cholesterol in early adulthood
- Atopic disease
- Breast cancer

Socially mediated factors which influence foetal development include:

- Poverty
- Maternal smoking
- Excess maternal alcohol intake
- Drug misuse
- Poor of deficient maternal or child diet. (Wadsworth and Butterworth, 2006)

There is evidence to show that current and permanent income are both associated with differences in self rated or self-assessed health (Jones and Wildman, 2007). There is also some evidence to show that, between countries or large sub-divisions of countries (such as states within the US) income inequalities are the driving force in creating and maintaining ill-health. (Gravelle and Sutton 2003; Hilderbrand and Van Kerm, 2006, Rowlinson 2011).

However identifying health effects of income inequality are harder to replicate at a smaller area level, such as regions within the UK (Weich et al, 2002). Wilkinson (2000) suggests that people living in poor neighbourhoods have poor health because of inequalities between their neighbourhood and societal norms:

> "… *people in deprived neighbourhoods do not have bad health because of inequalities within the neighbourhood, but because the whole neighbourhood is deprived in relation to the wider society. In general, as you move from larger to smaller areas, median income becomes a more important predictor and income distribution a weaker predictor of mortality." Both imply that the*

burden of low relative income is important and can be measured either within large areas or between economically segregated small areas." (Wilkinson, 2000).

In their literature review and study of the impact of the 2008 economic downturn in Wales, Elliott et al identified a general picture which showed negative impacts on mental health (including the risk of suicide) and some physical health problems. The physical problems, however, were offset by fewer road deaths and improvements to some health behaviours including smoking, alcohol consumption, physical activity and diet. (Elliott et al 2010)

However, the study looked at the effects of overall economic downturn rather than reduction in incomes *per se*. The effects of economic downturn are likely to be similar only in some elements (insecurity and uncertainty, financial strain) to the effect of income reduction as a result of benefit changes.

In the early years of investigation into linkages between income, income inequalities and health status there was some uncertaintly as to whether factors such as low income and income inequalities were the cause of ill health or its effect. In their review of the international literature and subsequent analysis of the British Household Panel Survey, Benzeval and Judge confirmed other studies which find causation as mostly running from low income towards ill-health, though there is also some reverse direction of flow.

They also found that average income over a five year period is more important than current income for all health measures apart from GHQ scores (General Heath Questionnaire – a tool for assessing psychiatric distress), that persistent poverty carries a greater health risk than occasional episodes of poverty, that income level and income change are both significantly associated with health (though income level appears more important) and, importantly in terms of relevance to the implications of the Welfare Reform Bill, that falls in income appear to vary health more significantly than increases in income (Benzeval and Judge, 2001). Decreasing household income adversely affects GHQ score and other factors such as divorce and unemployment act to amplify the psychological effects of low financial capacity.

The effects on mental health are exacerbated where people have low levels of financial capability (the ability to manage money in a way that makes ends meet). Larger mental health impacts are associated with financial capability than with household income. (Taylor et al, 2011)

An association between low equivalised household income and the health of children and adolescents has also been identified. Children and adolescents aged 5 – 15 in the lowest income quintile display significantly greater fair/poor overall health and

greater prevalence of psychiatric, conduct and emotional disorders than those in the highest quintile (Emmerson et al, 2006).

Housing

Housing insecurity (albeit in relation to owner occupiers who have difficulty paying their mortgages) is associated with increased mental ill-health in men and women and to increased GP visits in men.

The scale of diminished mental health directly associated with difficulty in making mortgage or rent payments and being in arrears is significant For both men and women being in arrears comes on top of and is, separately, of a higher level of magnitude than financial hardship (Shaw, 2004; Taylor et al, 2007).

Poor health is both a cause and a consequence of homelessness. Homeless people are at significantly higher risk of premature death and morbidity that the general population.

In a 2002 study, specific conditions which are more prevalent amongst homeless people in Aberdeen included: anxiety, stress, self-harm, other mental health problems and infectious diseases. Only 22% of homeless people describe themselves as being “in good health” by comparison to 77% of the general population. (Love, 2002)

A study of homeless people in Glasgow found:

- 73% had experienced one or more neurotic symptom in the past week
- 44% were assessed as having a neurotic disorder
- Over half experienced levels of hazardous drinking
- 65% had a longstanding illness
- 29% had attempted suicide
- 18% had self-harmed.

(Kershaw et al, 2000)

Fitzpatrick et al showed that homeless people in rural areas experience longer periods in temporary accommodation than those from urban areas. (Fitzpatrick et al (2005)

Fuel poverty

In their study of the health impacts of cold homes and fuel poverty, the Marmott Review Team found a relationship between Excesss Winter Deaths (EWDs), low thermal efficiency of housing and low indoor temperatures and that there were almost three times more EWDs in the coldest quartile of housing than in the warmest

quartile. They found a strong association between cold temperatures and cardiovascular and respiratory diseases.

Though many EWDs are likely to be amongst older people who are less directly affected by, for example, changes to Housing Benefit (though they will be indirectly affected by the effect the changes are likely to have on familial carers), the effect of living in a cold home is felt in all age groups.

Children living in cold homes are more than twice as likely to suffer from a variety of respiratory problems than children living in warm homes and that mental health is negatively affected by fuel poverty and cold housing for any age group. More than 1 in 4 adolescents living in cold housing are at risk of multiple mental health problems compared to 1 in 20 adolescents who have always lived in warm housing and that cold housing increases the level of minor illnesses such as colds and flu and exacerbates existing conditions such as arthritis and rheumatism. (Marmott, 2011).

As far as indirect health impacts are concerned cold housing and fuel poverty negatively affects children's educational attainment, emotional well-being and resilience, dietary opportunities and choices. It also negatively affects dexterity and therefore increases the risk of accidents and injuries in the home. (Marmott, 2011).

In relation to children, the Review Team found significant negative effects of cold housing in terms of infants' weight gain, hospital admission rates, developmental status, and the severity and frequency of asthmatic symptoms. For adolescents there were clear negative effects of cold housing and fuel poverty on mental health and in adults there are measurable effects of cold housing on adults' physical health, well-being and self-assessed general health, in particular for vulnerable adults and those with existing health conditions. (Marmott, 2011).

In older people the effects of cold housing were evident in terms of higher mortality risk, physical health and mental health. (Marmott, 2011).

Food

Diet is a key factor underlying a range of conditions including:

- Nutritional deficiencies
- Many forms of cancer
- Diabetes mellitus
- Cardiovascular diseases

And also plays a significant role in:

- Oral diseases
- Respiratory infections
- Digestive diseases

- Congenital abnormalities

(Robertson et al 2006)

A recent Canadian study identified high rates of food insecurity particularly amongst female lone parent families. Previous research had shown links between food insecurity and physical and mental conditions including heart disease, obesity, high blood pressure, diabetes, stress, anxiety, irritability, social isolation, heightened emotional responsiveness, eating disorders and depression and that, even when mothers limited their own food intake to ensure their children had enough to eat, children's mental and physical health was still affected through lower levels of positive parent-child interactions, poorer infant feeding practices, less competent parenting practices and increasing strain and irritability in parent-child interactions. (Collins 2010)

References

Cummings S., Ellaway A., Macintyre S., Marmot M., Stafford M. (2005) Neighbourhood environment and its association with self rted health: evidence from Scotland and England. *Journal of Epidemiology and Community Health*. 59: 207 – 213.

Gresenz C. R., Sturm R., Tang L. (2001) Income and mental health: unraveling community and individual level relationships *The Journal of Mental Health Policy and Economics* 4 197 – 203

Martikainen P., Adda J., Ferrie J. E., Davey Smith G., Marmot M. (2003) Effects of income add heath on GHQ depression and poor self rated health in white collar women and men in the Whitehall II study. *Journal of Epidemiology and Community Health*. 57: 718 – 723

Mangalore R., Knapp M., Jenkins R. (2007) Income-related inequality in mental health in Britain: the concentration index approach. Psychological Medicine. 37:1037 – 1045

Kondo N., Sembajwe G., Kawachi I., van Dam R. M., Subramanian S.V., Yamagata Z. (2009) Income inequality, mortality and self rated health: meta-analysis of multilevel studies. *BMJ*: 339:b4471 doi:10.1136/bmj.b4471

Shaw M. (2004) Housing and public health *Annual Review of Public Health* 25: 397 – 418

Taylor M. P., Pevalin D. J., Todd J. (2007) The psychological costs of unsustainable housing commitments. *Psychological Medicine* 37: 1027 – 1036

Scottish Executive (2005) *Health and Homelessness Standards*. Edinburgh: The Scottish Executive.

Love J. (2002) *Health and homelessness in Aberdeen: a study of the experiences and views of homeless people in Aberdeen*. Aberdeen: The Robert Gordon University

Kershaw A., Singleton N., and Meltzer H. (2000) *Survey of the health and wellbeing of homeless people in Glasgow*, London: Office for National Statistics
Fitzpatrick S., Pleace N. and Jones A. (2005) *The support needs of homeless families: an guide to provision for families with children affected by homelessness in Scotland*, York: University of York

Barnett K., Mercer S. W., Norbury M., Wyke S., Guthrie B. (2012) Epidemiology of multimorbindity and implications for health care, research, and medical education: a cross-sectional study. *The Lancet* Published online 10th May 2012.

Brunner E., and Marmot M. (2006) Social organisation, stress and health in Marmot M., and Wilkinson G. *Social Determinants of Health (second edition)*. Oxford: Oxford University Press

Wadsworth M. and Butterworth S. (2006) Early Years. In Marmot M., and Wilkinson G. *Social Determinants of Health (second edition)*. Oxford: Oxford University Press

Jones A. M., Wildman J. (2007) Health, income and relative deprivation: Evidence from the BHPS Journal of Health Economics 27: 308 – 324.

Gravelle H., Sutton M. (2003) Income related inequalities in self assessed health in Britain: 1979 – 1995. *Journal of Epidemiology and Community Health* 57: 125 - 129

Hilderbrand V., Van Kerm P. (2006) *Income inequality and self-rated health status: evidence from the European Community Household Panel*. Luxembourg: CEPS/INSTEAD

Rowlingson K. (2011) *Does income inequality cause health and social problems*? York: The Joseph Rowntree Foundation.

Weich S., Lewis G., Jenkins S. P. (2002) Income inequality and self fated health in Britiain. *Journal of Epidemiology and Community Health* 56: 436 – 441

Wilkinson R. M. (2000) Inequality and the social environment: a reply to Lynch et al. *Journal of Epidemiology and Community Health* 54. 411 – 413

Elliott E, Harrop E, Rothwell H, Shepherd M and Williams G (2010) *Working Paper 134: The impact of the economic downturn on health in Wales: a review and case study*. Cardiff: Cardiff School of Social Sciences

Benzeval M., Judge J. (2001) Income and Health: the time dimension. *Social Science Medicine*. 52 1371 – 1390

Taylor M. P., Jenkins S., Sacker A. (2011) *Financial capability, income and psychological wellbeing*. Colchester: Institute for Social and Economic Research

Emerson,E.; Graham,H.; Hatton,C. (2006) Household income and health status in children and adolescents in Britain. *European Journal of Public Health*, 2006, 16, 4, 354-360

Palmer G., MacInnes T., Kenway P., (2008) Cold and poor*: an analysis of the link between fuel poverty and low income*. London: New Policy Institute

Marmott Review Team (2011) *The health impacts of cold homes and fuel poverty* London: Friends of the Earth/Marmott Review Team

Robertson A., Brunner E., and Sheilham A. (2006) Food is a political issue. in Marmot M., and Wilkinson G. *Social Determinants of Health (second edition)*. Oxford: Oxford University Press

Collins L. (2010) The impact of food insecurity on women's mental health: how it negatively affects children's health and development. *Journal of the association for research on mothering* 11, 1 251 – 262.