Health inequalities in Lancashire

A joint strategic needs assessment, March 2014

In partnership with:

Blackpool Council

Blackburn with Darwen Borough Council

Lancashire County Council

www.lancashire.gov.uk

Foreword

People in the most deprived parts of Lancashire are seven times more likely to die early from illness associated with diabetes than those in the most affluent areas of the county. They are three times as likely to have poor mental health and twice as likely to die under the age of 75 from accidents. These, and other health inequalities prevent too many of Lancashire's citizens from benefiting from the opportunities, such as working, learning, making the most of leisure time and keeping in touch with family and friends, that many of us take for granted.

The gap in early death from diabetes has widened between 2009 and 2012 and the gap in some of the important causes of health inequalities such as income, fuel poverty and drinking alcohol at levels hazardous to health have also widened over the last three years. These and other persistent inequalities in people's living conditions, health behaviours and health outcomes, will no doubt compel partners across the Blackburn with Darwen, Blackpool and Lancashire County council areas to take action to increase heath equity.

However there is some cause for cautious optimism, as some health inequalities in Lancashire do seem to be reducing. For example the gaps in anxiety and depression and early deaths from heart disease and stroke have narrowed; with rates in the most deprived parts of the population improving faster than the least deprived. This shows that it *is* possible to narrow the health gap with concerted co-ordinated efforts across partner organisations.

This report provides an analysis of inequalities in health and the causes of poor health, between deprivation groups within the Lancashire sub region. It repeats analysis into the state of health inequalities across Lancashire undertaken in 2009. As well as giving us a picture of health inequalities now, it therefore gives us an indication of how health inequalities are changing over time.

The Marmot review of Health Inequalities published in 2010, along with subsequent research has made it clear that for too long partners have been focusing their efforts to address health inequalities on the symptoms of social and economic inequalities at the expense of the social determinants of health. Dealing with the consequences of health inequalities is extremely costly and allowing health inequalities to persist is extremely wasteful of scale resources. This makes it all the more important to focus on promoting wellness and preventing illness at this time of reducing resources. Working together to addressing the social and economic causes of ill health is the only way in which we will be able to do this on a sustainable basis.

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Introduction

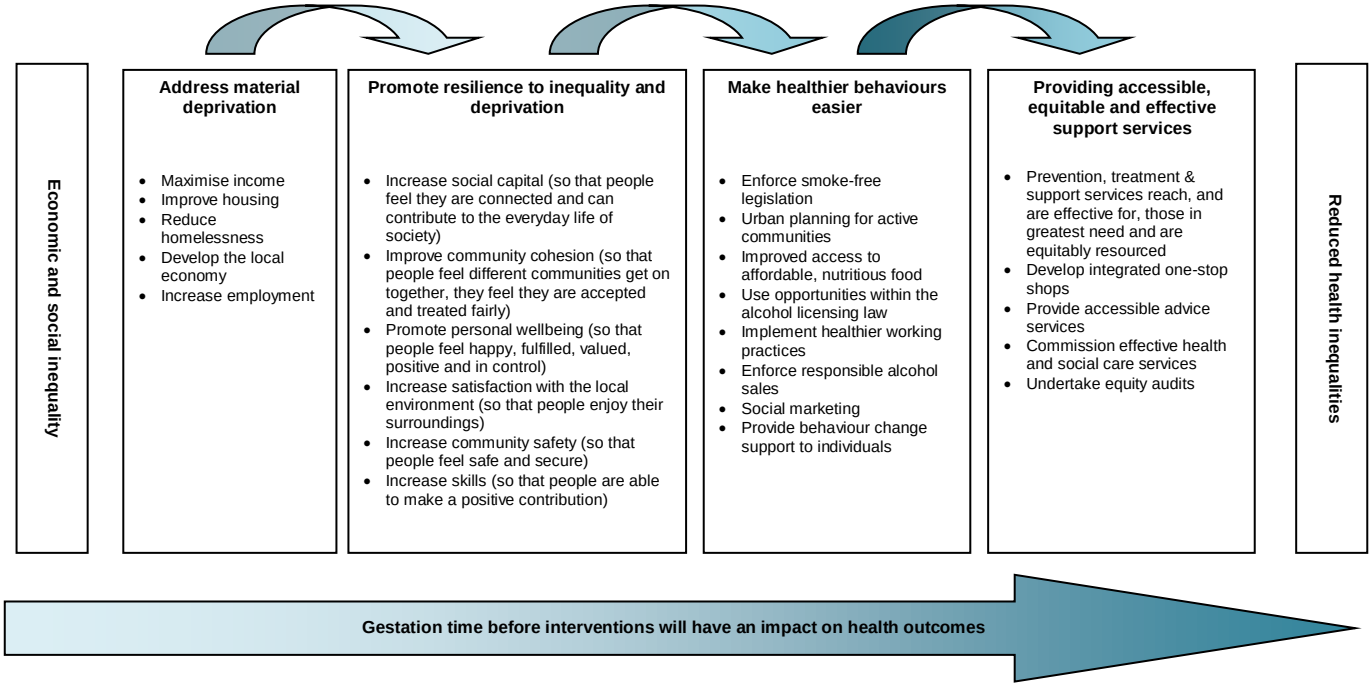
Health inequalities are often measured by the difference in average life expectancy between those living in different areas; however, there is a clear socio-economic gradient in the determinants of health; health behaviours; access to and uptake of health services; and patterns of disease and death. It is unfair that people's circumstances determine their health status and life expectancy. Despite overall improvements in life expectancy over the last 20 years (Murray, C.J.L., et al., 2013), health inequality gaps have widened, with people in the most deprived areas experiencing poorer health than those in the least deprived areas. This report provides an overview of deprivation-related health inequalities in Lancashire.

Recent research has shown that addressing the wider social determinants of health is likely to have the biggest impact on reducing health inequalities in the medium to long term (Marmot Review Team, 2010). The Marmot Review Team (2010 p.39), referred to these determinants as "the causes of the causes" of poor health – factors such as income, employment status, living and working environment – which all have a part to play in determining the health and wellbeing of individuals and the population as a whole. The vast majority of these factors lie beyond the direct

influence of health care. By addressing inequalities in these areas we can minimise the resultant health inequalities in the long-run.

It may be the case that as local partners we have a limited ability to influence societal inequalities, but there are ways that we can intervene in different parts of the causal pathway between socio-economic influences and inequalities in health outcomes. Figure 1 shows the relationship between social inequalities and inequalities in health.

Figure 1: Causal pathway of the relationship between social inequality and health inequality: key intervention points



The Marmot review found a consistent social gradient in health status and in many of the determinants of health shown in figure 1 above. This social gradient means that when populations are divided into deprivation or income groups, levels of good health increase as deprivation reduces. An example of the social gradient in Lancashire is shown in figure 2 below. This shows that premature death rates from lung cancer is lowest in the most affluent 20% of the population and increases as deprivation increases until it is highest in the most deprived 20% of the population.

Evidence cited in the Marmot review found that previous examples of targeting services and programmes at the most deprived individuals, families and groups did not usually result in narrowing the overall gap in health outcomes. Examples were given of where targeting initiatives at the most deprived had led to improvement in health and wellbeing in the small groups that were targeted, but the overall social gradient remained, because health outcomes in the slightly less deprived groups not targeted did not improve. This led the Marmot review to recommend an approach it called 'proportionate universalism'. This is where universal services are delivered in ways that are proportionate to need across the social gradient. For example Children's Centres are a universal service available to families across the social gradient; however they deliver more intensive support to families in the most difficult

circumstances. By using this approach, the health of the entire population across the whole social gradient can be improved and inequality gaps reduced.

This report presents the largest inequalities in health outcomes in Lancashire and provides recommendations for action to address these issues.

Background

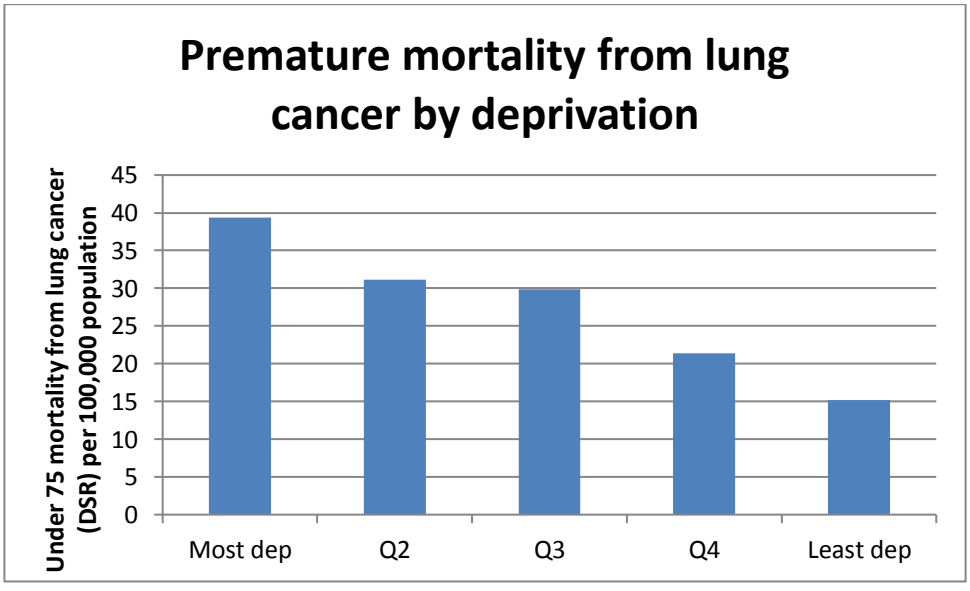
In 2009 the Lancashire JSNA team and partners published their first report on health inequalities across Lancashire, Blackburn with Darwen and Blackpool. This identified the top ten inequalities in health outcomes between the most and least deprived areas and the priorities to narrow these gaps. This new report follows on from the 2009 project and revisits the analysis using the most up-to-date data to calculate the current inequalities.

Methodology

Data for 157 indicators were collected at the lowest geographical level possible. These indicators were grouped into five thematic areas: health outcomes, access to services, health behaviours, resilience to the negative effects of deprivation status and material deprivation. The small areas were then ranked by their overall deprivation score (according to the Index of Multiple Deprivation 2010) and arranged into five equal groups known as 'quintiles'. Each quintile contains a fifth of Lancashire's population. This enabled the analysts to calculate the inequality ratio for each indicator (the size of the gap in health outcomes between the most and least deprived quintiles). This allows us to show the social gradient for each indicator within Lancashire. An interactive atlas of deprivation in Lancashire is available on the Lancashire JSNA website. Deprivation is mapped at small area (lower super output areas, used for the Census) and local authority area, and the map contains a ward layer that can be switched on or off so that the deprivation make-up of wards can been seen.

As an example, figure 2 below shows the social gradient in premature mortality rate for lung cancer.

Figure 2: Premature mortality from lung cancer by deprivation status



The indicators collected for this report were largely the same as those collected for the 2009 analysis, with a few exceptions. A summary of changes to the indicators can be made available on request from jsna@lancashire.gov.uk.

Geography

In this report 'Lancashire' refers to the 14-authority Lancashire area (the 12 districts of Lancashire county, plus the two unitary authorities: Blackburn with Darwen and Blackpool).

Health equity goals

As with the 2009 health inequalities analysis, this report starts by identifying the largest inequalities in health outcomes between the most and least deprived quintiles in Lancashire.

When the health inequality ratios were examined, three main themes emerged, these were:

- premature mortality (dying before the age of 75);
- mental health and wellbeing; and
- unplanned hospital admissions.

The new top ten goals for health equity all fit under the above themes. The goals are listed below in order of the size of the gap between the most and least deprived quintiles in Lancashire, starting with the biggest gaps. The actual ratio values for these inequality gaps are given in appendix A.

1. **Narrow the gap in diabetes** – those in the most deprived quintile are over seven times as likely to die prematurely from diabetes as those in the least deprived quintile and almost three times as likely to die from diabetes at any given age;
2. **Narrow the gap in respiratory disease** – those in the most deprived quintile are three and a half times as likely to die prematurely from respiratory disease as those in the least deprived quintile. In particular, they are over four and a half times as likely to die prematurely from chronic obstructive pulmonary disease (COPD);
3. **Narrow the gap in digestive disease** – those in the most deprived quintile are three times as likely to die prematurely from diseases of the digestive system as those in the least deprived quintile. In particular, they are more than three times as likely to die prematurely from chronic liver disease;
4. **Narrow the gap in mental health problems** – those in the most deprived quintile are three times as likely to suffer from extreme anxiety and depression as those in the least deprived quintile;
5. **Narrow the gap in lung cancer** – those in the most deprived quintile are over two and a half times as likely to die prematurely from lung cancer as those in the least deprived quintile and almost two and a half times as likely to die from lung cancer at any given age;
6. **Narrow the gap in circulatory disease** – those in the most deprived quintile are almost two and a half times as likely to die prematurely from circulatory diseases as those in the least deprived quintile. In particular, they are two and a half times as likely to die prematurely from coronary heart disease and more

than twice times as likely to die prematurely from stroke as those in the least deprived quintile;

7. **Narrow the gap in accidental deaths** – compared to those in the least deprived quintile, those in the most deprived quintile are more than twice as likely to die before the age of 75 due to an accident;
8. **Narrow the gap in quality of life** – those in the most deprived quintile are over twice as likely to experience extreme pain and discomfort as those in the least deprived quintile. The most deprived are also more than one and a half times as likely as the least deprived to have problems with mobility, self-care and performing usual activities;
9. **Narrow the gap in unplanned hospital admissions** – those in the most deprived quintile are more than one and a half times as likely to be admitted to hospital in an emergency as those in the least deprived quintile. The ratio was the same for all ages as for those under 75 years of age;
10. **Narrow the gap in infant mortality** – in the most deprived quintile babies up to the age of one year are over one and a half times as likely to die as those in the least deprived quintile.

Changes since the 2009 analysis

Tackling the root causes of health inequalities is complex and requires coordinated and concerted action across the causal pathway. It may therefore be no surprise that the top ten inequalities in health outcomes are largely the same as the ones identified in 2009. Here, we present the gaps that have widened or narrowed since that original analysis. The possible reasons for, and implications of these changes are explained later.

We were able to compare 87 of the indicators between the 2009 and 2013 analyses and found the internal inequality gap had narrowed for 56 of them (64%) and widened for 30 (34%).

Positive messages

> Although there are many wide health inequalities in Lancashire, it is reassuring to see that there are some indicators of adult social capital where deprivation status does not seem to be a determining feature. For example, analysis of a recent wave of the Living in Lancashire survey showed that deprivation had no bearing on whether residents felt that people from different backgrounds get on well together in their local area.

>Inequalities in early death from heart disease, stroke and lung cancer, poor mental health and child deaths from all causes have narrowed because health in the most deprived 20% of the population has improved faster than the least deprived 20%.

>While some indicators show a worsening picture in both the least and most deprived quintiles since the 2009 analysis, there are many indicators where the inequality gap has narrowed and both quintiles have shown an improving picture, for example premature deaths from coronary heart disease, stroke and lung cancer are reducing and many indicators relating to child wellbeing and skills are improving. Indeed, there are so many indicators for which the inequity gap has narrowed that they have not all been included in this report. The full list can be found in appendix B. If the equity gap in these health determinants continues to narrow, we would expect to see improvements in health outcomes in the future.

Only premature mortality from all cancers showed no change as the values for both the least and most deprived quintiles had improved by the same amount. We were unable to test the statistical significance of the changes since the 2009 analysis because different methodologies were used. This year's methodology is more robust so if the analysis were to be repeated in the future, the same method will be used and testing the statistical significance of the changes over time will be possible.

For any given health outcome, a narrowing of the inequality gap is not necessarily a wholly positive change, as it may be due to worsening in health outcomes for the least deprived quintile rather than improvements for most deprived. We have grouped the indicators together based on how they have changed (though we have not attempted to attach significance to the changes). The following changes relate to the 2013 health equity goals.

Changes in the ten health equity goals

No change – the least and most deprived quintiles have improved equally:

- premature mortality from all cancers;

Gap narrowed – the most deprived quintile has improved faster than the least deprived:

- extreme anxiety or depression;
- child mortality from all causes;
- premature mortality from coronary heart disease and stroke;
- mortality and premature mortality from lung cancer.

Gap narrowed – the most deprived quintile has improved but the least deprived has worsened:

- mortality and premature mortality from chronic liver disease;
- mortality from accidents.

Gap narrowed – both quintiles worsened with the least deprived quintile worsening faster than the most deprived quintile:

- COPD-related emergency admissions.

Gap widened – both quintiles have improved but the least deprived quintile has improved faster than the most deprived:

- mortality and premature mortality from diabetes.

A list of all 87 indicators and the changes between the 2009 and 2013 analyses are shown in appendix B.

This analysis of the changes is important in two ways: first, it provides some forewarning about health outcomes in which the inequality gap is getting wider. Some policy changes or interventions can inadvertently exacerbate health inequalities. These topics, if not addressed now, may feature as some of the widest inequalities in the future. Second, it highlights areas of achievement in reducing the inequality gap. This may help to identify strategies and interventions that are working, either directly or indirectly, to reduce inequalities. For example, although incidence of breast cancer has risen and the gap widened between the quintiles, screening uptake in the most deprived quintile has risen and mortality rates for both quintiles have improved. Such repercussions should be picked up by health impact assessment, but are not always anticipated.

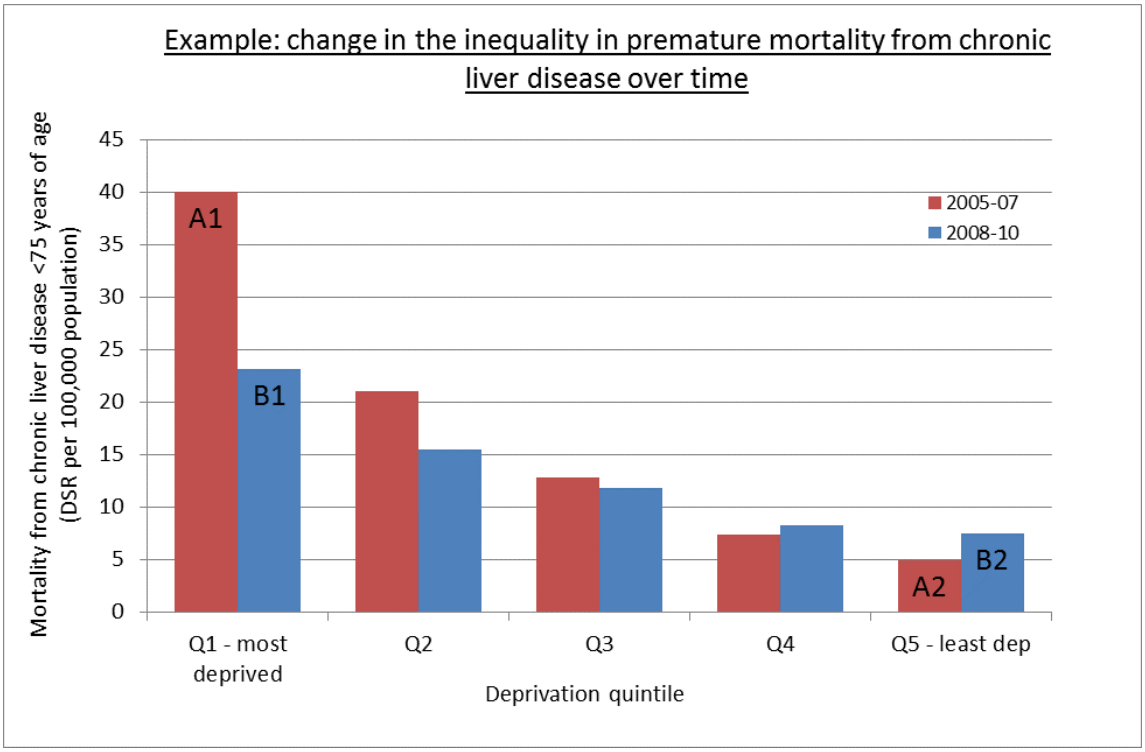
Changes in the priorities to address the goals

Using our 2009 analysis, six priorities for action were identified by partners to narrow the health gaps. These were:

- increase income and reduce child poverty;
- reduce unemployment and worklessness;
- build social capital;
- improve skills, lifelong learning and education;
- address alcohol misuse; and
- improve social support (including social care).

In reviewing our priorities for health equity, it is useful to know whether there have been changes in inequalities in indicators related to these priorities since the 2009 analysis. Table 1 shows the indicators relating to the priority objectives and shows where the inequality gaps have changed, and by how much (a worked example is shown in figure 3 below). It has not been possible to calculate changes in indicators of adult social capital due to differing methodologies over time.

Figure 3: Example of calculation in change over time



Calculations:

Inequality ratio for 2005-07 = A1÷A2 = 40.00÷4.88 = **8.2**
Inequality ratio for 2008-10 = B1÷B2 = 23.13÷7.53 = **3.1**

Percentage change in the inequality ratio = (3.1-8.2)÷8.2x100 = **62% narrower**
Percentage change in quintile 1 (most deprived) = (B1-A1)÷A1x100 = (23.13-40.00)÷40.00x100 = **42% decrease**
Percentage change in quintile 5 (least deprived) = (B2-A2)÷A2x100 = (7.53-4.88)÷4.88x100 = **54% increase**

In this example the inequality ratio has reduced because the premature mortality rate from chronic liver disease has reduced in the most deprived group and increased in the least deprived group.

Table 1: Changes in indicators relating to the six priority objectives

Indicator	Period 1	Period 2	% increase or decrease in inequality ratio*	% change in Q1 between period 1 and period 2	% change in Q5 between period 1 and period 2
Priority 1 - increase income					
Median household income	2009	2012	6%	-23%	-19%
Working age benefits claimant rate	Feb 08-Feb 09	Feb 2012	6%	-8%	-14%
Income support claimant rate (16+)	Feb 08-Feb 09	Feb 2012	-5%	-41%	-38%
IB/SDA claimant rate (16+)	Feb 08-Feb 09	Feb 2012	10%	-7%	-15%
Overcrowded households (% of households)	2001	2011	-68%	-38%	94%
Fuel poverty (% of households)	2003	2010	18%	217%	169%
Priority 2 - reduce unemployment					
Claimant count (% of working age population)	May 08-May 09	Nov 2012	55%	0%	-36%
Priority 3 - improve social capital					
Primary school pupils who find it difficult to make friends (%)	2007-08	2011-12	-25%	-32%	-9%
Secondary school pupils who don't get on with other pupils (%)	2007-08	2011-12	-24%	-16%	10%
Primary school pupils who don't believe they can influence change (%)	2007-08	2011-12	-30%	-55%	-37%
Secondary school pupils who don't believe they are listened to (%)	2007-08	2011-12	-32%	-39%	-10%
Priority 4 - improve skills					
Achievement of 5+ A-C grade GCSEs (%)	2007-08	2010-11	-28%	47%	6%
Primary school pupils not encouraged to do their homework (%)	2007-08	2011-12	-12%	-31%	-22%
Secondary school pupils not encouraged to do well (%)	2007-08	2011-12	14%	-18%	-28%
Primary school pupils missing school without a good reason (%)	2007-08	2011-12	4%	-18%	-21%
Secondary school pupils missing school without a good reason (%)	2007-08	2011-12	-16%	-29%	-15%
Priority 5 - reduce alcohol misuse					
Non drinkers (%)	2009	2011	62%	-65%	-43%
Hazardous drinking (%)	2009	2011	79%	135%	31%
Harmful drinking (%)	2009	2011	-67%	-37%	91%
Road traffic collisions with an alcohol flag (% of all collisions)	Jul 08-Jun 09	Apr 2011-Mar 2012	-30%	-76%	-66%
Mortality from chronic liver disease (DSR)	2005-07	2008-10	-62%	-41%	55%
Premature mortality from chronic liver disease (DSR)	2005-07	2008-10	-62%	-42%	54%
Priority 6 - improve social support					
No comparable indicators due to changes in the dataset					

$$* \, Inequality\ ratio = \frac{\text{Score for quintile 1 (most deprived)}}{\text{Score for quintile 5 (least deprived)}}$$

Other indicators for which the gap has widened

The following indicators are those where the inequality gap has widened and both the least and most deprived quintiles have shown a worsening picture. Although these aren't currently among the largest inequality gaps, they highlight topics that should be given priority by partners to prevent the position deteriorating further.

- median household income;
- fuel poverty;
- meeting the physical activity target;
- incidence of breast cancer, malignant melanoma and malignant melanoma under 75.

Conclusion and recommendations

Strategic recommendations to support the development of policies and strategies

This analysis shows that although there has been a narrowing of the health gap in Lancashire for a number of indicators of poor health, a significant social gradient remains for many causes of premature death, key indicators of wellbeing and in unplanned admissions to hospital. There is also a widening gap in income, fuel poverty, physical activity and hazardous drinking. At a time when demand for services is increasing and public sector resources are reducing, partners in Lancashire cannot afford to ignore the impact that health inequalities have on preventable death and use of public sector services.

The Marmot Review of health inequalities argues that if we are to be effective in narrowing the health gap on a sustainable basis we need to intervene across the whole causal pathway; addressing the social determinants of health. The following six policy objectives are informed by the global evidence on reducing health inequalities:

1. giving every child the best start in life (highest priority recommendation);
2. enabling all children, young people and adults to maximise their capabilities and have control over their lives;
3. creating fair employment and good work for all;
4. ensuring a healthy standard of living for all;
5. creating and developing sustainable places and communities; and
6. strengthening the role and impact of ill-health prevention.

Coordinated action to deliver the Marmot objectives should be a priority for local partners. Lancashire County Council is one of only six local authorities in the country to be receiving support from the Marmot Team on implementing the Marmot recommendations. The findings of this analysis should inform the focus of the support delivered.

Local partners should identify how they can contribute to narrowing the widening gap in Lancashire in income, fuel poverty, physical activity and hazardous drinking.

A stakeholder event was held in December 2013 to engage partners in identifying priorities for achieving our health equity goals. The following priorities and recommendations are the result of that stakeholder workshop.

Priority 1

Priority	Goal
Develop the local economy	Narrow the gap in material living conditions

Recommendations to JSNA partners:

- consider how economic development strategies can support growth in sectors that employ high numbers of people from deprived areas as well as increase investment in high growth sectors;
- support local businesses to become accredited healthy workplaces that use evidence-based approaches to keep people well at work and enable those with health problems to stay in employment;
- promote access to welfare rights advice within health care settings;
- work with GPs and local employers to better understand the 'fit note';
- encourage the local public sector and partners to increase social value though employment of local people, purchasing from local businesses, commissioning from the third sector and employee volunteering;
- identify ways to increase digital inclusion;
- encourage local employers to pay the Living Wage.

Priority 2

Priority	Goal
Increase social connectedness	Narrow the gap in community resilience

Recommendations to JSNA partners:

- take opportunities provided by infrastructure programmes such as the Preston, South Ribble and Lancashire City Deal to design the built environment to facilitate social connectedness;
- commission the third sector to bring local communities together to improve quality of life, using community assets approaches;
- increase opportunities to bring people together for group activities, sports and games;
- support local authority elected members to undertake community development and to connect local people to community assets;
- establish networks of mentors/buddies in the most vulnerable communities;
- increase digital inclusion to help address loneliness and social isolation;
- make use of Lancashire Economic Partnership's influence, connections with big businesses, skills and financial resources to increase social connectedness.

Priority 3

Priority	Goal
Promote and enforce health-related legislation	Narrow the gap in health behaviours

Recommendations to JSNA partners:

- encourage local lobbying for evidence-based health-related legislation by JSNA partner organisations such as local authorities, clinical commissioning groups, health and care providers, police and the third sector;
- enforce health-related legislation (e.g. licensing, food hygiene, alcohol and tobacco sales) proportionately according to intelligence about non-compliant businesses;
- lobby for a minimum unit pricing for alcohol;
- promote health and safety in the workplace as a more positive concept that focuses on promoting the health and wellbeing of employees, their work-life balance and fulfilment rather than purely risk management;
- enforce building regulations to ensure the quality of housing;
- explore the introduction of 'exclusion zones' to limit the number of unhealthy food outlets and alcohol-licensed premises near schools;
- consider opportunities for increasing physical activity and social interaction, and improving access to green space and leisure facilities when planning the built environment;
- increase the number and quality of cycle and walking routes when developing the transport network;
- make health impact assessment mandatory for local authority planning, contracting and commissioning.

Priority 4

Priority	Goal
Allocate public sector service resources according to need	Narrow the gap in the provision of accessible, effective services

Recommendations to JSNA partners:

- explore the development of resource allocation formulae that reflect need for services;
- promote the use of equity audit in the commissioning of services to ensure that access, use and outcomes of services are proportionate to the level of need across the social gradient;

- introduce local area co-ordination approaches to join up services around groups of general practices and to enable people experiencing challenge to be connected to assets in the local community;
- commission integrated prevention services focused on achieving a small number of key outcomes;
- apply the concept of proportionate universalism within the commissioning process.

Additional resources

This report provides a summary of the extensive analysis carried out by a team of analysts from across Lancashire.

References

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