Living Well for Longer
in
Cheshire East

The Annual Report
of the
Director of Public Health

2012-2013

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Foreword

In April 2013, across England and Wales, the responsibility for Public Health transferred from the NHS to Local Authorities. It is with great pleasure that I bring you this, my first Annual Report, as Director of Public Health for Cheshire East.

I am required by law to write an annual report on the health of the local population. This is an independent report which describes a number of key aspects of local health, highlights areas of excellence and concern and sets out headline recommendations to tackle these issues.

In June 2013, Public Health England published Longer Lives (www.longerlives.phe.org.uk). Longer Lives described premature mortality (defined as deaths under the age of 75) by local authority area. It broke down premature deaths by the top four killers; cancer, heart disease and stroke, lung disease and liver disease. This report focuses on premature mortality within Cheshire East.

National comparisons reveal that Cheshire East has relatively low levels of premature mortality, ranked 38th out of 150 local authorities. The number of premature deaths locally has also fallen over the past nine years by 22%. There is a lot to celebrate. However, further improvements in health and reductions in premature mortality are possible as

1. Over 1,000 people die before the age of 75 each year.
2. Nearly 800 of these deaths are avoidable[1].
3. More men die prematurely than women in Cheshire East, though the number of men dying prematurely has been reducing since 2001.
4. The reduction in premature deaths in women has stalled since 2005-2007.
5. There are wide variations within Cheshire East, depending on where you live, on your risk of premature death.

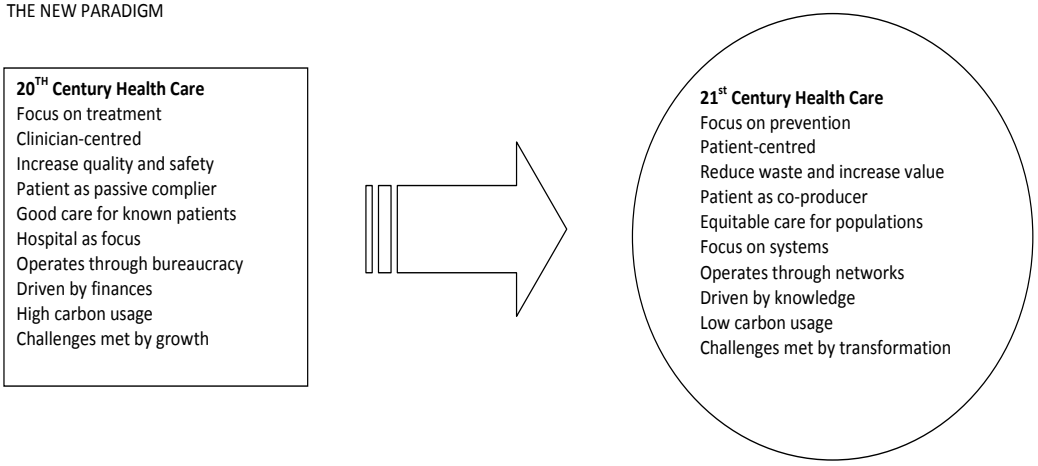
The data above starts to illustrate local health inequalities and the potential impact of the wider determinants of health on early death. These issues were highlighted by The Marmot Review, Fair Society Healthy Lives, published in 2010. This report linked poor health outcomes with lower socioeconomic standing and highlighted that 'the link between social conditions and health is not a footnote to the 'real' concerns with health – health care and unhealthy behaviours – it should become the main focus' (Marmot, 2010, pg 3). However, t**he Marmot Review highlighted that to reduce health inequalities it was not enough to focus just on the most disadvantaged, but that action should be taken across a community with 'an intensity that is proportionate to the level of disadvantage' (Marmot, 2010, pg 10)**. **This is the significant challenge for all who live and work in Cheshire East.**

[1] Avoidable deaths are those that would not have happened if appropriate medical and/or public health interventions had taken place to reduce a person's risk of dying prematurely.

Changing both unhealthy behaviours and breaking the link between poor health and social conditions will not be easy. It will require different groups who previously may not have needed to work together to do so. It will need professionals such as architects, designers and planners who may not have considered health as part of their remit before to become part of the wider public health workforce; it demands a new era of collaboration and cooperation between statutory, voluntary and business sectors. The recent reorganisation of public health delivery and its move to the Council can provide a catalyst for this to occur. Local Authorities now carry a statutory responsibility for improving health. Bringing together the expertise of Public Health practitioners with the Council's long standing local responsibilities for tackling the wider determinants of health, such as air quality, education, road accidents, transport, noise, violence, housing, fuel poverty and use of outdoor space means a unified approach can be taken against these causes of ill health. The Cheshire East Health and Wellbeing Board and emerging sub-regional structures will drive and support this work with other commissioners (e.g. NHS, Police and Fire) and partners.

These are long term aspirations that require a different approach by all. Figure 1 shows the component changes required to enable this to occur. Sir Muir Grey has described this as a 'paradigm shift'.

Figure 1: The New Paradigm



Source: Sir Muir Grey, Personal Communication

Imagine that we buried a public health time capsule to be opened by our older selves, our successors, children and grandchildren in 2043, what would we hope their world would be like? We hope that they would be living longer healthier lives; that they would have learnt from our mistakes and know that ignoring your own health can lead to disability, long term conditions and premature death. They would be more active with their built environment being conducive to healthy behaviours enabling them for example to build physical activity into their days without even thinking of it – cycling or walking to school, work or the shops, taking the stairs - and that the differences seen in health outcomes between parts of the community would have been reduced or eliminated. They would use services and technology to help **predict and avoid disease** and when ill, they would be treated by appropriately specialised professionals (given the advances in medicine and ability to target treatments to the individual as well as the disease).

To make Cheshire East a healthier place to live, the health and wellbeing of the residents of Cheshire East must be brought to the forefront of all of our decisions and actions. The National Institute for Health and Care Excellence (NICE) has written public health guidance on identifying and supporting people most at risk of dying prematurely. This, along with other NICE public health guidance, will support our work locally ensuring it is evidence based and robust. I believe the following key actions will ensure we are on track:

Actions for Public Health to lead

1. Promoting the NHS Health Check for people aged 40-74 years; identifying those with major or multiple risk factors which could lead to premature death and reducing these risks.
2. Ensuring maximum uptake of current national cancer screening programmes and promotion and support of early detection.
3. Reducing harmful drinking
4. Reducing smoking amongst highly addicted smokers and reduce the number of young people starting to smoke.
5. Increasing physical activity; helping people to build it into their day and promoting low cost physical activities which are accessible to all.
6. Working with local businesses and food banks and others to promote healthy eating; encourage and support people to eat healthier, locally grown, cheaper unprocessed foods.

Actions for all including NHS, Council, Statutory, Voluntary & Business Sectors

7. Using readily available data to identify people at greatest risk of premature mortality and target action appropriately.
8. Address any issues of unequal access to high quality services.
9. Work in partnership to provide people at risk of premature mortality with appropriate support to encourage behaviour change to reduce their risk factors.
10. Build health and wellbeing or preventative measures into everyday business - including the delivery of health and social care and treatment services.
11. Work in partnership to build up the 'wider public health workforce' – health is everyone's business.
12. Leading by example with healthy workplaces, healthy schools, and a healthy and safe environment.

Many of these actions are happening in parts of Cheshire East. To build on good work already in place, to make the changes needed to reduce premature mortality, it will be necessary for these actions to be targeted well and undertaken systematically. It requires change from us all.

In 2002, Sir Derek Wanless produced a review, commissioned by the then Government, into the UK's healthcare funding needs over the next 20 years. The report outlined three possible scenarios - solid progress, slow uptake and fully-engaged[2]. Major features of the "fully-engaged" scenario include, **a**

[2] **solid progress** - people becoming more engaged in relation to their health; life expectancy rises considerably, health status improves and people have confidence in the primary care system and use it more appropriately. The heath service is responsive, with high rates of

massive improvement in the public's engagement in their own health, driven by widespread access to information; a dramatic improvement in public health, with a sharp decline in key factors such as smoking and obesity as people take ownership of their own health; and the rapid and effective uptake of "appropriate" technology as engagement rises, with health needs and the type of care available becoming more sophisticated (All Party Parliamentary Group on Primary Care & Public Health, 2012, pg 1). This challenge is as relevant now as in 2002. The report presented the fully-engaged scenario as a way to deliver rapid improvement in the population's health, with a fully engaged public and high quality service. If the residents of Cheshire East, the public sector, NHS, voluntary and business sectors alongside the public health department engage with the vision of a healthier Cheshire East and work together to ensure this future happens, real changes will be seen locally.

In this report, I will consider the key issues causing premature mortality and identify why these problems exist locally. I also have a specific local call to action for all those involved in improving the health of Cheshire East residents to bring the health of Cheshire East residents up to that of the best in Europe. Together, we can reduce the number of premature deaths locally and in doing so we will improve the overall health and wellbeing of Cheshire East residents.

Dr Heather Grimbaldeston
Director of Public Health

technology uptake and more efficient use of resources.
slow uptake – there is no change in the level of public engagement; life expectancy rises by the lowest amount in all three scenarios and the health status of the population is constant or deteriorates. The health service is relatively unresponsive, with low rates of technology uptake and low productivity.
fully-engaged – levels of public engagement in relation to their health are high; life expectancy increases and goes beyond current forecasts, health status improves dramatically and people are confident in the health system and demand high-quality care. The health service is responsive, with high rates of technology uptake, particularly in relation to disease prevention. Use of resources is more efficient. (http://www.pagb.co.uk/appg/inquiryreports/WanlessReview10yearson_2012.pdf, pg 7).

Chapter One

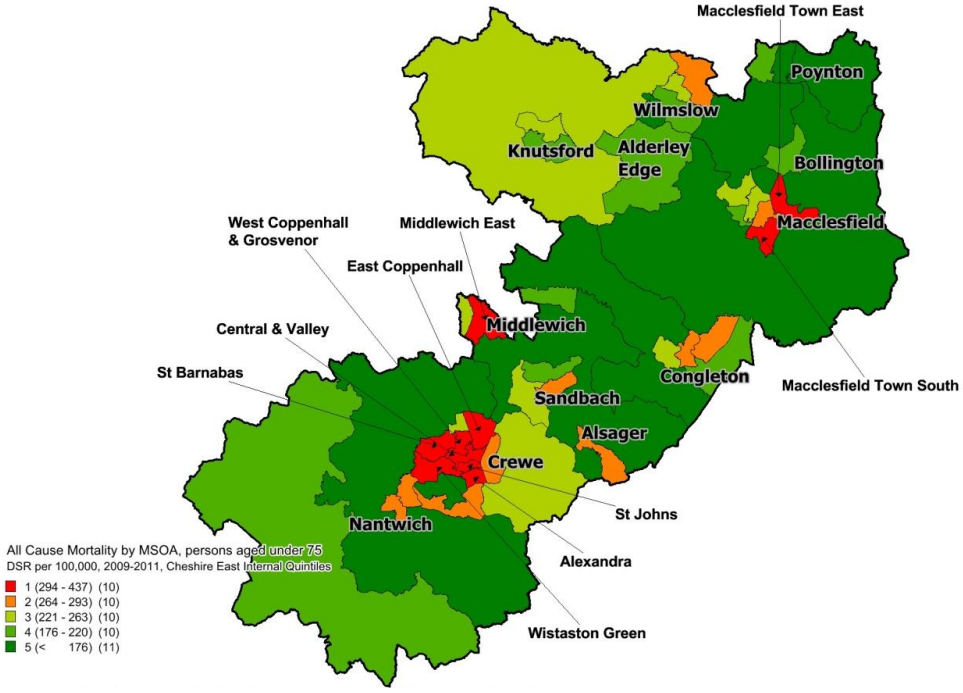
A Call to Action

Throughout the twentieth century our living standards and healthcare have improved to the point that now in the twenty-first century life expectancy is longer than ever before. In England, a baby boy born today can expect to live until he is at least 78 years of age, and for a baby girl this is 83 years (Office for National Statistics, 2013). People aged 65 now, having survived to this age in England, can expect to live for a considerably longer period; a further 18 years for men and 21 years for women (ONS, 2013). As a society, we expect people to live until they are at least 75 years old.

Therefore, any death under the age of 75 is now classed as a premature death. **Within Cheshire East over 1,000 people per year die before their 75th birthday. And three quarters of these are avoidable[3].** Although premature deaths, in Cheshire East, spike in the 60-74 age range in both men and women, 48% of all premature deaths occur in people of working age (15-64 years). This premature mortality affects all communities within Cheshire East, but some areas experience more premature deaths than others.

Whilst Cheshire East Council is ranked nationally as one of the councils' with lower rates of premature mortality this masks the wide variations which can be seen locally between areas within Cheshire East. Early death rates in Crewe Local Area Partnership (LAP) are much higher than in all other LAP areas in Cheshire East and they are also higher than the England average.

Map 1: Cheshire East Premature Mortality 2009-2011



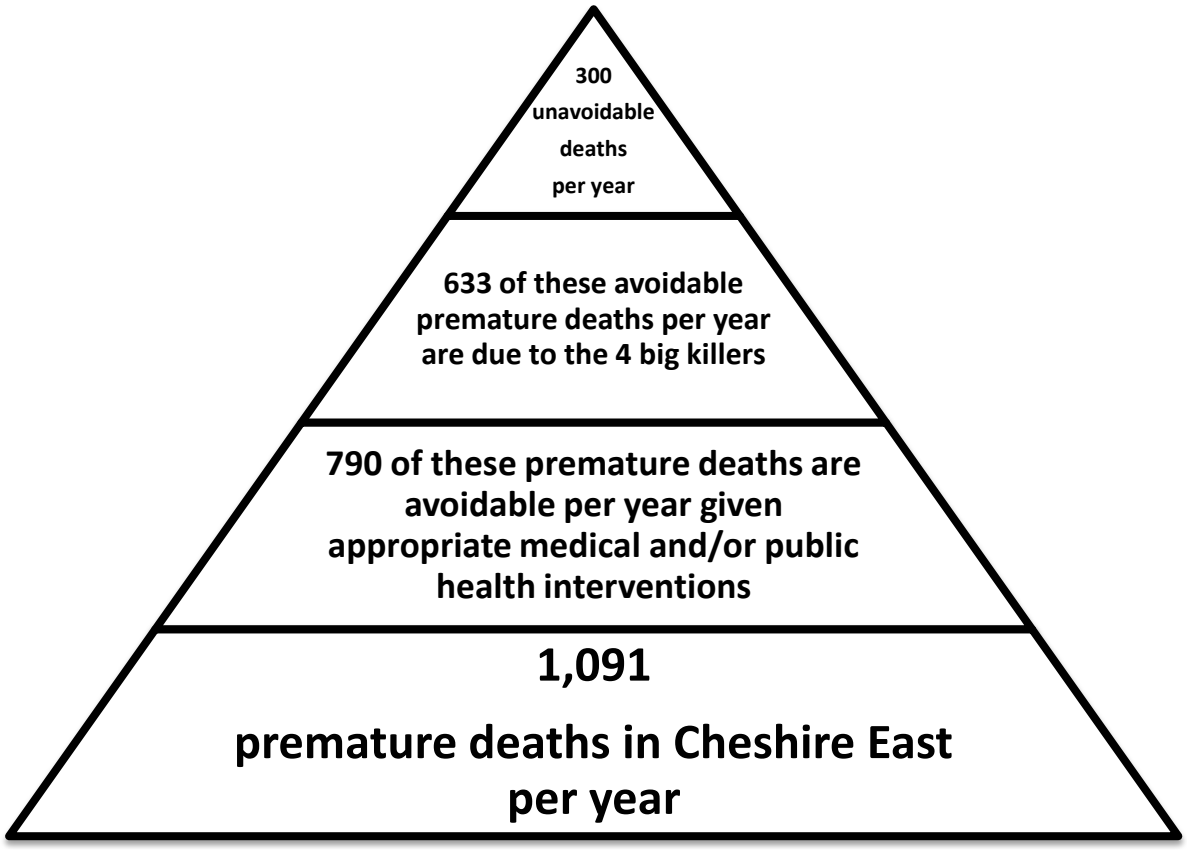
[3] Avoidable deaths are those that would not have happened if appropriate medical and/or public health interventions had taken place to reduce a person's risk of dying prematurely.

Source: 2001 Census, Output Area Boundaries, Crown Copyright 2003. Crown copyright material is reproduced with the permission of the Controller of HMSO. Created by Public Health Intelligence Cheshire East Council.

It is likely that someone dying prematurely will have been until their death an active member of society. Nationally, one in 10 people are carers (www.carers.org.uk) and one in four working families rely on grandparents for childcare (www.grandparentsplus.org.uk). Thus, premature deaths can lead to unforeseen circumstances. Not only can families find themselves in financial difficulties due to the loss of earnings from the person who has died, but the deaths can lead to an increased need for services for families and affected individuals.

Reducing the nearly 800 avoidable premature deaths per year, will have a considerable impact and help maintain the health of all Cheshire East residents. In Figure 2 the pyramid shows that only a small number of premature deaths were unavoidable – they would have happened no matter what interventions were put in place. All others however, could have been avoided with appropriate medical and/or public health interventions.

Figure 2: Cheshire East Premature Mortality Pyramid



Source: Public Health England, Longer Lives, PHMF; Public Health Mortality File

Key Facts About Premature Mortality in Cheshire East

The Good News

1. Over the past nine years there has been a decrease of 22% in the premature mortality rates seen in Cheshire East.

2. Although more men die prematurely in Cheshire East than women, the reduction in male premature death has been greater over the past nine years.

The News to Note:

1. 82% of all the premature deaths are caused by just four big killers.

2. Over 600 deaths a year in Cheshire East, from the top four causes of premature death (cancer, heart disease and stroke, lung disease and liver disease), are avoidable.

3. Female premature mortality rates have been static since 2005-2007 with only small reductions seen since then.

4. The largest number of premature deaths is found in Crewe Local Area Partnership (LAP).

5. The number of premature deaths in Crewe LAP is comparable to local authorities in the third highest decile (tenth) for premature mortality in the country.

Women in Crewe have significantly higher rates of premature mortality than those living in any other Cheshire East LAP.

82% of all the premature deaths are caused by just four big killers

The four top causes of premature mortality highlighted in 'Living Well for Longer' are:

- Cancer
- Heart disease and stroke
- Lung disease
- Liver disease

Locally the majority (82%) of the premature deaths were due to these four top causes, with cancers being by far the most common cause of death (43%). In addition, accidents (including road traffic accidents), suicide and undetermined injury are responsible for a further 6% of premature deaths. Within accidents, approximately 25% of deaths were caused by falls and 33% of deaths were caused by road traffic accidents (RTAs). RTAs are considered in detail in Chapter Six. Falls are discussed in Chapter Two.

Table 1: Premature Deaths in Cheshire East by Cause

Cause of death		Number of premature deaths in Cheshire East over the three years 2009-2011		
		Males	Females	Total / %
1.	Cancers	755	659	1,414 (43.2%)
2.	Heart disease and stroke	506	275	781 (23.9%)
3.	Lung disease	176	128	304 (9.3%)
4.	Liver disease	112	58	170 (5.2%)
5.	Accidents	76	38	114 (3.5%)
6.	Suicide & injury undetermined	65	17	82 (2.5%)
7.	All others	210	197	407 (12.4%)
TOTAL		**1,900**	**1,372**	**3,272**

Source: Rates are calculated locally using Public Health Mortality Files & ONS LSOA Single Year of Age Population Estimates

Over the past nine years there has been a decrease of 22% in the premature mortality rates seen in Cheshire East. The largest reduction has been seen in males.

Over 600 deaths a year in Cheshire East, from the top four causes of premature death (cancer, heart disease and stroke, lung disease and liver disease), are avoidable.

Over the past 9 years there has been a very clear and sustained decrease in premature mortality rates of 22% in Cheshire East. Whilst more men are dying prematurely than women, the greater gain in reduced premature mortality has been seen in males.

However, in 2009-2011, 1,898 (71%) of the 2,669 deaths due to the top four causes were potentially avoidable; over 600 deaths each year.

The greatest reduction in premature deaths are likely to have come from improvements in healthcare services and developments in medicine. This is welcome news and reflected, in part, by a number of national initiatives e.g. the Quality and Outcomes Framework (QOF) for GP practices and national targets which covered cancer screening programmes, childhood immunisations and waiting times for access to hospital based services.

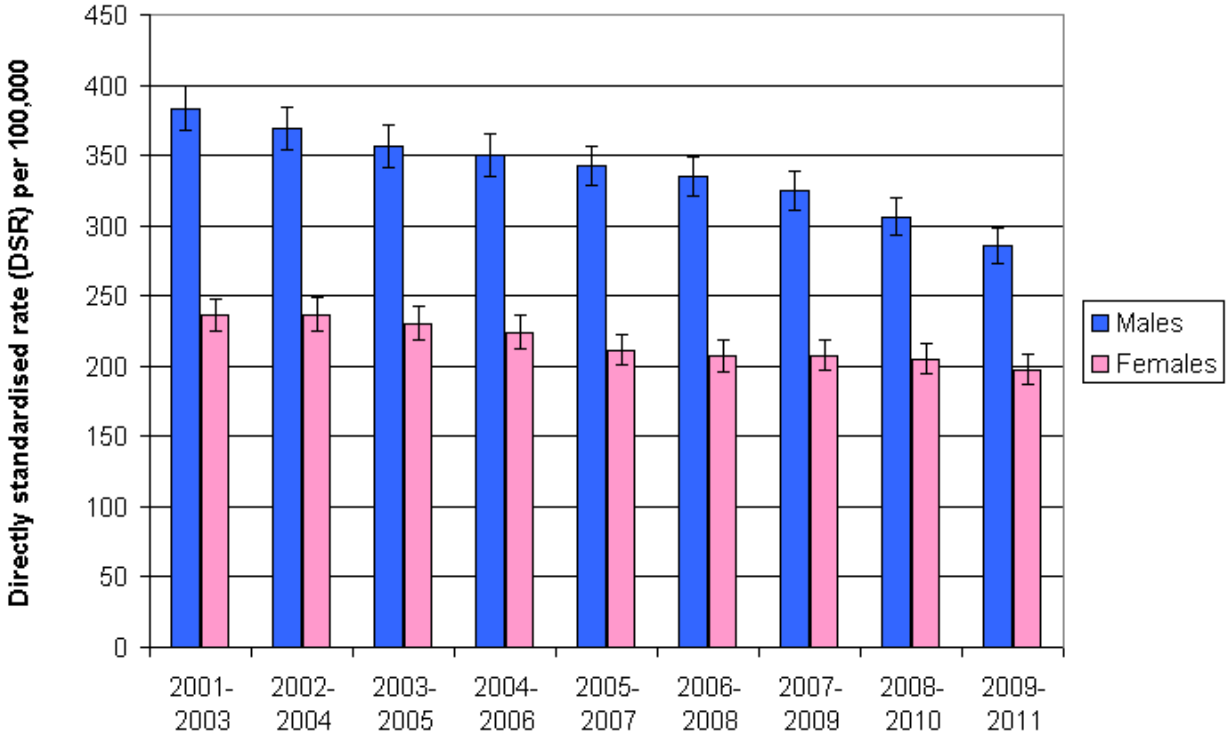
Although more men die prematurely in Cheshire East than women, the reduction in male premature deaths has been greater over the past 9 years.

Female premature mortality rates have been static since 2005-2007 with only small reductions seen since then.

Reductions in premature mortality rates were higher for males than for females between 2001-2003 and 2009-2011. This reduction along with a noticeable stalling of the decrease in female premature mortality rates, with only minimal reductions recorded since 2005-2007, has narrowed the gap

between the two genders. Yet despite this, gender differences remain, with male premature mortality rates being 44% higher than female premature mortality rates in 2009-2011.

Figure 3: Directly Standardised[4] Premature Mortality Rate in Cheshire East - All Causes



Source: PHMF/ONS PE

Table 2: Decrease in Directly Standardised Premature Mortality Rate in Cheshire East between 2001-2003 and 2009-2011

	Directly standardised premature mortality rate (per 100,000) in Cheshire East		Decrease in directly standardised premature mortality rate in Cheshire East between 2001-2003 and 2009-2011
	2001-2003	2009-2011	
Males	383	285	26%
Females	236	198	16%
Persons	619	483	22%

Source: PHMF/ONS PE

[4] Direct standardisation allows direct comparison of rates between populations with different age structures.

The largest number of premature deaths is found in Crewe Local Area Partnership (LAP).

The number of premature deaths in Crewe LAP is comparable to local authorities in the third highest decile for premature mortality in the country.

Cheshire East has lower than average premature mortality compared to the rest of England and is ranked 38 out of 150 local authorities (Public Health England, 2013). Cheshire East is one of the least socioeconomically deprived areas in England, and is ranked within the 9th decile (tenth) for deprivation in England (the second least deprived)[5]. Yet when compared with other local authorities also ranked in the 9th decile, who have similar socioeconomic deprivation levels, Cheshire East performs less well and is ranked 11 out of 15 local authorities (see Table 3).

Table 3: Similar Areas Ranking Table

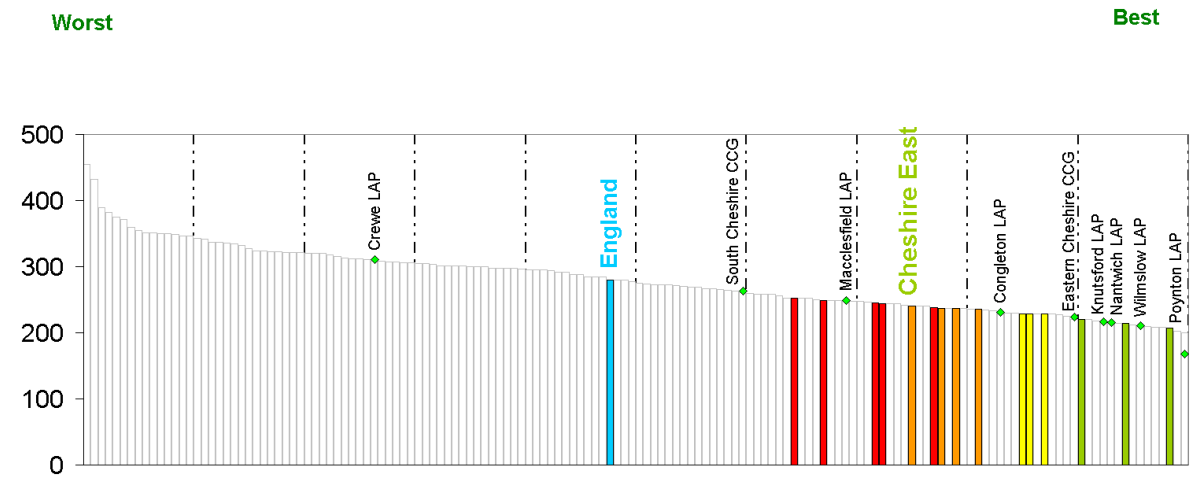
Rank	Local Authority	Population	Premature Deaths per 100,000
1	Dorset CC	413,813	207.3
2	Bromley	310,554	213.8
3	Cambridgeshire CC	622,312	220.0
4	Wiltshire	474,319	228.5
5	Oxfordshire CC	654,791	228.7
6	West Sussex CC	808,919	228.9
7	Merton	200,543	235.5
8	Gloucestershire CC	598,289	236.5
9	North Yorkshire CC	601,506	236.9
10	Essex CC	1,396,599	238.1
11	Cheshire East	370,736	240.9
12	Warwickshire CC	546,554	244.6
13	East Riding of Yorkshire	334,673	245.2
14	North Somerset	203,091	248.9
15	York	197,783	252.2

Source: longerlives.phe.org.uk/mortality-rankings#are/E06000049/par/IMD10-UTLA-D9

[5] The 2013 report 'The NHS belongs to the People: A Call to Action' highlights that "the more socially deprived people are, the higher their chance of premature mortality, even though this mortality is also more avoidable" (pg 10).

In addition the positive national position masks the wide variations which can be seen locally between areas within Cheshire East. Early death rates in Crewe LAP are much higher than in all other LAP areas in Cheshire East and they are also higher than the England average.

Figure 4: Premature Mortality, Directly Standardised Rate per 100,000, Persons Aged Under 75, 2009-11, Local Authorities Ranked by Mortality Decile



Source: PHE Longer Lives, PHOF Data Tool, PHMF/ONS PE

On the graph above, the coloured bars represent other local authorities within Cheshire East's peer group with those marked red being significantly worse than the peer group, orange being slightly worse, yellow being slightly better and green being significantly better. The graph also shows where the different LAP areas in Cheshire East sit on the national scale.

As Figure 4Figure 4 shows, when compared to its peers, Cheshire East's premature mortality rate places it in the 8th decile rather than the 9th decile where it truly sits. This therefore presents a challenge to Cheshire East, to explore the issues contributing to premature deaths locally, with an aspiration that addressing these issues will reduce the number of early deaths and therefore result in a premature mortality rate in line with similar authorities in the 9th decile.

Overall Crewe residents experience premature mortality at a rate of 311 per 100,000 whilst for those in Poynton (the LAP with the lowest premature mortality rate) the rate is only 168 per 100,000. Furthermore, reductions in premature mortality in Crewe between 2001-2003 and 2009-2011 have been much more modest than those observed for Cheshire East as a whole.

The significantly worse health outcomes experienced by the people of Crewe adversely affect the average premature mortality rates experienced by both Cheshire East as a whole and also those living in the area served by South Cheshire Clinical Commissioning Group (SCCCG).

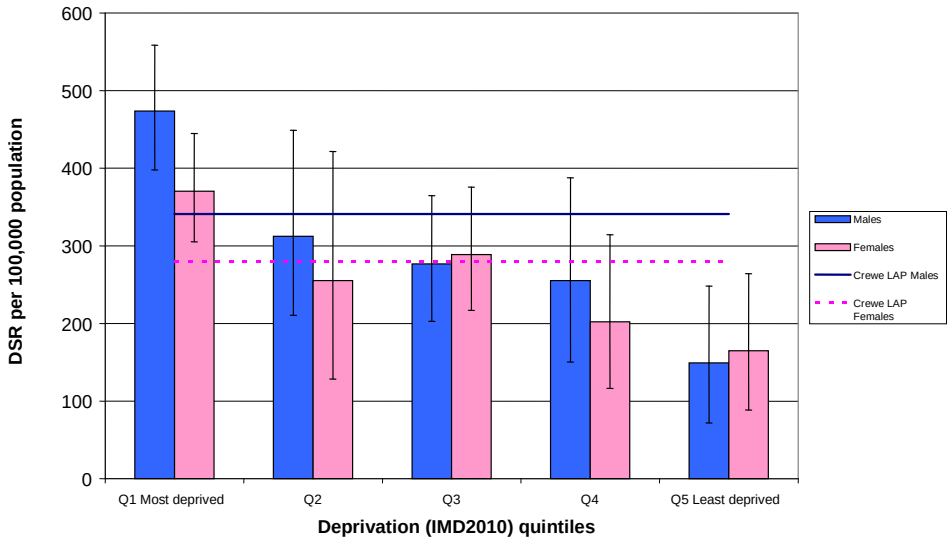
To reach the group average for premature mortality in Cheshire East's peer group of local authorities a reduction of 72 premature deaths per year need to be achieved. The majority of this reduction would need to be in the Crewe LAP.

The local variations are multi-factorial but are due in part to the health experience of people living in socioeconomically deprived areas (see Map 2). Socioeconomic deprivation is strongly associated

with early death rates. The most deprived populations in Cheshire East are found in Crewe LAP, although almost every town in the borough contains one or more small communities with high levels of deprivation. Local levels of socioeconomic deprivation can affect early death rates in several possible ways. These include the health effects of material deprivation (e.g. through poorer housing, education and income), higher prevalence of harmful lifestyle behaviours (e.g. smoking) and reduced access to good quality healthcare.

The pattern of higher premature death rates amongst people experiencing higher levels of deprivation can be seen even at the LAP level. **Within Crewe LAP, those who are less deprived have better health and a reduced risk of dying prematurely.**

Figure 5: Directly Standardised Mortality Rates for All causes by deprivation quintile, Crewe LAP, aged under 75, Males & Females, 2009-11 provisional (using Mid2011 population estimates)

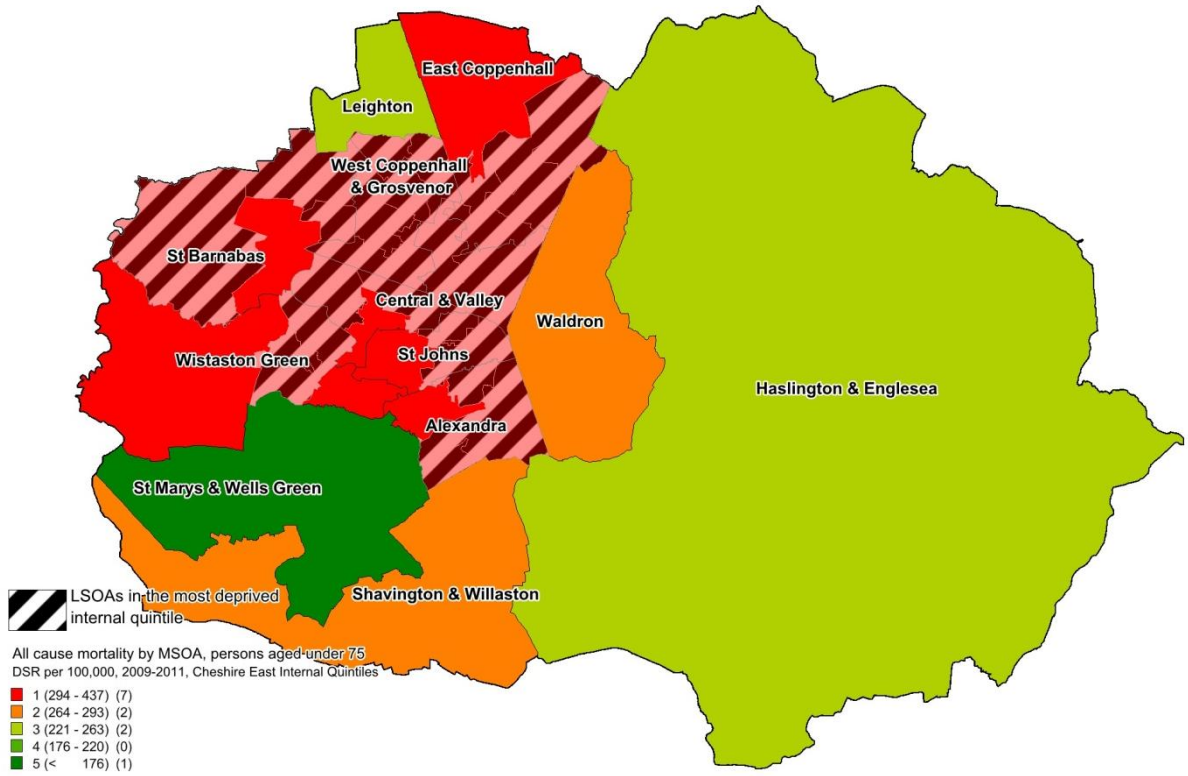


Source: PHMF/ONS PE

Figure 5 shows premature deaths in Crewe LAP by deprivation quintile (fifths). The highest rates of premature deaths are seen in the most deprived areas with more men dying prematurely than women, but both are significantly higher than the Crewe LAP overall. The difference in mortality rates between men and women is very much less pronounced than in other LAPs in Cheshire East, and in several parts of Crewe female mortality is actually higher than male.

Map 2 and Map 3 show where the premature deaths are occurring within Crewe and Macclesfield LAPs. In Crewe LAP the higher rates of premature deaths correspond to the Local Super Output Areas (LSOAs) in the most deprived internal quintile. It clearly shows the impact of deprivation on health even at this micro level. This is also the case in Macclesfield LAP though there is wider variation in this area.

Map 2: Crewe LAP Premature Mortality



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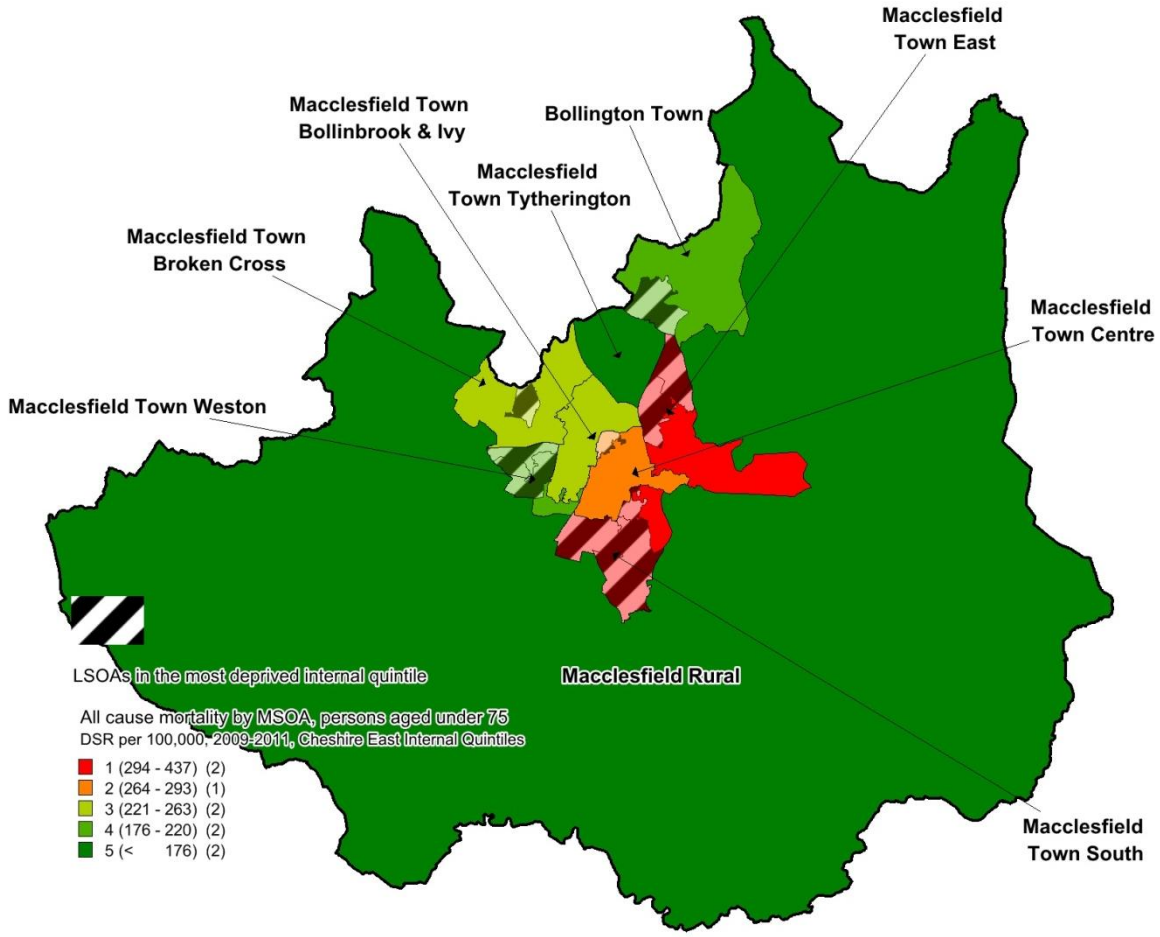
Amongst the remaining LAPs in Cheshire East, the premature mortality rates are much lower. For women, all the remaining LAPs have rates of premature mortality below the Cheshire East 2009-11 average. The same is seen for men in all remaining LAPs except in Macclesfield LAP which had higher rates of premature mortality than the Cheshire East average in 2009-2011 (see Chapter Three where premature deaths in Macclesfield LAP are considered further).

Map 3: Macclesfield LAP Premature Mortality



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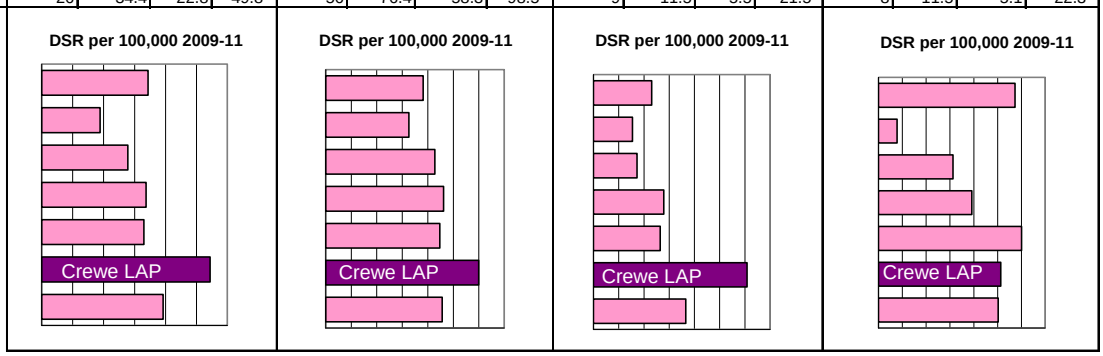
The residents of Congleton, Knutsford, Nantwich, Wilmslow and Poynton LAPs have overall premature mortality rates that are amongst the best in England, although they too have small areas with high levels of preventative mortality.

Women in Crewe have significantly higher rates of premature mortality than those living in any other Cheshire East LAP.

In addition to the overall higher premature mortality seen in Crewe LAP, the gap between the rates of male and female premature deaths is much narrower. Males and females in Crewe LAP had higher rates of early deaths than the Cheshire East average in 2009-2011. Indeed, females in Crewe have significantly higher rates of premature mortality than those living in any other Cheshire East LAP. In Crewe LAP more women die of cancer than men, however nationally, and in the rest of Cheshire East, it is the other way around with more men dying from cancer than women (see Chapter Three). There are higher rates of heart disease amongst women in Crewe LAP compared to other LAPs (see Chapter Four) and COPD (Chapter Five).

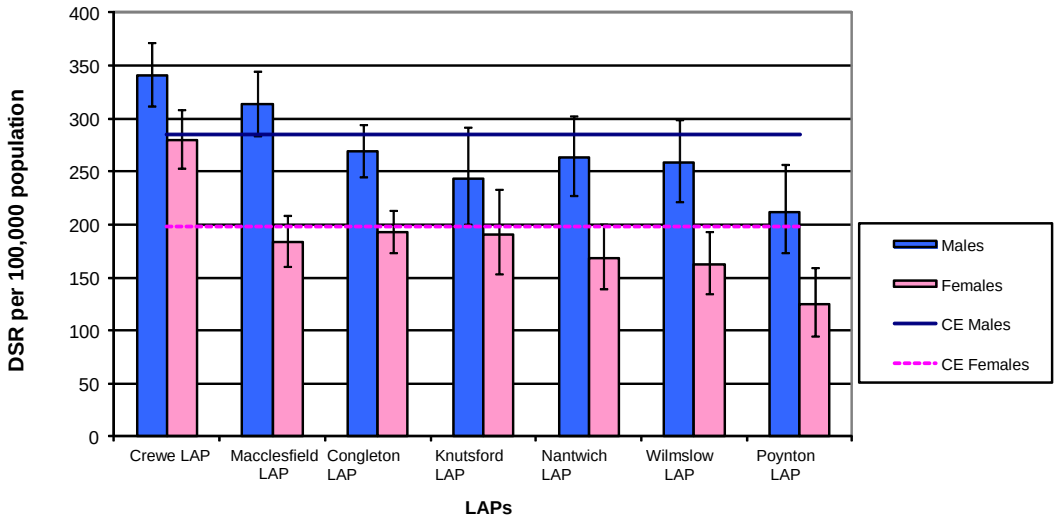
Figure 6: Four main causes of death in women under 75, Cheshire East, 2009-2011

	Circulatory Disease				Cancer				Respiratory Disease				Liver Disease			
	No. deaths	DSR	UCI	LCI	No. deaths	DSR	UCI	LCI	No. deaths	DSR	UCI	LCI	No. deaths	DSR	UCI	LCI
Cheshire East	**275**	**37.5**	**33.3**	**42.1**	**659**	**93.2**	**86.4**	**100.4**	**128**	**17.0**	**14.3**	**20.2**	**58**	**9.0**	**6.9**	**11.6**
Congleton LAP	76	39.2	31.1	48.9	169	91.4	78.3	106.1	35	18.3	12.8	25.4	17	10.1	6.0	16.0
Crewe LAP	78	54.4	43.4	67.5	169	120.0	103.1	138.9	45	30.4	22.5	40.4	13	10.3	5.6	17.3
Knutsford LAP	18	33.0	19.8	51.9	46	89.6	65.9	119.0	7	13.2	5.5	27.0	6	12.0	4.6	25.8
Macclesfield LAP	45	33.8	24.9	44.9	119	92.4	77.0	110.1	20	14.0	8.7	21.3	9	7.8	3.7	14.7
Nantwich LAP	20	27.8	17.0	43.0	63	85.6	66.3	108.8	7	8.6	3.7	17.4	4	6.3	1.8	15.8
Poynton LAP	12	18.9	10.0	32.5	37	65.2	46.3	89.4	5	7.7	2.7	17.6	1	1.6	0.1	8.4
Wilmslow LAP	26	34.4	22.8	49.8	56	76.4	58.3	98.5	9	11.5	5.5	21.5	8	11.5	5.1	22.3



Source: PHMF/ONS PE

Figure 7: Directly Standardised Mortality Rates for All causes Cheshire East Local Area Partnerships, aged under 75, Males & Females, 2009-11 Provisional (using Mid 2011 population estimates)



Source: PHMF/ONS PE

Conclusion

As standards of living and life expectancy increase, we now expect people to live until they are at least 75 years of age, and therefore we now define an early or premature death as any death occurring in a person under the age of 75 years.

In total there are estimated to be 1,000 early deaths per year within this local authority, and whilst the rates of death have decreased by over a fifth in the last decade, too many people locally continue to die prematurely.

Over three quarters of these deaths (approximately 750 per year) are due to potentially avoidable causes, and it is therefore possible that these deaths could potentially be prevented. Over 80% of these deaths are known to be due to 'the 4 big killers', namely cancer, heart disease and stroke, lung disease and liver disease. Accidents (including road traffic accidents), suicide and undetermined injury collectively account for a further 6% of early deaths.

Although Cheshire East, compared to the rest of England, has relatively low premature death rates, there are stark variations in death rates within the local authority and between Local Area Partnerships; these variations correlate closely to the levels of deprivation within the communities affected. For example the premature death rate in Crewe is much higher than other Local Area Partnerships and higher than the England average. These data reflect the findings of the Marmot Report (2010) "...health inequalities result from social inequalities".

However, Marmot went on to state that **focusing solely on the most disadvantaged will not reduce health inequalities sufficiently. This is demonstrated well in both Figure 5 and Figure 6. To reduce the gradient in health, actions must be universal, but with a scale and intensity that is proportionate to the level of disadvantage. This is called proportionate universalism.** The next chapter will explore this concept in greater depth before we consider the major premature killers in Cheshire East, cancer, heart disease and stroke, lung disease and liver disease and also road traffic accidents and suicide.

Key Findings

- An early or premature death is any death occurring in a person under the age of 75 years
- Nationally, Cheshire East ranks in the top third of local authorities with low numbers of early deaths (approximately 1,000 early deaths per year). Yet when compared with other local authorities that have similar socioeconomic deprivation levels, Cheshire East performs less well and is ranked 11 out of 15 local authorities.
- Over three quarters of these deaths (approximately 750 per year) are due to a preventable causes (and over 80% of which are known to be due to 'the 4 big killers', namely cancer, heart disease and stroke, lung disease and liver disease)
- An awareness of the variations in death rates within the local authority and between Local Area Partnerships is important to help target action and reduce early deaths. To reach the average for premature mortality in Cheshire East's peer group of local authorities a reduction of 72 premature deaths per year is needed. The majority of this reduction would need to be in the Crewe LAP.

Chapter Two

Introducing Proportionate Universalism in Cheshire East

Proportionate universalism is the idea that health inequalities can be reduced across a community through universal action but with a scale and intensity that is proportionate to the level of disadvantage.

As highlighted in the foreword, the Marmot Review was commissioned to propose the most effective evidence-based strategy for reducing inequalities. The main findings are highlighted below:

1. Every year in England, between 1.3 and 2.5 million extra years of life are lost when people die prematurely as a result of health inequalities. In Cheshire East, the nearly 800 avoidable premature deaths that occur every year equate to a loss of about 15,000 years of future participation in society by these citizens.

2. There is a social gradient in health - the lower a person's social position, the worse his or her health. Action should focus on reducing the gradient in health.

3. Health inequalities result from social inequalities. Action on health inequalities requires action across all the social determinants of health.

4. However, **focusing solely on the most disadvantaged will not reduce health inequalities sufficiently. To reduce the gradient in health, actions must be universal, but with a scale and intensity that is proportionate to the level of disadvantage. This is called proportionate universalism**.

5. **Action taken to reduce health inequalities will benefit society in many ways**. It will have economic benefits in reducing losses from illness. These currently account for productivity losses, reduced tax revenue, higher welfare payments and increased treatment costs.

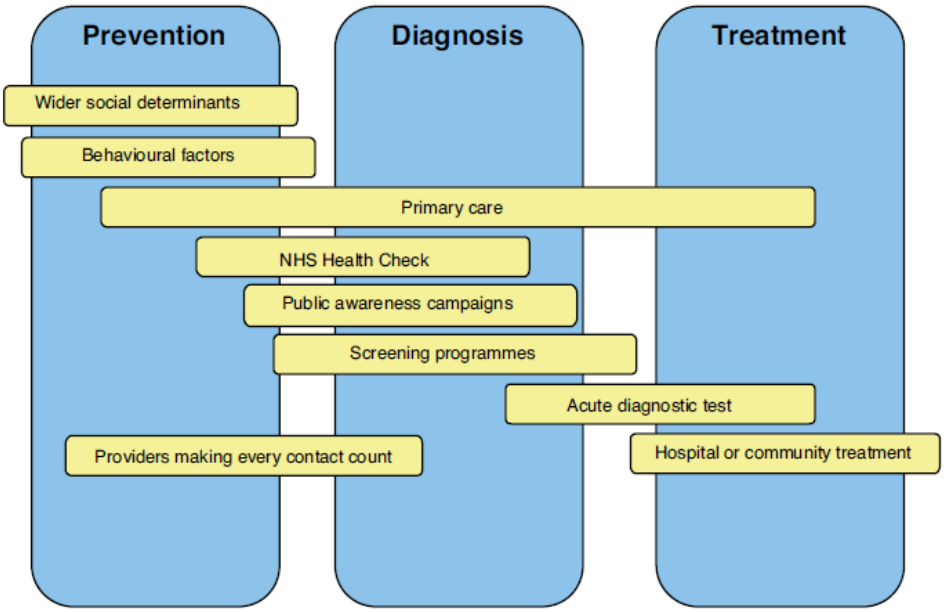
6. Reducing health inequalities will require concerted action across six objectives:

   - give every child the best start in life;
   - enable all children, young people and adults to maximise their capabilities and have control over their lives;
   - create fair employment and good work for all;
   - ensure a healthy standard of living for all;
   - create and develop healthy and sustainable places and communities;
   - strengthen the role and impact of the prevention of ill health.

7. **Delivering these objectives will require action by central and local government, the NHS, the third and private sectors and community groups.** National policies will not work without effective local delivery systems focused on health equity in all policies. Effective local delivery requires effective participatory decision-making at local level. This can only happen by empowering individuals and local communities.

Using proportionate universalism as a core principle across the three domains of prevention, early diagnosis and treatment will help to maximise the use of limited resources to reduce the number of premature deaths across the whole of Cheshire East.

Figure 8: The Three Domains of Prevention, Early Diagnosis and Treatment



Source: Living Well for Longer: A call to action to reduce avoidable premature mortality, DH, 2013, pg.12.

Improvements in mortality can be brought about:

1. through 'public health service' interventions e.g. helping people to take more exercise or stop smoking, or in tackling the wider social determinants of health – **this is termed preventable mortality,** or

2. through health care interventions such as the early diagnosis of diseases or conditions, and through effective treatment – **this is termed amenable mortality**

Although most 'public health service' interventions are designed to help those who do not yet have signs of poor health, public health and preventive initiatives are still key elements of the diagnosis and treatment domains. For example:

- by identifying early those people who are at higher risk of developing diseases - any symptoms/early illness can be managed more effectively, the possibility of complications reduced and people can be helped to change their lifestyles to prevent disease progression. This is the basis of the NHS Health Checks programme

- for those who already have a diagnosis, preventive measures can reduce the impact of the illness and the risk of dying early. Good examples of this include improved survival rates in those cancer patients who are able to begin or maintain regular physical activity or those with Type 2 diabetes who are able to maintain a planned weight reduction. Both of these groups have a reduced need for medication and also lower complication rates or becoming disease free

- those who already have a diagnosis also benefit from having comprehensive information about their condition, and support from others with a similar illness

Interventions can cross one or more of these domains. Changes and improvements do not necessarily need to cost money. They can simply be a reorganisation of how things are run, or improving access to existing services.

The "Be Steady Be Safe" falls prevention programme and Cherubs (Cheshire's Really Useful Breastfeeding Support) are examples of **proportionate universalism.** Both provide borough-wide support, combined with a targeted focus on specific groups or areas where need is greatest.

Be Steady Be Safe - a falls prevention programme

Falls give rise to significant costs to individuals, their families and public services due to hospitalisation, social care, repeated falls, loss of independence, impaired mobility and isolation. They can cause moderate to severe injuries, such as hip fractures and head trauma, and can increase the risk of early death. Many falls are linked to poor weather conditions or tripping over uneven pavements, and could easily be avoided.

The public health importance of falls has been recognised locally through the Be Steady Be Safe programme, which provides balance and strength exercise classes run by qualified Otago tutors. The programme runs borough-wide and is targeted at people who are worried about falling, have fallen or have poor balance or mobility. It provides advice on how to manage a fall and supports people to manage independently after a fall. Although many of the users are older people, the programme is targeted to anyone who is at increased risk from falls.

In 2012/13, 306 people attended Be Steady Be Safe classes. These were predominantly women (243 females, 63 males) with a wide range of ages (50 to 92 years). All of them were White British, which indicates a need to improve access for people from ethnic minority groups. The response to the programme has been very positive with 99% of participants feeling the class has helped them to stop falling in the future. 84% of participants have not fallen since taking part in the class.

Cherubs (Cheshire's Really Useful Breastfeeding Support)

Breast milk is the best food for a baby during infancy, but it also has longer term health benefits. Breastfed babies are less likely to become obese and therefore less likely to develop type 2 diabetes and other illnesses later in life. It is beneficial for the mother as it lowers the risk of breast and ovarian cancer. Thus breastfeeding helps to protect both baby and mum against premature mortality far into the future.

Launched in 2010, Cherubs includes a locally run website (www.cherubsbreastfeeding.co.uk), a Facebook group, breastfeeding support groups, a community-based Infant Feeding Co-ordinator and two part time Breastfeeding Support Workers (based in Crewe and Winsford). Breastfeeding women are trained to become Cherubs' Peer Supporters to other breastfeeding women. It runs a breastfeeding charter which is awarded to venues that show support to the breastfeeding mother and supports the hospitals and maternity services to achieve UNICEF Baby Friendly Accreditation.

Cherubs is a good example of proportionate universalism. It is available for all new mothers, with an additional focus on Crewe where breastfeeding rates are particularly low and extra support is needed in the community to encourage breastfeeding.

NHS Health Check (for more detail see Chapter Four)

The NHS Health Check is aimed at people aged 40-74 to identify those at greatest risk of common but preventable conditions such as heart disease, stroke, kidney disease or type 2 diabetes. Those aged 65-74 will also be given advice on dementia.

Everyone between the ages of 40 and 74 will be invited for a NHS Health Check once every five years if they have not already been diagnosed with vascular diseases or have certain risk factors such as high blood pressure or high cholesterol treated by medication.

At the check, the person's risk of heart disease, stroke, kidney disease and diabetes will be assessed. They will then be offered personalised advice and support to help them lower that risk and stay healthy. This could include suggestions on changes to their diet, reducing weight and increasing physical fitness, and help with stopping smoking.

The National Institute for Health and Care Excellence (NICE) has produced guidance (PH15) on identifying and supporting people most at risk of dying prematurely. Probably one of the most important is that **all patients who are considered to be 'disadvantaged' or at risk of premature death should be encouraged to register with a general practitioner**. This includes people in care, and provides them with access to acute level services if necessary and also preventative measures.

One of the recurring themes amongst the recommendations is that **services should be provided at times and in venues accessible to the community.** For example:

- Health sessions run at a range of public areas (e.g. the post office, supermarkets, charity shops, etc.) can be used to identify people at risk (e.g. by checking blood pressure)
- Flexible and co-ordinated services that reflect the needs of the local population should be provided (e.g. community based, out-of-hours, single sex)
- Provision in areas where the disadvantaged can easily access services, and help be supported to attend (e.g. by providing reminders, help with transport, offering home visits)

Some local GP practices run Saturday morning clinics for flu vaccinations at the practice or in civic buildings, which has increased uptake. Childhood immunisation clinics however, are often still held during the day. These clinics may not be convenient for working parents whose children are due their top-up or pre-school booster vaccinations and where needed clinics could be moved to a different time of the day or venue to improve uptake.

Some urban areas have introduced 'carer and commuter' clinics in the evenings for those who are unable to access GP appointments during the day. Other alternative venues for 'outreach' surgeries include children's centres for midwives and health visitor clinics; leisure centres are also now being viewed as a potential multi-functioning sites where clinics can be promoted to residents who otherwise may not attend or use leisure facilities.

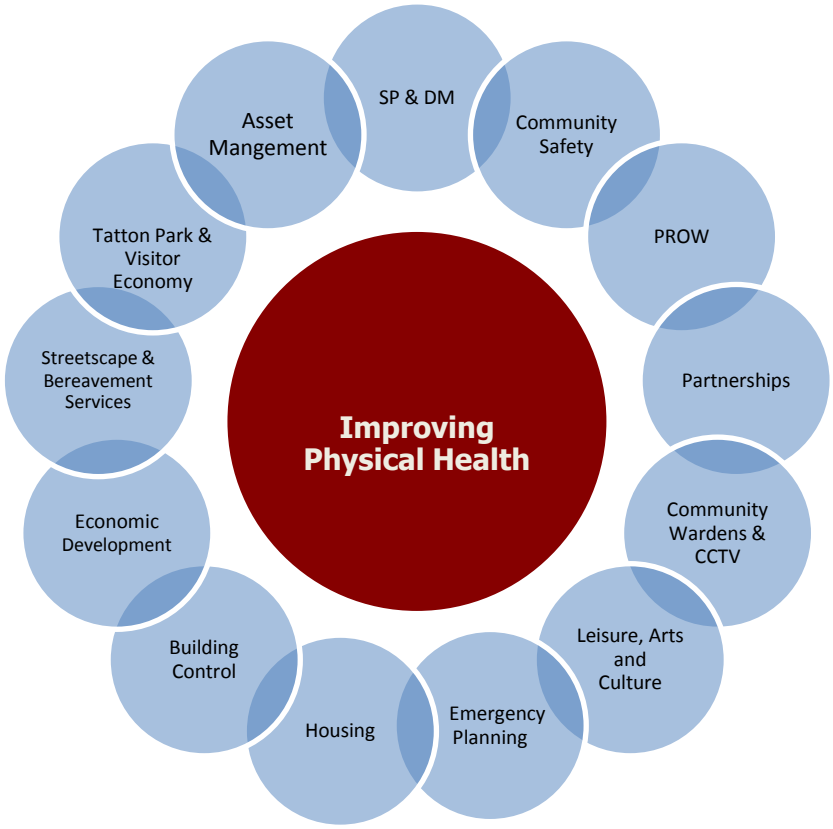
Changes can also be system based, with better use of available data. By providing effective treatment soon after diagnosis, the impact on a person's life in terms of disability and their risk of

premature mortality can be reduced. NICE has recommended that GP practices should routinely search their registers looking for patients who have failed to attend routine follow-up appointments or collected repeat prescriptions and make contact with them. They also recommend using general practice registers to identify patients who smoke, have a poor socioeconomic background, or have mental health problems that may have made it difficult for them to access preventive services.

Local service commissioners and providers can influence local public health through proportionate universalism by concentrating on those with poor health. Let us use physical activity as an example, which is an important public health intervention for all four of the main causes of premature mortality; cancer, heart disease and stroke, lung disease and liver disease. **Physical activity influences or directly links to 17 different outcomes from the Public Health Outcomes Framework for England.**

Within Cheshire East Council alone the work of thirteen different departments, excluding public health, has been found to contribute to improving the physical health of Cheshire East residents.

Figure 9: Health Mapping - Improving Physical Health



Source: Health Mapping: Places and Organisational Capacity, Tracey Bettaney, Public Protection and Health Manager, Cheshire East Council[6]

Improving physical health is about getting people to exercise and expanding the physical activity that people do on a daily basis and building it into a person's daily routine for example using sustainable

[6] Abbreviations Key:
SP&DM: Spatial Planning and Developments Management
PROW: Public Rights of Way

transport and the use of stairs rather than lifts. It is recommended that under 5s should do three hours of physical activity a day, 5-18 year olds should do one hour of physical activity a day and adults should do 30 minutes of physical activity five times a week (www.nhs.uk/livewell/fitness).

Swimming is one of the best 'all round' physical activities amongst all groups, however, swimming pools are known to be expensive to run. It currently costs £10.30 for a family of four to go swimming in Cheshire East despite the Council subsidy. Regular swimming is known to be too expensive for some residents. Central Government recognised this issue and funded a national free swimming scheme for under 16s and over 60s. Although funding for this scheme ended on 1 April 2010. Cheshire East Council continued to fund swimming for under 16s and over 60s up to 31 August 2010. Locally there was clear evidence of uptake of the sessions in both age groups. Between 1 April – 31 August 2010 20,815 swims were taken in the over 60s age group and 53,480 swims in the under 16s (Cheshire East Council, 2010). It is not possible to tell how many of these were single or return visits, but this does show that older people and children made use of this opportunity.

So, heavily discounted swimming does **not** need to be 'universal'. It can be targeted and fits well within the proportionate universalism model. Depending on a full cost benefit analysis and funding availability, it may be possible to offer discounted access to swimming for people who live in specific areas, encourage free or discounted swimming for families, older people or under 16s at specific times (e.g. weekends, early morning, school holidays).

NICE also recommends targeting people at key life stages (e.g. during pregnancy, or when entering or leaving the workforce) as these are times when people are most likely to be open to change.

It is also possible to offer discounted exercise for those whose GP or care professional (e.g. midwife or social worker) has 'prescribed' it (often called exercise on prescription). This could be linked to the new Health Check programme to benefit those identified as having an increased risk of heart disease, stroke, kidney disease or type 2 diabetes.

Not all changes need have a cost implication. NICE guidance (PH17) on 'Promoting physical activity for children and young people' suggests that Councils and schools, amongst others:

> actively promote public parks and facilities as well as more non-traditional spaces (for example, car parks outside working hours) as places where children and young people can be physically active

The guidance also suggests that signs such as 'no ball games' should be reconsidered as these limit spaces where young people, and their families, can be physically active near their homes.

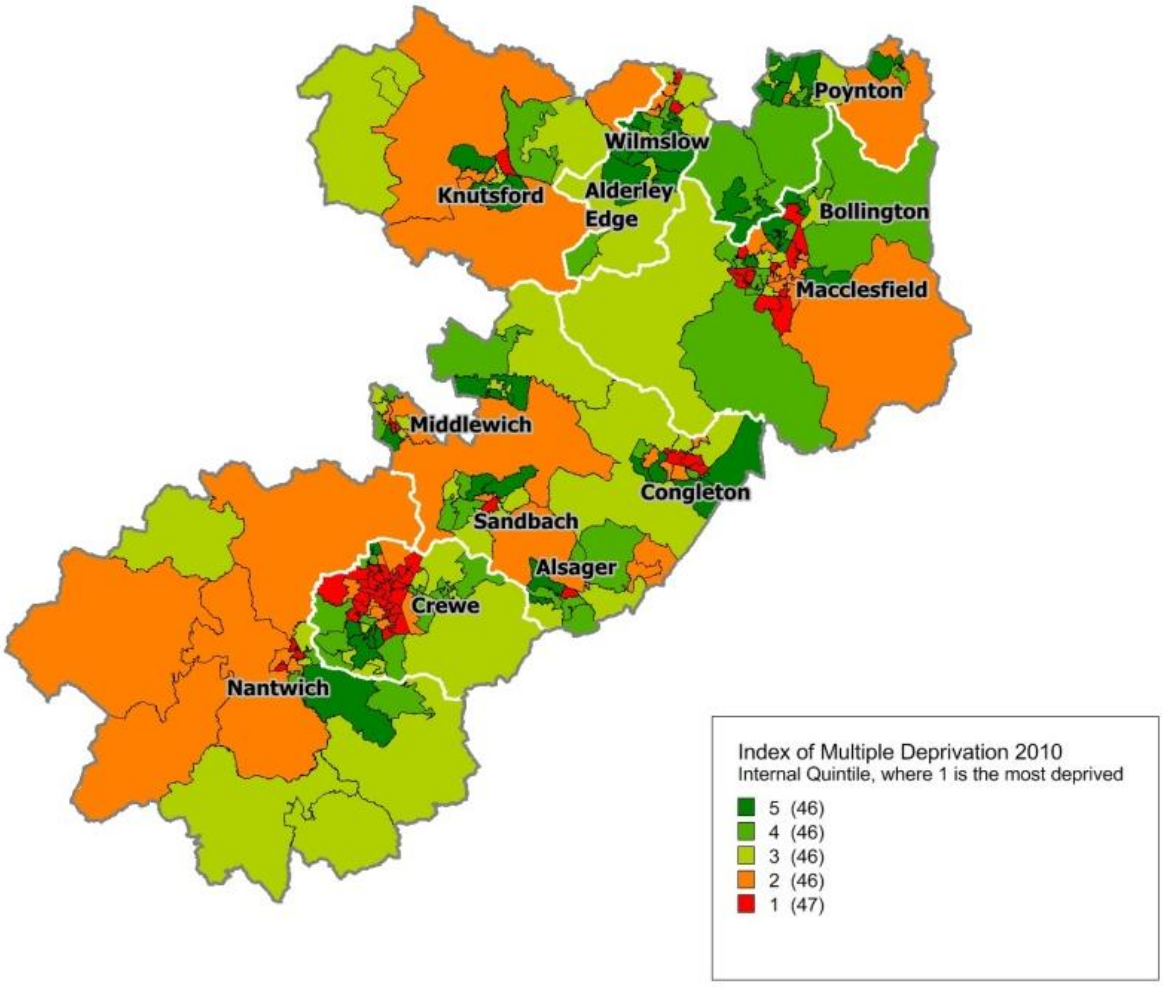
The beautiful parks in Cheshire East can be further promoted, and rural and town spaces used for more physical activities ranging from children's play areas to outdoor gyms. Working with local communities and the police and promoting regular group activities would help make residents feel safer and more confident about using these spaces both as part of a group and by themselves.

There are many opportunities for the Council to build on its current contribution to the health and wellbeing of its residents and fulfil its newly acquired statutory obligations. Improvements do not need to cost money, but do require close partnerships to be formed and an understanding of

common goals established. By thinking of the wider aspects of public health the Council will be able to influence local changes to improve the health of residents.

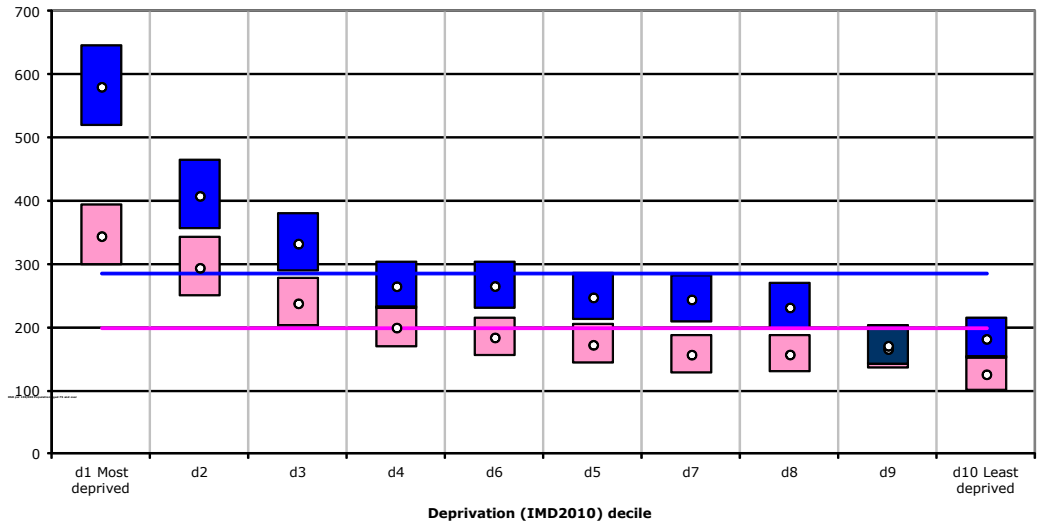
An **implicit assumption underlying proportionate universalism** is that health inequalities can be correctly identified and their significance assessed at a small area level. It is important to appreciate that some variations in health exist because of the histories and experiences of how people have grown up, lived and worked in their local neighbourhoods. Other variations may exist just through chance variation or because of an intermediate confounding effect. When looking at very small areas, an approach that can be taken is to aggregate similar areas together so that their collective experience can be more robustly assessed. An example of this is shown in Map 4 which shows small areas in the Borough by quintiles (or fifths) of deprivation, and in Figure 10 which shows the premature mortality rates for the same areas by an even finer disaggregation, deciles (or tenths).

Map 4: Cheshire East - Index of Multiple Deprivation 2010 Internal Quintile



Source: 2001 Census, Output Area Boundaries, Crown Copyright 2003. Crown copyright material is reproduced with the permission of the Controller of HMSO. Created by Public Health Intelligence Cheshire East Council.

Figure 10: Directly Standardised Mortality Rates for All Causes by deprivation decile, Cheshire East, aged under 75, Males & Females , 2009-11 provisional (using Mid 2011 population estimates)



Source: PHMF/ONS PE

People living in decile 1 live in the 10% most deprived areas locally and those in decile 10 live in the 10% least deprived areas locally. It highlights the stark difference living in deprivation makes to premature death, with rates being more than double for decile 1 compared to decile 10.

Some of the areas that can be used for targeting initiatives include:

- 52 Electoral wards with an average population size of 7,100
- 51 Middle level super output areas (MSOAs) with an average population size of 7,300
- 231 Lower level super output areas (LSOAs) with an average population size of 1,600
- 40 General practices with an average population size of 9,300

Though many public health interventions focus on population by GP practices or in the super output areas, it is important to recognise the importance of ward level action and the Councillors as a force for change locally within the wards they represent.

So what is the impact of introducing proportionate universalism? Clearly, where health differences exist, we want to be able to target all areas at a level that is appropriate to their needs, and in so doing we will achieve maximum health gains within the available resources. The key aim from a health and wellbeing perspective is to reduce variations in premature mortality. As fewer people die prematurely, life expectancy will increase both locally and across the Borough.

A common misconception is that prolonging life will cause people to live a greater proportion of their lives suffering with the burden of ill-health. The Office for National Statistics (ONS) has recently published a report that looks at variations in Healthy Life Expectancy (HLE). This is a quality of life measure dividing predicted life expectancy into time spent with or without illness or disability.

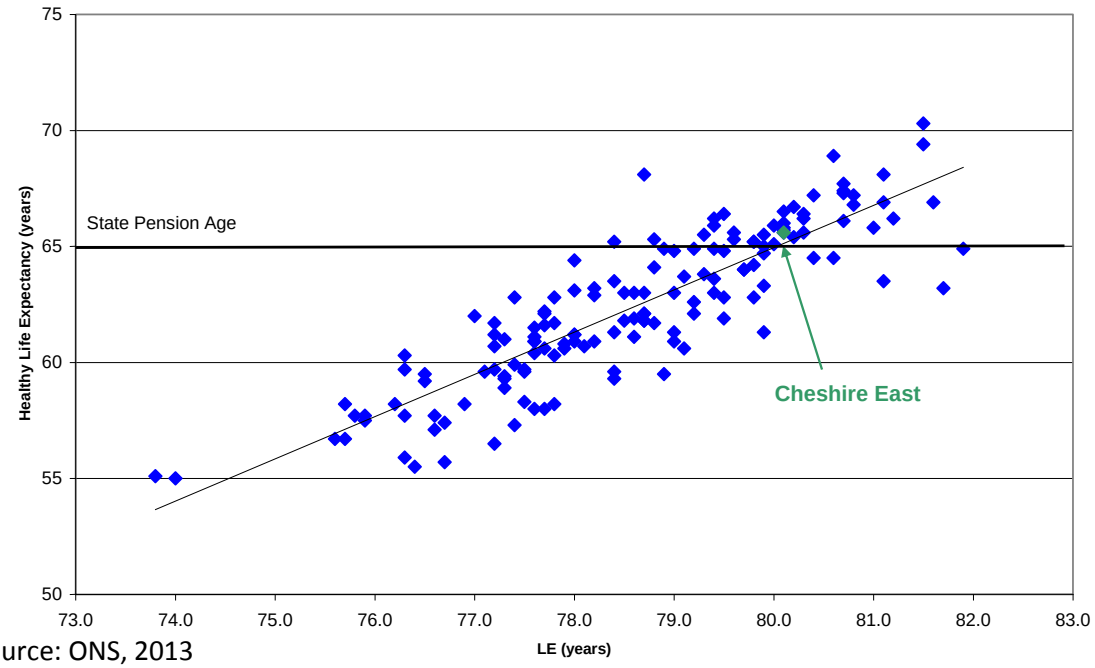
Healthy Life Expectancy is included in both of the overarching indicators of the Public Health Outcomes Framework, reflecting the public health focus of improving health and well-being across the life-course and not simply extending life. **Healthy Life Expectancy is an estimate of the number of years an individual can expect to spend in 'good' or 'very good' general health, based upon the following survey question: "How is your health in general; would you say it was…' – Very good, Good, Fair, Bad or Very bad?"**

In 2009-11, males living within Cheshire East were estimated to have a **Healthy Life Expectancy** of 65.6 years at birth. This is significantly higher than the North West (61.0 years) and England (63.2 years) averages. **This places Cheshire East within the best quartile (best 25%) nationally**. Richmond upon Thames, London (70.3 years) has the highest Male HLE in England, and **Cheshire East males would need to gain 4.7 years to match this.**

A female within the borough can expect to spend 66.8 years in 'good' or 'very good' general health, higher (not statistically significant) than the estimate for males. Cheshire East again falls within the **best national quartile**, significantly higher than both the North West (61.7 years) and the England average (64.2 years). Again Richmond upon Thames comes top nationally with a Female HLE of 72.1 years, 5.3 years higher than Cheshire East.

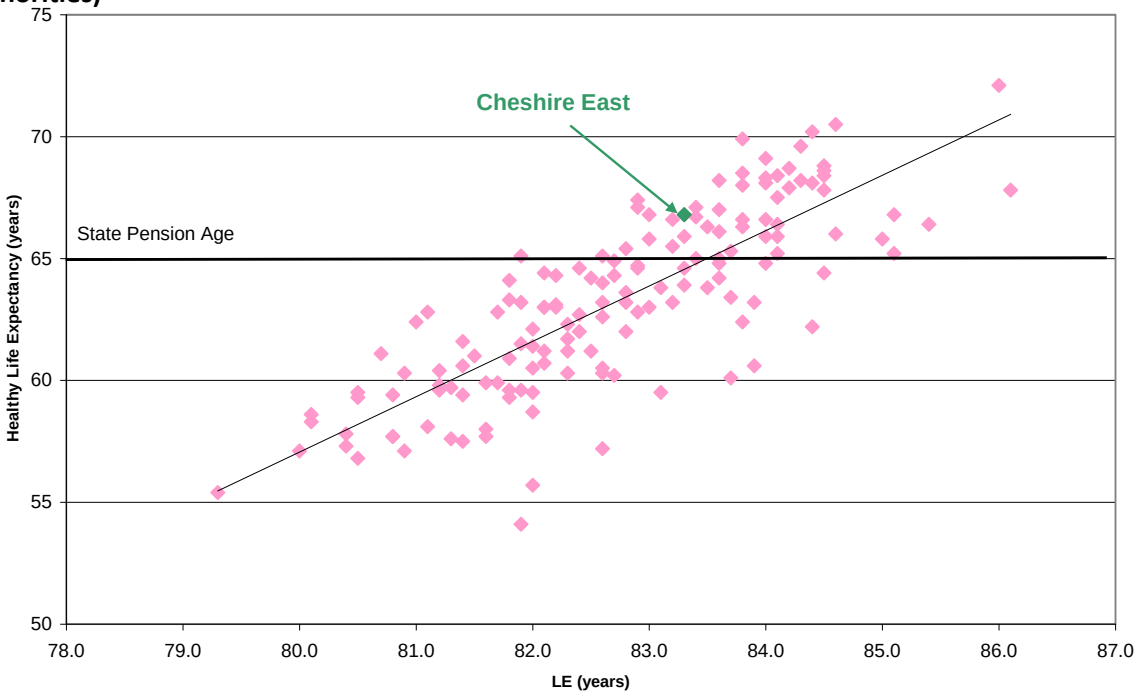
The graphs below show the strong relationship between living longer (life expectancy (LE)) and living longer in 'good' health (HLE). Although we are unable to replicate this analysis for lower geographies in order to show internal differences, we can use the locally calculated Life expectancy to identify areas within the borough that are likely to experience 'not good' health. This assumption is further supported by research evidence demonstrating **that people with poor self-reported health die sooner than those with self-rated 'good' health.**

Figure 11: Life Expectancy and Healthy Life Expectancy for males at birth, 2009-11 (upper tier authorities)



Source: ONS, 2013

Figure 12: Life Expectancy and Healthy Life Expectancy for females at birth 2009-11 (upper tier authorities)



Source: ONS, 2013

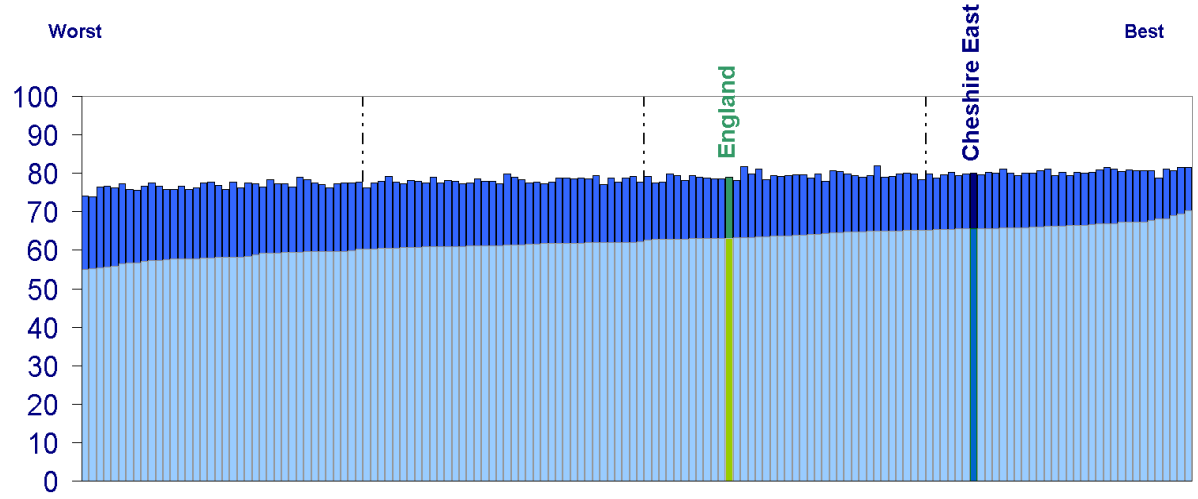
Healthy Life Expectancy is often contextualised in terms of the state pension age of 65; and age 65 is used for both males and females. **In Cheshire East it is similar to the state pension age of 65 for both sexes.**

The proportion of life spent in 'good' general health is calculated by dividing Healthy Life Expectancy by Life Expectancy. **In Cheshire East, men will spend 81.9% of their lives in good general health compared to the national average for England of 80.1% (rank 36/150). Women in Cheshire East will spend 80.2% of their lives in good general health. This is markedly better than the England average of 77.4% (rank 26/150). Both males and females fall within the highest national quintile**.

Men in Bedford (East Region) at 86.5% have the highest proportion of life spent in general good health in England. Women in Richmond upon Thames at 83.8% have the highest proportion of life spent in general good health in England. Cheshire East would need to make gains of 4.6% and 3.6% respectively to match these.

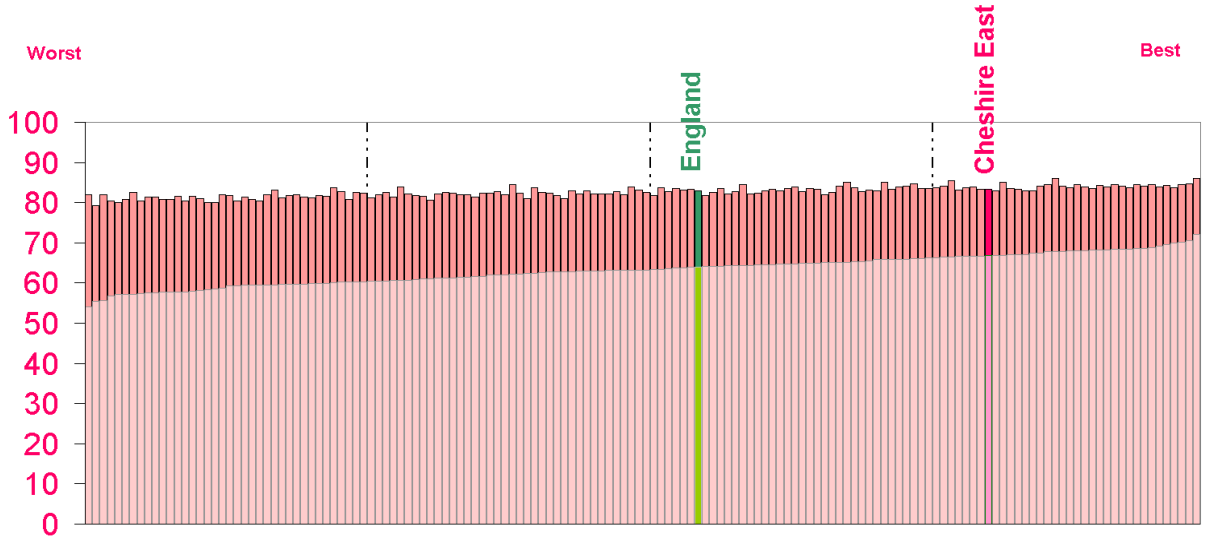
Analysing life expectancy against the proportion of life spent in 'good' health produces a trend indicating that generally **those who have longer lives also live for longer in self-rated 'good' health. This analysis also shows that in Cheshire East the actual proportions are higher than expected given the Life Expectancy values.** There is a strong relationship between Healthy Life Expectancy and deprivation, Healthy Life Expectancy tends to be lower in more deprived authorities. In Cheshire East Healthy Life Expectancy for males is as expected given the level of deprivation; **however the Healthy Life Expectancy for females is slightly lower than expected.**

Figure 13: Healthy Life Expectancy at birth, Males, 2009-2011



Source: ONS, 2013

Figure 14: Healthy Life Expectancy at birth, Females, 2009-2011



Source: ONS, 2013

Conclusion

This chapter has highlighted that proportional universalism will enable Cheshire East to improve the health and wellbeing of all its residents. Although overall the residents of Cheshire East have good life expectancy and will spend a large proportion of their lives living with good general health, these figures will mask variations within the borough.

There is lots of evidence linking deprivation with poor health and wellbeing and a higher risk of premature mortality. **In Cheshire East people living in the 10% most deprived areas locally have premature mortality rates which are more than double those of people living in the 10% least deprived areas locally**. People living in deprivation will also spend more of their lives living with

poor health. Through proportional universalism it will be possible to focus on the most deprived groups in Cheshire East whilst still providing support to the rest of the community.

In addition to proportionate universalism, improvements in premature mortality can be made through preventable mortality and amenable mortality. **By increasing public health interventions such as helping people to increase their levels of physical activity alongside healthcare interventions such as early diagnosis it will be possible to reduce their risk of premature mortality**. Neither preventable mortality nor amenable mortality need have high cost implications. It may only be necessary to consider new alternatives, such as allowing children the use of non-traditional spaces such as car parks (after business hours) in which to play or changing the timings or venue of a health care service to increase access.

Changes under preventable mortality and amenable mortality alongside proportionate universalism will help to reduce the nearly 800 avoidable premature deaths seen yearly in Cheshire East.

Key Findings

- **To reduce the gradient in health, actions must be universal, but with a scale and intensity that is proportionate to the level of disadvantage. This is called proportionate universalism**.
  - The "Be Steady Be Safe" falls prevention programme and Cherubs (Cheshire's Really Useful Breastfeeding Support) are examples of **proportionate universalism.**
- Health inequalities result from social inequalities. Action on health inequalities requires action across all the social determinants of health.
  - the Councillors can be a force for change locally within the wards they represent.
- People living in the 10% most deprived areas locally have premature mortality rates which are more than double those of people living in the 10% least deprived areas locally.
- In Cheshire East, the nearly 800 avoidable premature deaths that occur every year equate to a loss of about 15,000 years of future participation in society by these citizens.
- Improvements in mortality can be brought about through 'public health service' interventions such as smoking cessation services (**preventable mortality),** or through health care interventions such as the early diagnosis of diseases or conditions **(amenable mortality)**
  - **all patients who are considered to be 'disadvantaged' or at risk of premature death should be encouraged to register with a general practitioner**.
  - Flexibility in services including venues, timings and making them more accessible
- Lots of departments within the council are engaged in public health related work and it is important to raise awareness of public health and how people's jobs fit into the Council's new public health remit; the council has the chance to influence people's health choices through a range of methods and contact points.

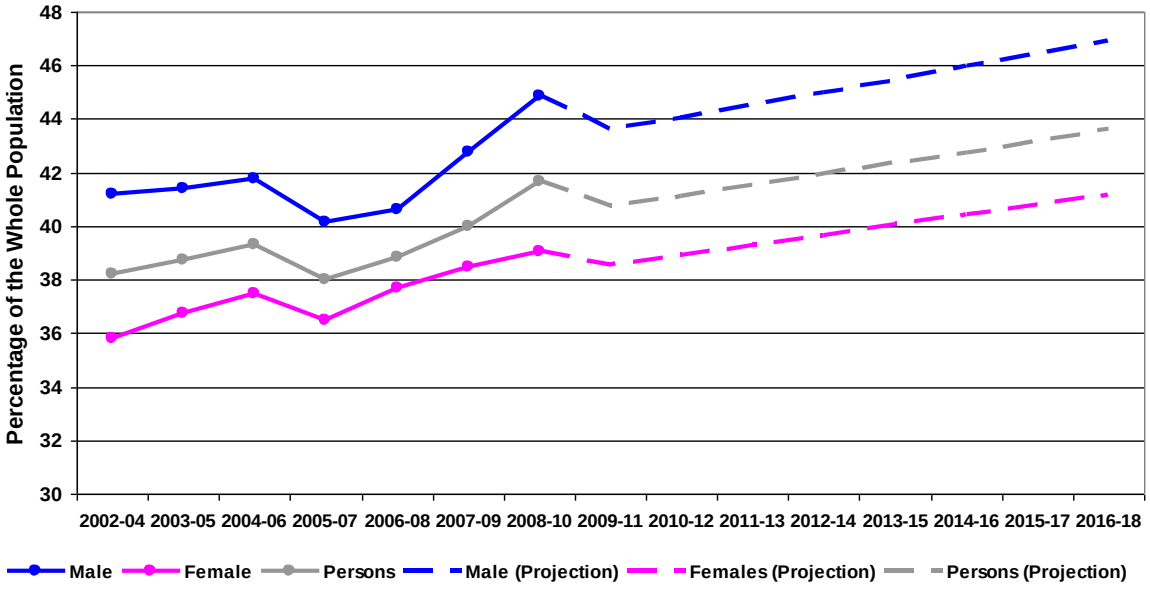
- Encourage a change of mindset relating to more non-traditional spaces such as car parks (outside working hours) as places where children and young people can be physically active
- Cheshire East is in the best national quartile for healthy life expectancy and the proportion of their lives that residents will spend in good general health

Chapter Three

Cancer

Cancer is a collective term for a number of diseases where normal body cells change and grow in an uncontrolled way and have the potential to invade other organs and structures. It is the biggest cause of death in Cheshire East, with 995 deaths in 2010. It is also the main cause of early death in the Borough, causing 459 deaths in people under the age of 75 in that year.

Figure 15: The Lifetime Risk of Developing Cancer in Cheshire East



Source: PHMF, NW Cancer Intelligence Unit Cancer Incidence, ONS PE

Around 42% of people in Cheshire East are currently at risk of developing cancer at some point during their lifetime, often during their older years. This risk is forecast to rise to 44% over the next ten years. Some of this increase is happening because people are living longer, but some is linked to people's lifestyle choices.

Cancer treatments and outcomes are related to the type of cancer and stage at diagnosis (based on the size and spread of the tumour). Each cancer has its own method of staging, but generally stage I cancers are small and local while stage IV cancers are larger in size and have already spread. The local Clinical Commissioning Groups (CCGs) are actively trying to increase the proportion of people whose cancer symptoms are spotted and investigated at an earlier stage, as this will improve survival rates.

A good example of this is breast cancer. There is a high awareness of the symptoms of breast cancer, and women and their doctors act quickly when symptoms occur. Many breast cancers are found by the breast screening programme. This means that more breast cancers are being diagnosed early and more women are surviving from this disease.

However, there are some cancers or changes to body cells that do not grow rapidly or spread. A good example of this is prostate cancer which is common among older men. It is not currently

possible to predict which prostate cancers will spread and which will remain localised. Localised cancers are associated with a very high chance of survival even if untreated, and some men who know about the local changes in their prostate prefer to be regularly followed up rather than risk the side-effects from surgery.

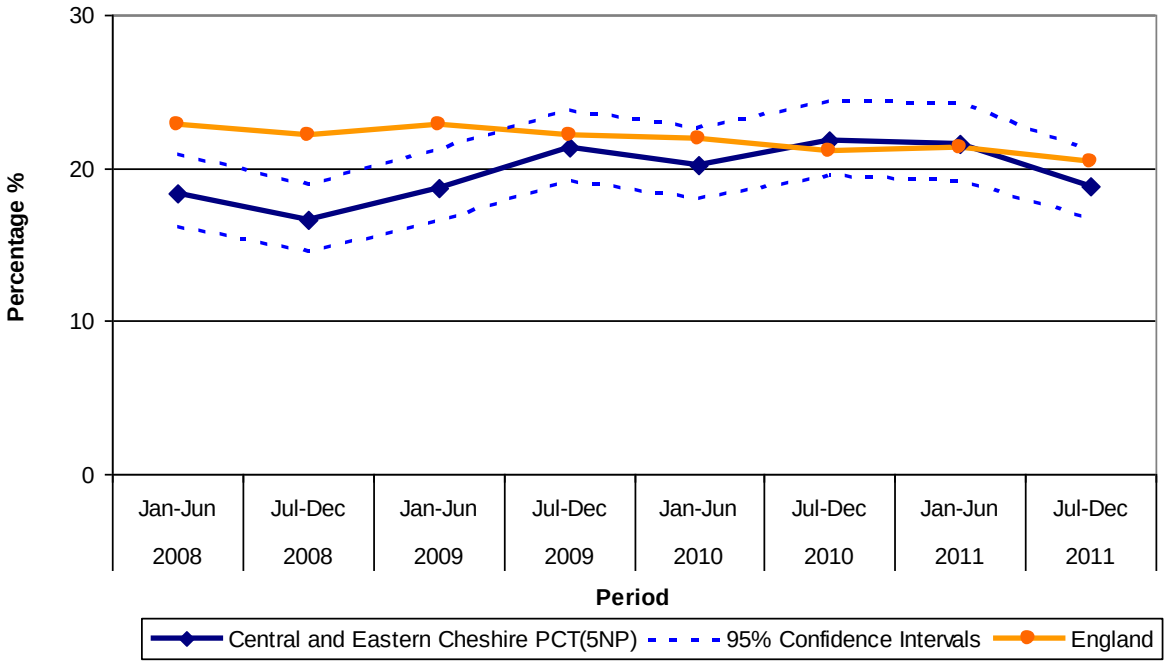
Table 4: Five-Year Relative Survival (%) by Cancer Type and Stage at Diagnosis

	Lung Cancer		Bowel Cancer		Breast Cancer	Prostate Cancer	
	% cases	survival	% cases	survival	survival		survival
Stage I	16.2%	35.3%	13.2%	93.2%	90.0%	**Organ confined**	98.6%
Stage II	8.2%	20.9%	36.9%	77.0%	70.0%	**Metastatic**	32.6%
Stage III	35.5%	6.3%	35.9%	47.7%	50.0%		
Stage IV	40.0%	low	14.0%	6.6%	13.0%		

Source: Former Anglia Cancer Network, NCIN Data Briefing, Urological Cancer Observatory
*Metastatic means cancer has spread

We do not currently have robust information about the proportion of cancers in Cheshire East that present at early stages. As a proxy we can track changes in the proportion of newly identified tumours where the patient first presented to hospital as an emergency as many of these are likely to be late stage cancers. Emergency presentations for cancer are not changing significantly, rising from 17% in the last half of 2008 to 21% in the first half of 2011. This reduced to 19% in the second half of 2011.

Figure 16: Emergency Presentations for Cancer

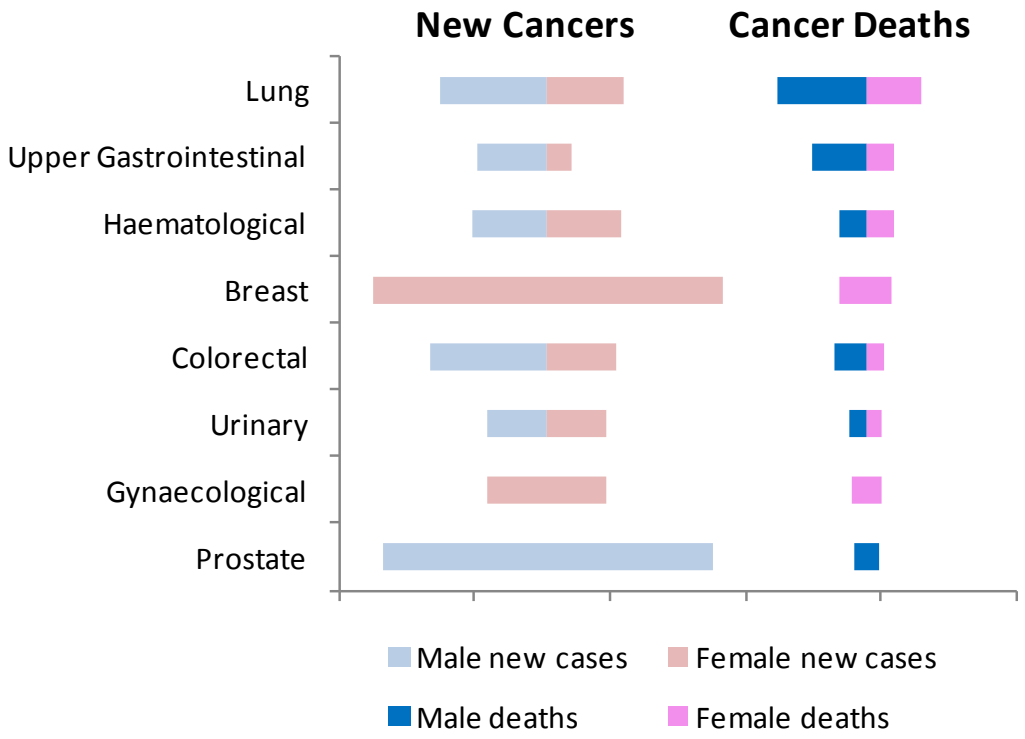


Source: NWCIU Cancer Incidence and PHMF

2,148 people were diagnosed with cancer in Cheshire East in 2010, of whom 1,410 (66%) were under the age of 75. Although breast cancer in women and prostate cancer in men are the two most

commonly occurring forms of cancer in all age groups across Cheshire East, they only rank 4th and 8th respectively in terms of the numbers of lives being lost prematurely. **The main premature killers are lung cancer and upper gastrointestinal cancer (oesophagus, stomach and pancreas), which are associated with poor survival if they are not diagnosed early.**

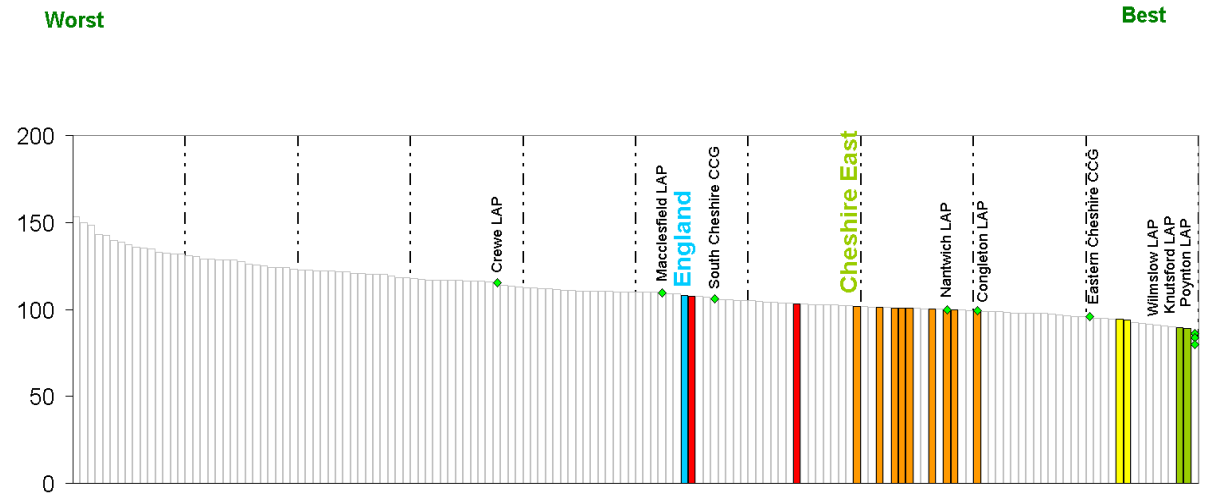
Figure 17: Cancer in Cheshire East in 2010, aged under 75



Source: NCIN

Cheshire East has premature death rates which are better than the England average (see Figure 18) and it is ranked 46 out of 150 local authorities. But when Cheshire East is compared with other local authorities with similar levels of socioeconomic deprivation, its early death rates are worse than expected. This is occurring because the Cheshire East "average" is being skewed by high numbers of early deaths from cancer in Crewe and Macclesfield.

Figure 18: Premature Mortality from Cancer, Directly Standardised Rate per 100,000, persons aged 75 and under, 2009-2011, Local Authorities Ranked by Mortality Decile



Source: PHOF Data Tool, PHMF/ONS PE

The coloured bars in the graph above represent other local authorities with similar socioeconomic profiles to Cheshire East. Those coloured green are significantly better than average for the group whereas those coloured red are significantly worse than average for the group.

Table 5: Patients with a diagnosis of cancer, ranked by crude prevalence

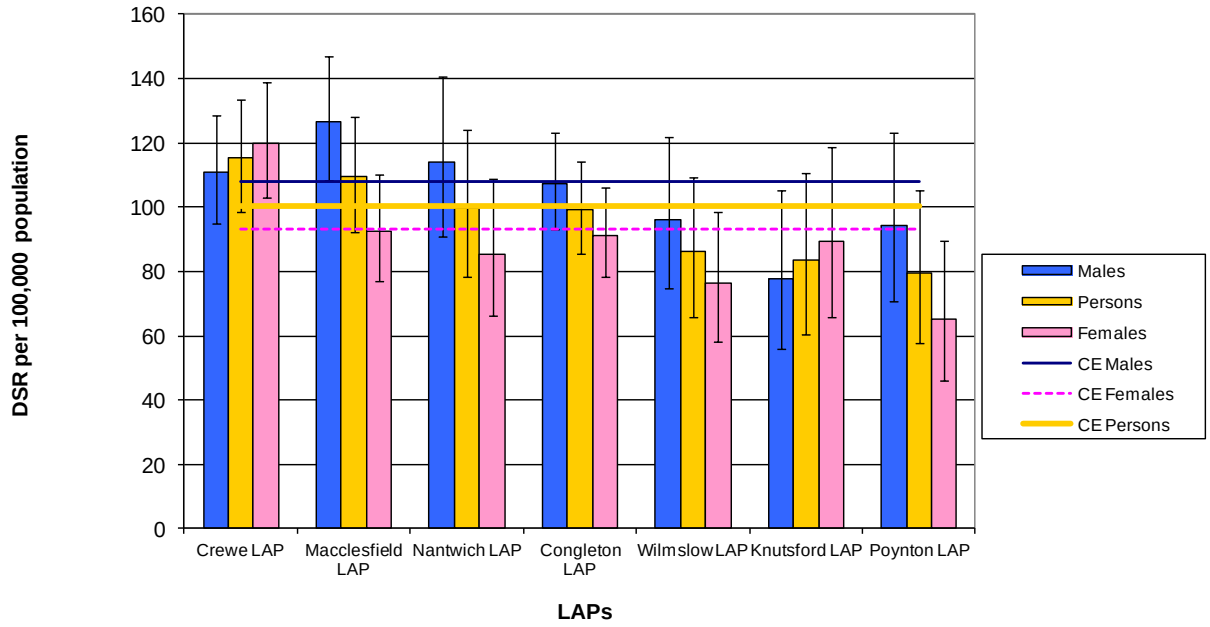
Town Area	Cancer Register	Proportion of total list size
Alsager	324	2.6%
Knutsford	340	2.5%
Middlewich	326	2.4%
Nantwich	320	2.3%
Sandbach	414	2.2%
Wilmslow	707	2.2%
South Cheshire CCG Rural	938	2.2%
Poynton	295	2.2%
Eastern Cheshire CCG Rural	1116	2.1%
Cheshire East	**7713**	**2.0%**
Congleton	552	2.0%
Crewe	1334	1.7%
Macclesfield	1047	1.7%

Source: QOF 2011/12

The low prevalence of patients on the cancer register is due to high mortality amongst cancer patients.

Within most of the LAP areas more men than women die from cancer, with men in Macclesfield having a significantly high rate. However, in Knutsford and Crewe more women are at risk with the **Crewe female death rate being higher than the national average**.

Figure 19: Directly Standardised Mortality Rates for All Cancers (C00-C97) Cheshire East Local Area Partnerships, aged under 75 by gender, 2009-11 provisional (using Mid2011 population estimates)



Source: PHMF/ONS PE

How do we tackle this? Although considerable advances have been made in treating cancer, the best way of saving lives is by:

- preventing cancers from developing by leading a healthy lifestyle
- detecting precancerous conditions (the basis of colorectal and cervical screening)
- detecting cancers at the earliest possible point so that they are easier to treat. For breast cancer this means before they become large enough to be felt
- increasing people's awareness of the symptoms and signs of cancer so that they seek help as soon as they notice any unusual changes

Preventing Cancer

A study of the fraction of cancers attributable to lifestyle and environmental factors in the UK in 2010 (Parkin et al, 2011) showed that nationally, **43% of all cancers (45% in men, 40% in women) in 2010 were caused by exposure to lifestyle and environmental risk factors**. It also highlighted that **tobacco smoking is the most important risk factor** and caused 19% of all new cancer cases. Smoking causes cancers of the oral cavity, larynx, oesophagus and lung because these surfaces are directly exposed to the cancerous chemicals in tobacco smoke.

The importance of other risk factors depends on the type of tumour. For example, alcohol consumption, red meat and a low fibre diet increase the risk of bowel cancer, while being overweight, delaying childbearing and not breastfeeding increases the population risk of breast cancer. Tobacco smoking is now the cause of most lung cancers as industrial carcinogens are well controlled, and this poses a silent future threat for the younger smokers in our community. The rise

in obesity is likely to be one of the main causes of the national and local increase in oesophageal cancers (gastrointestinal), with smoking and acid reflux contributing too. (BMJ 22 June 2013 Vol 346 p2)

The links between lifestyle and cancer are complex and are different for each cancer. Local patterns of cancer occurrence can give us a good indication about where we need to focus action to improve lifestyles. There are some very distinctive patterns of cancer occurrence in the various communities across Cheshire East, and some of these variations are undoubtedly due to previous and ongoing exposure to lifestyle risk factors in these communities. Other variations can be explained in part by patterns of screening (reduced colorectal and cervical cancer) or healthcare testing (prostate cancer). PSA testing often reveals prostate 'cancers' that are of no clinical significance, (i.e. they do not pose a threat to the health of the individual) although these cases contribute markedly to the overall risk and distribution of cancer in local communities.

Table 6: Directly standardised rates of new cases of cancer, by tumour type, all ages, for the six-year period from 2005 to 2010

		Males			Females		
		Average No. per Year	DSR (per 100,000)	95%CI	Average No. per Year	DSR (per 100,000)	95%CI
Colorectal Cancer	Poynton	7	65.2	(46.4 - 88.9)	6	42.2	(28.1 - 60.4)
	Wilmslow	10	51.4	(39.0 - 66.4)	10	38.4	(28.4 - 50.7)
	Eastern Cheshire CCG Rural	22	49.9	(41.4 - 59.5)	20	37.0	(30.1 - 44.8)
	Sandbach	7	56.4	(40.5 - 76.5)	5	27.4	(17.3 - 40.8)
	Knutsford	6	55.1	(37.7 - 77.6)	4	28.2	(15.3 - 46.1)
	Macclesfield	18	50.1	(40.9 - 60.8)	15	29.1	(22.9 - 36.4)
	Congleton	10	50.4	(38.0 - 65.5)	7	28.4	(19.9 - 39.2)
	South Cheshire CCG Rural	13	43.5	(34.2 - 54.6)	11	33.7	(25.8 - 43.3)
	Middlewich	4	48.3	(30.1 - 73.4)	2	27.4	(14.5 - 46.7)
	Crewe	19	43.0	(35.3 - 51.8)	17	31.4	(25.1 - 38.6)
	Alsager	4	37.6	(23.4 - 57.0)	4	29.8	(17.7 - 46.3)
	Nantwich	5	43.2	(28.3 - 62.8)	3	23.1	(12.5 - 38.0)
	Cheshire East	**123**	**48.5**	**(45.0 - 52.2)**	**102**	**32.1**	**(29.4 - 34.9)**
Lung Cancer	Crewe	30	66.6	(57.0 - 77.2)	22	42.9	(35.6 - 51.3)
	Macclesfield	25	71.1	(60.1 - 83.5)	17	37.2	(30.0 - 45.6)
	Middlewich	5	71.4	(48.4 - 101.5)	2	25.3	(13.3 - 43.6)
	Wilmslow	10	48.7	(37.0 - 62.9)	13	47.3	(36.2 - 60.4)
	Nantwich	5	46.0	(30.2 - 66.9)	4	35.5	(21.1 - 54.9)
	Congleton	9	48.6	(36.6 - 63.2)	7	29.1	(20.5 - 39.9)
	Alsager	4	42.9	(26.8 - 65.0)	3	28.8	(16.8 - 45.7)
	Poynton	6	52.0	(35.1 - 73.8)	3	18.4	(9.4 - 31.7)
	Sandbach	4	34.2	(22.0 - 50.7)	4	29.9	(18.8 - 44.8)
	South Cheshire CCG Rural	11	37.6	(28.9 - 48.1)	8	23.4	(17.1 - 31.3)
	Knutsford	4	35.9	(22.2 - 54.6)	3	23.4	(12.5 - 38.8)
	Eastern Cheshire CCG Rural	16	34.5	(27.8 - 42.3)	12	22.6	(16.9 - 29.4)
	Cheshire East	**129**	**50.2**	**(46.7 - 54.0)**	**98**	**31.7**	**(29.1 - 34.6)**
Prostate Cancer	Middlewich	9	127.6	(96.2 - 166)			
	Poynton	12	119.0	(92.9 - 150)			
	Wilmslow	21	111.1	(92.2 - 132.6)			
	South Cheshire CCG Rural	33	110.5	(95.5 - 127.1)			
	Eastern Cheshire CCG Rural	49	109.6	(97.1 - 123.2)			
	Knutsford	11	108.3	(82.6 - 139.2)			
	Macclesfield	37	103.6	(90.2 - 118.3)			
	Alsager	10	103.5	(78.1 - 134.5)			
	Crewe	43	98.6	(86.8 - 111.4)			
	Sandbach	12	97.4	(76.3 - 122.5)			
	Nantwich	10	82.3	(61.9 - 106.9)			
	Congleton	16	81.8	(65.9 - 100.3)			
	Cheshire East	**263**	**103.9**	**(98.8 - 109.2)**			
Breast Cancer	Knutsford				15	167.5	(132.2 - 208.8)
	Nantwich				15	147.3	(115.4 - 184.6)
	Macclesfield				53	142.6	(126.8 - 159.8)
	Wilmslow				29	139.3	(118.1 - 163.1)
	Poynton				14	137.7	(107.7 - 172.9)
	Congleton				24	133.5	(111.4 - 158.4)
	South Cheshire CCG Rural				36	129.1	(111.9 - 148.1)
	Sandbach				16	121.9	(97.1 - 150.8)
	Eastern Cheshire CCG Rural				48	121.1	(106.6 - 136.8)
	Crewe				52	117.6	(104.3 - 132.1)
	Middlewich				9	112.6	(84.2 - 147.2)
	Alsager				10	102.1	(76.2 - 133.6)
	Cheshire East				**319**	**129.8**	**(123.8 - 136)**

Source: NWCIU Cancer Incidence Data/OMS PE

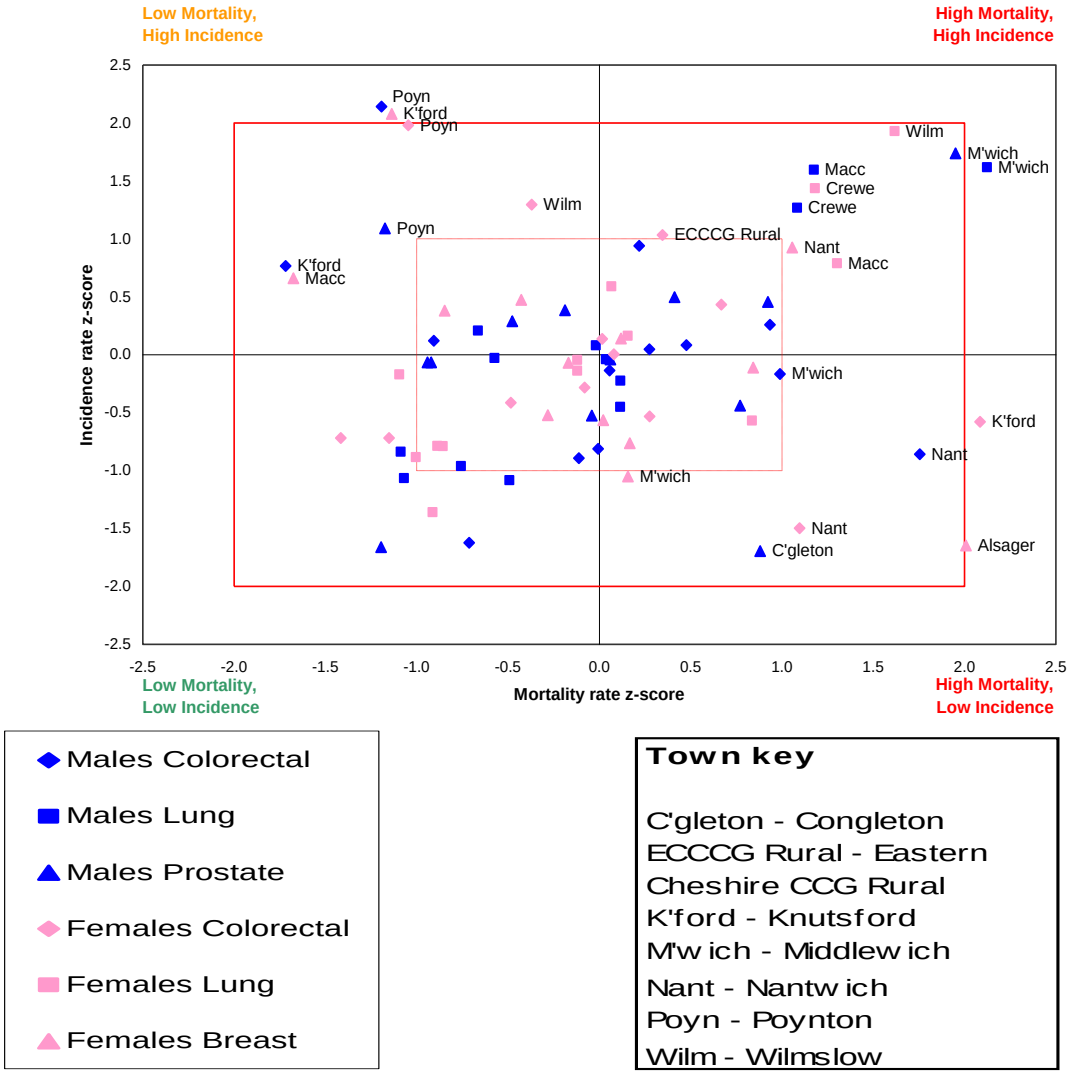
Areas in Table 6 are ranked by the rate of occurrence of each cancer type for both sexes combined.

Table 7: Directly standardised rates of mortality from cancer, by tumour type, all ages, for the six-year period from 2005 to 2010

		Males			Females		
		Average No. per Year	DSR (per 100,000)	95%CI	Average No. per Year	DSR (per 100,000)	95%CI
Colorectal Cancer	Nantwich	3	28.2	(16.4 - 45.0)	3	14.8	(6.6 - 26.8)
	Wilmslow	5	24.2	(16.1 - 34.7)	3	11.8	(6.3 - 19.6)
	Eastern Cheshire CCG Rural	10	20.9	(15.7 - 27.2)	8	13.2	(9.5 - 17.9)
	Middlewich	2	24.4	(12.1 - 44.0)	1	9.7	(3.0 - 22.9)
	Macclesfield	8	21.9	(16.0 - 29.2)	7	11.6	(8.0 - 16.1)
	Crewe	9	19.0	(14.2 - 24.9)	7	12.7	(9.0. - 17.3)
	South Cheshire CCG Rural	6	19.5	(13.5 - 27.2)	5	13.9	(9.3 - 19.8)
	Sandbach	3	20.6	(11.4 - 34.2)	2	10.2	(4.9 - 18.3)
	Alsager	2	16.0	(7.6 - 29.6)	2	12.4	(5.3 - 23.7)
	Congleton	3	15.0	(8.7 - 24.2)	4	13.1	(7.7 - 20.5)
	Knutsford	1	11.0	(4.4 - 22.3)	2	16.8	(7.2 - 31.3)
	Poynton	2	13.6	(6.5 - 24.7)	2	10.4	(4.8 - 19.3)
	Cheshire East	**53**	**19.8**	**(17.7 - 22.2)**	**45**	**12.6**	**(11.0 - 14.3)**
Lung Cancer	Middlewich	5	66.6	(44.4 - 95.8)	3	30.3	(16.7 - 50.3)
	Macclesfield	20	55.3	(45.6 - 66.3)	16	33.8	(27.0 - 41.8)
	Crewe	24	54.2	(45.6 - 63.8)	17	32.9	(26.5 - 40.3)
	Wilmslow	7	34.4	(24.7 - 46.6)	11	36.2	(27.0 - 47.4)
	Nantwich	5	42.6	(28.1 - 61.7)	3	24.4	(13.0 - 40.5)
	Congleton	8	41.7	(30.6 - 55.4)	5	22.9	(15.2 - 33.1)
	Sandbach	4	35.4	(23.0 - 52.1)	3	22.9	(13.2 - 36.5)
	Alsager	4	42.6	(26.8 - 64.1)	2	15.5	(7.0 - 28.9)
	Poynton	4	33.3	(20.7 - 50.5)	3	16.9	(8.9 - 28.5)
	Knutsford	3	32.2	(19.3 - 50.3)	3	17.3	(8.5 - 30.2)
	South Cheshire CCG Rural	9	28.3	(21.0 - 37.3)	6	17.1	(11.7 - 23.9)
	Eastern Cheshire CCG Rural	13	28.5	(22.4 - 35.7)	10	16.2	(11.9 - 21.3)
	Cheshire East	**106**	**41.0**	**(37.9 - 44.4)**	**80**	**25.1**	**(22.7 - 27.6)**
Prostate Cancer	Middlewich	3	31.7	(17.5 - 52.7)			
	South Cheshire CCG Rural	8	26.6	(19.5 - 35.4)			
	Congleton	5	26.4	(17.9 - 37.3)			
	Crewe	12	25.8	(20.1 - 32.6)			
	Wilmslow	6	24.0	(16.5 - 33.7)			
	Sandbach	3	21.7	(12.8 - 34.5)			
	Eastern Cheshire CCG Rural	12	21.0	(16.3 - 26.6)			
	Knutsford	2	19.5	(10.4 - 33.2)			
	Macclesfield	7	17.3	(12.3 - 23.7)			
	Alsager	2	17.2	(8.5 - 31.0)			
	Poynton	2	16.0	(8.6 - 27.1)			
	Nantwich	3	15.9	(8.7 - 26.6)			
	Cheshire East	**64**	**22.2**	**(20 - 24.6)**			
Breast Cancer	Alsager				22	36.8	(22.3 - 56.9)
	Nantwich				23	32.1	(19.0 - 49.8)
	South Cheshire CCG Rural				62	31.0	(23.4 - 40.1)
	Crewe				89	27.6	(21.7 - 34.4)
	Middlewich				16	27.5	(15.1 - 45.6)
	Congleton				34	27.3	(18.1 - 39.2)
	Eastern Cheshire CCG Rural				81	26.8	(20.8 - 34.0)
	Sandbach				20	25.3	(14.6 - 40.3)
	Wilmslow				33	24.6	(16.5 - 35.1)
	Poynton				19	22.5	(12.5 - 36.5)
	Knutsford				17	21.0	(11.2 - 35.2)
	Macclesfield				50	18.3	(13.2 - 24.6)
	Cheshire East				**466**	**25.9**	**(23.4 - 28.6)**

Source: PHMF/ONS PE

Figure 20: Incidence and Mortality of Main Tumour Types by Town, All Ages, 2005-2010



Source: NWCIU Cancer Incidence, PHMF/ONS PE

Table 7 and Figure 20 show that particular cancers are of concern in particular areas with Middlewich having high levels of people getting and dying from lung cancer, whereas men in Poynton have a high rate of colorectal cancer but have lower death rates from this cancer than most other LAP areas.

A z score measures the distance of a value from the mean (average) in units of standard deviations. A positive z score indicates that the value is above the mean, whereas a negative z score indicates that the value is below the mean.

Figure 20 attempts to show the relationship between new cases and deaths for various cancers within Cheshire East towns. It can show which particular cancers within each town are of concern. A dot lying outside the solid red+/- 2 z scores box may indicate the need to investigate further. If the dot lies to the **right** of the box, this indicates **high mortality**, and if it lies outside the **top** of the box, this indicates **high incidence**. A dot lying outside the dotted red +/- 1 z score box may also warrant further exploration. Dots falling with the bottom left hand of the quadrant or within the inner dotted red +/- 1 z scores are not of concern and have not been labelled.

The graph indicates that within Cheshire East, Middlewich has high levels of men developing and dying from lung cancer, whereas colorectal cancer in men within Poynton and breast cancer in women in Knutsford have high survival (high incidence, low mortality). The graph indicates poor outcomes for women developing colorectal cancer in Knutsford (relatively low levels of incidence, high mortality).

Tables 6 and 7 contain the supporting data used to create the quadrant chart (

Figure 20).

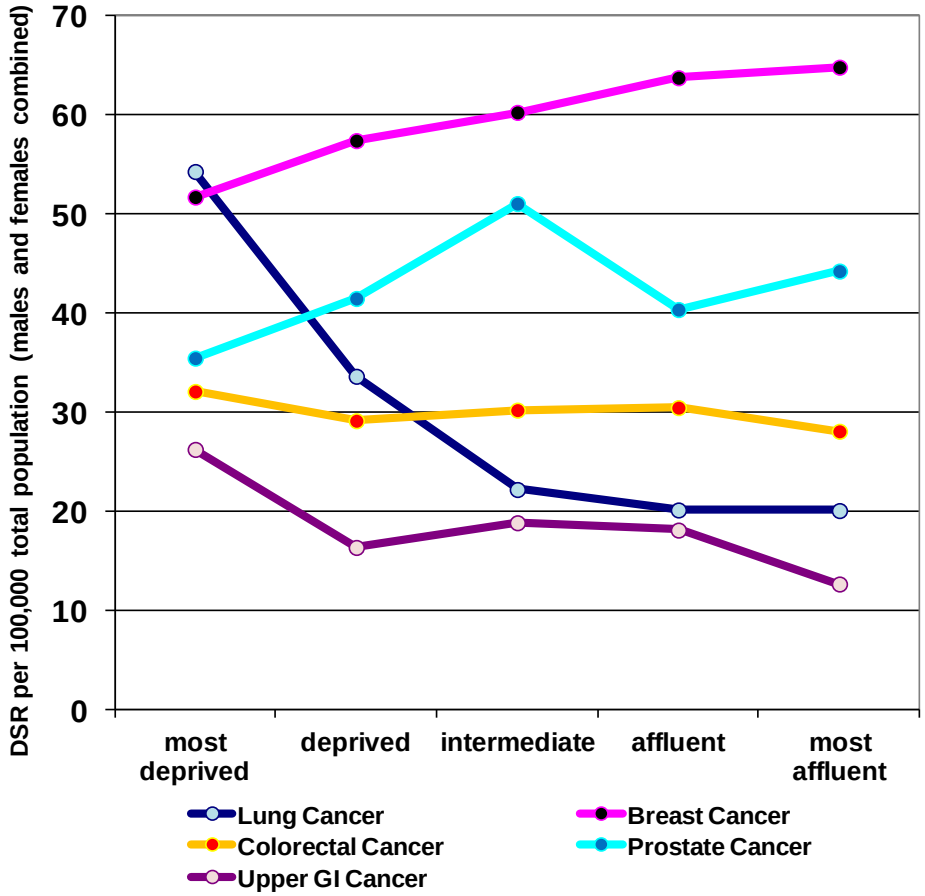
In Cheshire East:

- Lung cancer is 170% and upper GI cancer 107% more common in the most deprived areas
- Breast and prostate cancer are both 25% more common in the most affluent areas
- Lung cancer rates are significantly high among men in Crewe and Macclesfield, and women in Crewe and Wilmslow
- Breast cancer rates are significantly higher among women in Knutsford

People in the more deprived areas of the Borough carry the heaviest burden of deaths from lung and upper gastrointestinal cancer. This is because smoking rates are usually higher in more deprived areas, although lung cancer is just one of a number of smoking related disorders that occur more frequently in these areas. **The proportionate response will be to target substantial smoking cessation and tobacco control initiatives in areas identified by analyses of hospital respiratory admissions in adults and children and through the NHS Health Checks programme**. There is a link with other risk behaviours as some smokers are more likely to also drink and be overweight.

People in the more affluent areas have higher rates of breast cancer and prostate cancer, both of which are associated with better survival. Ensuring full uptake of the breast cancer screening programme would ensure that early deaths are minimised in these areas. As can be seen from Figure 17 death rates from prostate cancer are low, confirming that many people who have this diagnosis do not go on to have widespread disease.

Figure 21: New Cases of the Main Cancers in People Under 75 in Cheshire East in 2008-10 (dividing the population into fifths by level of deprivation)



Source: NWCIU Cancer Incidence Data/ONS PE

Cancer Screening Programmes

There are three national cancer screening programmes. Screening for prostate cancer leads to over diagnosis and overtreatment of men without any associated gains in survival. For this reason, the National Screening Committee does not recommend screening men for prostate cancer.

Breast cancer – overall there is very high screening coverage (81%) in Cheshire East[7], although **coverage is particularly low in Wilmslow**. The programme has recently started to extend to include women from age 47 to 73. Breast screening is known to be associated with a risk of over-diagnosis, which means that 19% of women will receive treatment for a cancer which would not otherwise have been noticed. Despite this, breast cancer screening is associated with a considerable gain in survival. Over 95% of women whose breast cancer is found through screening will still be alive more than five years following diagnosis and over 83% of women will live for more than fifteen years.

Breast screening is highly acceptable to women and the majority of women who are screened will return for rescreening. Efforts therefore need to be focused on those women who refused their original screening invitation to see if there are any barriers that can still be overcome. The NHS

[7] Coverage relates to those women who attended breast screening following a routine screening invitation. Nationally, at 31st March 2012, 77% of women aged 53-70 had attended for breast screening.

Health Check programme in Cheshire East now includes an opportunity to discuss this with these women.

Colorectal cancer – Covers people from their 60th up to their 75th birthday. **Locally there is suboptimal coverage (compared to the uptake of other cancer screening programmes locally) with only 60% of people participating in screening.** This screening programme therefore has huge potential to save more lives. Low uptake is due to it being a new screening programme, which targets men as well as women (it is recognised that men are less likely to participate in screening programmes) and the test itself is self administered and rather complicated.

Cervical cancer – decades of cervical screening have reduced this cancer to the extent that only two dozen women in Cheshire East develop cervical cancer each year. Cervical cancer is only ever caused by human papillomavirus (HPV) infection and it has the potential to be virtually eradicated through HPV vaccination and cervical screening. The HPV vaccination programme has successfully provided 93% of teenage girls in Cheshire East with long-term protection from cervical cancer but women of older ages are still at risk of developing cervical cancer. Although there is very high screening coverage (81%) of women aged 25 to 64, rates have been falling among younger women aged 25 to 34 which is the age group most at risk of invasive cervical cancer. The JSNA shows that there are particularly low screening rates in Crewe, possibly associated with low uptake among Polish women.

Awareness and Early Diagnosis

Prompt diagnosis is an essential requirement to ensure management of cancers at an early stage when curative treatment may be less complicated and more likely to be successful. Therefore, people suspected of having cancer should be seen by a specialist team within two weeks of referral by their General Practitioner. This is achieved by referring patients via a "Two-week wait pathway". The referral rate should be high if the incidence of cancers is high.

Cheshire East has lower rates of two-week wait referrals (1,886 per 100,000) compared to the national average (1,982 per 100,000) which reflects the lower than average rates of new cancer diagnoses locally. The Cheshire East average masks local variations between areas and between tumour types. Of those who are referred via this pathway, 12.9% are subsequently diagnosed with cancer. This is a higher proportion than the 10.6% recorded nationally. The overall effect is that of those who are diagnosed with cancer, 47.4% were diagnosed via this pathway compared with 46.5% for England as a whole. The greater the proportion of people who are diagnosed via this pathway the better, as those who are diagnosed later or as an emergency are more likely to have advanced cancer and therefore experience worse outcomes.

The necessary actions are:

- maintain high public awareness of the early signs and symptoms of cancer, particularly those of lung cancer and upper gastrointestinal cancer (oesophagus, stomach and pancreas), where early presentation and referral can make a substantial difference to survival. For example Cancer Research UK recently called for patients to go to see their GP if food became stuck when they swallowed or they experienced heartburn for three weeks or more.

- audit emergency cancer presentations to monitor the impact of public awareness campaigns. One-off national and sub regional campaigns have led to temporary increases in people in

Cheshire East presenting to their general practitioner and being investigated and diagnosed with cancer. These campaigns need to be run on a continuous basis across the Borough, although differing in local communities to achieve universal proportionalism.

Half of all of the cancers diagnosed in 2010 were treated locally, although this proportion differed by tumour type from 78% for breast cancer to 33% for lung cancer. A fifth of patients received no active treatment although this proportion was slightly higher in some communities with an older age structure. There were also differences with tumour type, and just 5% of women receiving no active treatment for breast cancer compared to 27% of all people with lung cancer. Over a third of local people will appropriately receive their treatment in specialist hospitals outside the Borough. The ability to concentrate clinical expertise in a smaller number of hospitals to provide best treatment for all, according to the national NHS England specifications for specialist treatment, means that standards of cancer care are rising and more people will survive for longer.

Table 8: Main Hospital of Treatment for all Cancers Diagnosed in 2010, Cheshire East Council

	Mid Cheshire Trust	East Cheshire Trust	Christie	Stockport or South Manchester	Other Hospital	No Active Treatment	Total
Crewe	63%	1%	8%	4%	5%	19%	**413**
Nantwich	63%	2%	7%	3%	5%	20%	**97**
Alsager	59%	0%	3%	3%	11%	23%	**88**
Middlewich	68%	0%	10%	4%	7%	11%	**71**
Sandbach	59%	0%	12%	4%	6%	19%	**97**
South Cheshire CCG Rural	52%	3%	8%	4%	12%	22%	**252**
Congleton	4%	44%	15%	9%	6%	22%	**162**
Knutsford	3%	41%	14%	15%	6%	21%	**78**
Macclesfield	1%	42%	20%	13%	3%	20%	**314**
Poynton	1%	37%	17%	22%	6%	16%	**81**
Wilmslow	2%	34%	18%	23%	5%	18%	**173**
Eastern Cheshire CCG Rural	7%	30%	22%	16%	7%	19%	**322**
	646	**432**	**299**	**214**	**136**	**421**	**2,148**
ALL CANCERS	**30%**	**20%**	**14%**	**10%**	**6%**	**20%**	**100%**
Prostate	36%	16%	13%	14%	5%	15%	**349**
Breast	39%	39%	6%	6%	5%	5%	**342**
Colorectal	35%	32%	11%	3%	16%	3%	**257**
Lung	17%	16%	23%	14%	4%	27%	**241**
Upper gastrointestinal	31%	14%	19%	3%	3%	30%	**144**

Source: NWCIU Cancer Incidence Data

We need to prevent early death and suffering from cancer, but when people are moving to the end stage of life we also need to minimise variations in access to high quality end of life service provision including community and hospice care. Although the introduction to this chapter outlined an inevitable increase in cancer risk in Cheshire East over a number of years, this increase need not be associated with rising costs. Screening programmes are a highly cost-effective means of reducing the burden from cancer. Investing in cancer awareness, and helping people to act on their symptoms, will mean that they have a much higher chance of survival as well as less complicated treatment so expenditure on complex operations and high-cost drugs can be released. Investing in prevention and primary care, ultimately improves the health and wellbeing of the population.

Conclusion

It should be remembered that cancer is the largest killer of the four main causes of premature death in Cheshire East. And it is increasing. As this chapter has shown, different parts of Cheshire East are affected by different cancers due to deprivation level and lifestyle factors. Despite these differences, some key messages are appropriate for all Cheshire East communities regarding cancer. It is necessary for people to focus on their lifestyle – maintain a healthy weight, reduce alcohol consumption and stop smoking - and also be cancer symptom aware. Health promotion on key cancer symptoms, such as the blood in your poo campaign for bowel cancer, will help to increase earlier identification and reduce the number of emergency admittance at a late, and often untreatable, stage. Continuing to support and improve the uptake of cancer screening programmes will also reduce the number of cancers diagnosed at a later stage; this is especially important for the bowel cancer screening programme where uptake is low.

Although all areas of Cheshire East require continued targeting to improve cancer awareness, it is appropriate under universal proportionalism, to target specific areas on certain cancers. The more deprived areas should be targeted for lung and upper GI cancers as we know more people from these areas get these cancers. We also know that tobacco smoke is the main cause of these cancers and therefore we can support people in these areas to reduce their smoking habits and thus protect themselves against these cancers. Public health can work with the local CCGs to target and support their patients most at risk. Eventually, through sustained work on increasing the public's understanding of the risks involved of certain lifestyle behaviours, it may be possible to move all funding towards preventative action rather than treatment, as the number of these cancers could be dramatically reduced if people made lifestyle changes.

Key Findings

- Nationally, 43% of all cancers (45% in men, 40% in women) in 2010 were caused by exposure to lifestyle and environmental risk factors
- Cancer is the main cause of death and premature death in Cheshire East. Two fifths of people are at risk of getting cancer and this proportion is increasing. This is mainly because of unhealthy lifestyle choices.
- The main premature killers in Cheshire East are lung cancer and upper gastrointestinal cancer (oesophagus, stomach and pancreas), which are associated with poor survival if they are not diagnosed early.
- Lung and upper gastrointestinal cancers are more common in deprived areas. People who live in more affluent areas have higher rates of diagnosis of breast and prostate cancer.
- 1 in 5 of all cancers in Cheshire East are found after an emergency presentation to hospital. Many of these cancers will be late stage cancers. This proportion is not falling.
- High rates of male premature deaths due to cancer are seen in Macclesfield.

- The premature death rate due to cancer in females in Crewe is 20% higher than the national average.
- Breast screening uptake is lower in Wilmslow than other areas. There is low coverage of bowel screening locally. Younger women (25-35 years) must continue to attend for cervical screening test.

Chapter Four

Cardiovascular Disease

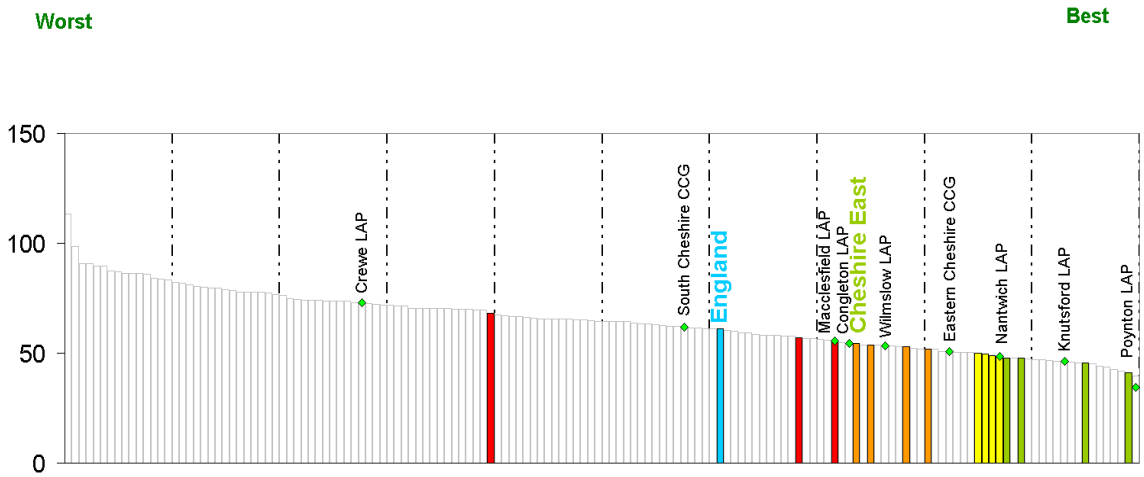
Cardiovascular disease is an overarching term that is used to describe a family of diseases that share a common set of risk factors. These risk factors cause furring or stiffening of the walls of arteries (atherosclerosis), which in turn leads to coronary heart disease (angina and heart attack), stroke, and peripheral arterial disease (affecting the blood vessels of the legs and arms).

Other conditions such as vascular dementia, chronic kidney disease, arrhythmias (irregular heart beat), sudden cardiac death and heart failure share these risk factors and have a significant impact on cardiovascular health. Diabetes also shares the same modifiable risk factors (see below), and having diabetes increases people's risk of cardiovascular disease.

The number of people affected (population burden) is considerable. 242 residents under the age of 75 died from cardiovascular disease in 2011. There were 14,399 people on heart disease registers in 2011/12, **although this only represents 67.5% of the estimated 21,330 who actually have heart disease**. There were 8,174 people recorded by general practitioners as having had a stroke, which is 80.8% of the estimated 10,110 stroke sufferers currently living in the community.

The coloured bars in the graph represent other local authorities with similar socioeconomic profiles to Cheshire East. Those coloured green are significantly better than average for the group whereas those coloured red are significantly worse than average for the group. Although Cheshire East's position is better than the England average (Cheshire East is ranked 40 out of 150 local authorities), its early death rates are worse than expected when compared with other local authorities with similar levels of socioeconomic deprivation (Cheshire East is ranked 12 out of 15 local authorities). The graph indicates that this is due to a high cardiovascular death rate among people who live in Crewe.

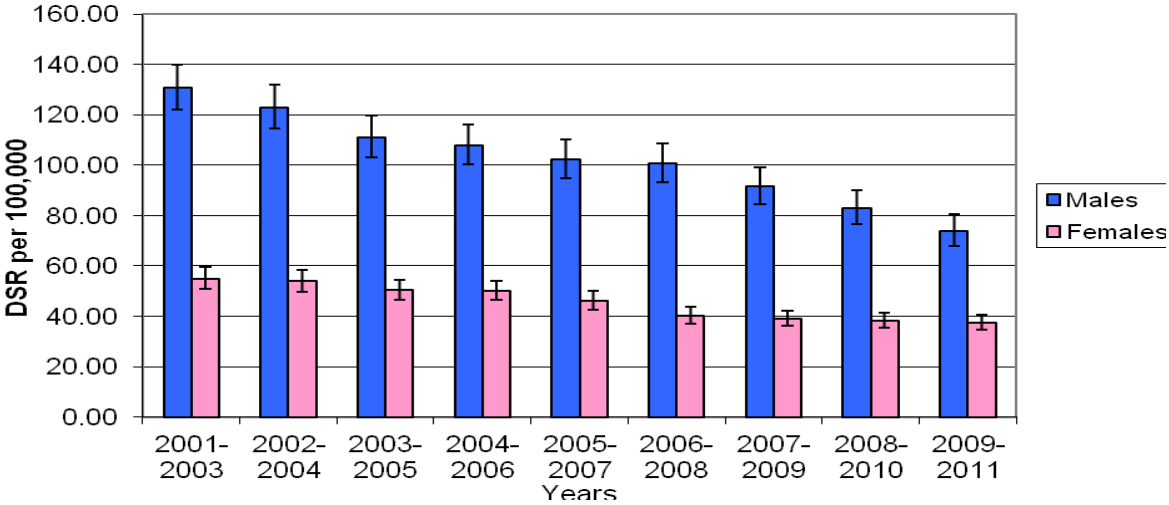
Figure 22: Premature Mortality from Cardiovascular Disease, Directly Standardised Rate per 100,000, persons aged under 75, 2009-2011, Local Authorities Ranked by Mortality Decile



Source: PHE Longer Lives, PHOF Data Tool, PHMF/ONS PE

Around two thirds of cardiovascular deaths occur in males and one third in females. More than half of these deaths are due to coronary heart disease, and about a quarter are due to a stroke. Death rates locally for people under 75 have fallen by about 40% between 2001 and 2011, with a greater reduction among males (43%) compared to females (32%). This fall is largely due to reductions in cigarette smoking and better management of cardiovascular disease in primary and secondary care.

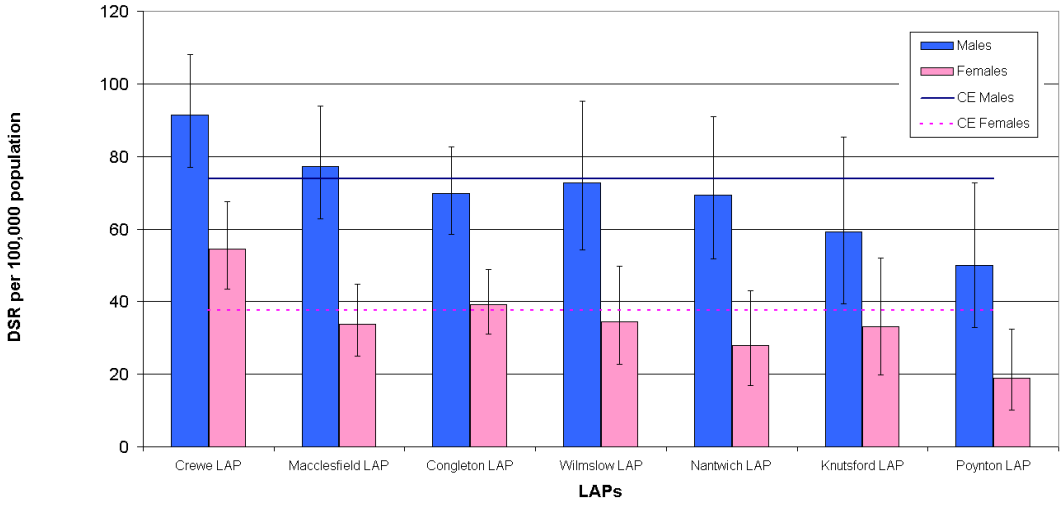
Figure 23: Time Trends in Premature Mortality from Cardiovascular Disease in Cheshire East



Source: PHMF / ONSPE

When looking at the changes over time and the differences between local areas, it is evident that death rates among women in Cheshire East have not been reducing as fast as among men. Men and women who live in Crewe have a statistically significantly higher risk of dying early from cardiovascular disease than people living in any other part of Cheshire East.

Figure 24: Direct Standardised Mortality Rates for All Circulatory Disease (ICD10 I00 - I99) Cheshire East Local Area Partnerships, aged under 75, Males & Females, 2009-11 provisional (using Mid2011 population estimates)



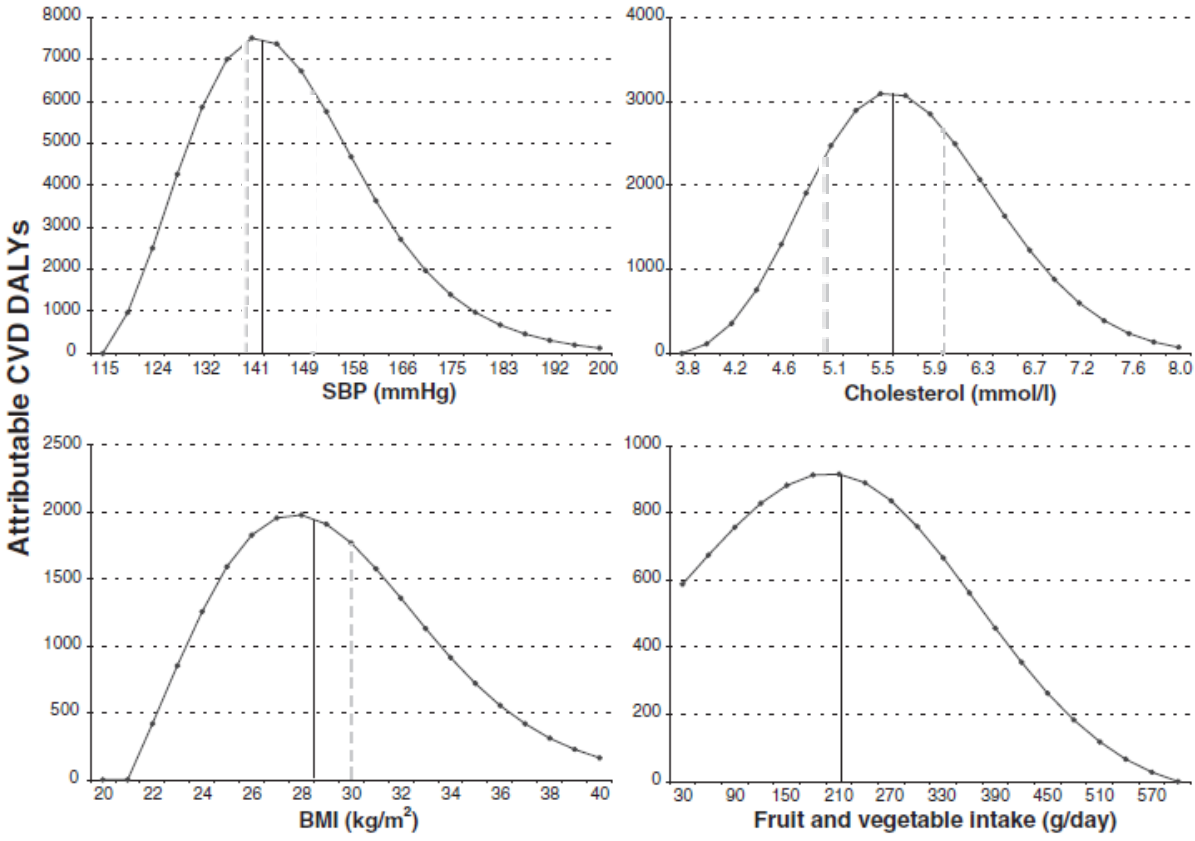
Source: PHMF / ONSPE

These variations in deaths provide an important insight into the underlying patterns of risk factors in Cheshire East. A number of common risk factors increase the risk of developing atherosclerosis. They act in a multiplicative way to increase risk, with every additional risk factor increasing the overall risk for that individual. These risk factors fall into three broad groups:

- Fixed risk factors (age, gender and family history), which **cannot be changed**
- Behavioural risk factors (smoking, physical inactivity, high salt intake, low fruit and vegetable intake, obesity, and harmful use of alcohol) reflect people's circumstances and choices and **can be changed for the better** to reduce personal risk
- Physiological risk factors (raised blood pressure, raised cholesterol, impaired glucose tolerance and chronic kidney disease) reflect secondary changes to body systems that are **generally reversible in their early stages** but may need medical treatment

Figure 25 illustrates the distribution of the cardiovascular burden of disease attributable to four major continuous risk factors, by exposure levels. In each instance, half of the attributable burden (expressed as disability-adjusted life years) occurs to the left of the solid vertical line and half occurs to the right. The dashed vertical lines indicate some commonly used thresholds — 140 mmHg for (systolic) blood pressure (SBP), 5 mmol/l for hypercholesterolaemia, and 30kg/m2 for obesity.

Figure 25: Distribution by exposure level of cardiovascular disease (CVD) burden attributable to selected continuous risk factors



Source: Comparative quantification of health risks, chapter 26. World Health Organisation 2004

About half of the cardiovascular burden attributable to these four risk factors occurs in the "mid-range" exposures, i.e. between a systolic blood pressure of approximately 130 and 150 mmHg, a cholesterol of 5.0 and 6.1mmol/l, a body mass index (BMI) of 25 to 32kg/m2, and fruit and vegetable intake of 150 to 300 g/day. **This emphasises the importance of trying to achieve changes in each of these risk factors across a large proportion of the residents in Cheshire East. Of these four particular risk factors, raised blood pressure contributes most to overall cardiovascular disease** burden, followed by raised cholesterol and a raised body mass index. **Even moderate changes across the whole population could lead to significant gains in people's health**:

Reducing everyone's systolic blood pressure by 5 mmHg = 56 early CVD deaths avoided

Reducing everyone's serum cholesterol by 0.5 mmol/l = 26 early CVD deaths avoided

Reducing everyone's body mass index by 5 kg/m2 = 16 early CVD deaths avoided

Looking across the footprint of Cheshire East, **significant changes in cardiovascular mortality can only be achieved if we act decisively to reduce these and other lifestyle risk factors so that they are not just among the best in England, but the best in Europe.** The table below highlights just how much change is needed.

Table 9: Lifestyle Risk Factors in Cheshire East with National and International Comparisons

Risk Factor	Cheshire East	England Average	Best Performing EU Countries	EU Average
Smoking	16.6%	20.7%	Luxembourg (17%)	23%
Increasing and high risk drinking (combined)	24.0%	22.3%	Turkey	not known
Salt intake (grams per day)	estimated as 8.2 grams	8.1 grams	England is among the best in Europe	not known
Obesity (prevalence)	21.6%	24.2%	Romania (8%)	17%
Physical inactivity	25.4%	28.5%	Greece (16%)	37%

Source: Cardiovascular Disease Profile (SEPHO), Cardiovascular Disease Outcomes Strategy (DoH), and WHO

The National Institute for Health and Care Excellence (NICE) has recommended a major reduction in salt intake among the population, aiming for a maximum intake of 6 g per day per adult by 2015 and a longer-term goal of 3 g per day by 2025. **Children under 11 should have substantially less salt in their diet than adults, f**or example a maximum of 2 g per day between the ages of 1 and 3 years and 3 g per day between the ages of 4 and 6. **Currently, average salt intake among children is well above these nationally recommended levels and some children consume as much salt as adults.**

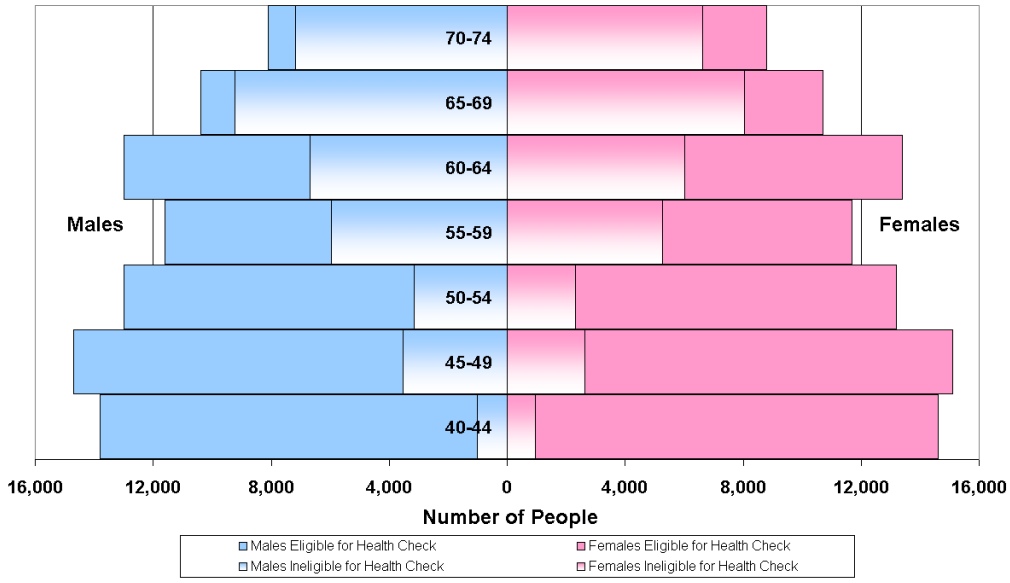
NICE also recommends a reduction in consumption of saturated fat from 13.3% to below 11% of food energy, with a longer-term goal of a further substantial reduction to 6–7% of total energy. **This of itself would prevent around a sixth of deaths from cardiovascular disease**. **A key influence on dietary intake comes from take-aways and other food outlets that specialise in foods high in fat,**

salt or sugar. Low-fat products are not recommended for children under 2 years, but should be used thereafter with semi-skimmed milk being the milk of choice for children aged over 2.

NHS Health Checks

The NHS Health Check programme can prevent heart disease, stroke, diabetes and kidney disease by identifying and managing the risks outlined above. A Health Check is offered every five years to around 104,000 adults aged 40 to 74 who do not already have one of these conditions. As people grow older, more of them will develop cardiovascular disease and are taken out of the Health Checks programme (the central part of the pyramid shown in Figure 26). The majority of people having a Health Check are aged between 40 and 54, which provides an important window of opportunity to change their lifestyles.

Figure 26: Cheshire East Health Checks 2013/14: Eligible Population



Source: ONS PE/Health Survey for England 2011

The overall responsibility for the NHS Health Check Programme transferred to Cheshire East Council in April 2013. The unique feature of this programme is that it allows Cheshire East to implement a formal assessment of cardiovascular risk in over 16,000 men and women every year and then act on the findings. As shown in Table 10 below, we estimate that over 5,000 people each year will be found to be obese, and over 3,000 will be smokers and/or harmful drinkers. The NHS Health Check represents an important opportunity for the Council to improve the health of these residents.

Table 10: Health Checks in Cheshire East

Health Checks Eligible Population: Cheshire East 2013/14								
	40-44	**45-49**	**50-54**	**55-59**	**60-64**	**65-69**	**70-74**	**Total**
Resident Population	28,400	29,800	26,200	23,300	26,400	21,100	16,900	172,100
Number estimated to be on disease register	1,953	6,162	5,465	11,235	12,720	17,270	13,801	68,606
Number eligible for health check	26,447	23,638	20,735	12,065	13,680	3,830	3,099	103,494
Expected Annual Uptake (80%)								
Number eligible for health check annually	4,231	3,782	3,318	1,930	2,189	613	496	16,559
Number estimated to be smokers	949	758	665	329	372	79	64	3,215
Number estimated to be harmful drinkers (more than 6/8 units on single occasions)	983	770	676	281	318	33	27	3,088
Number estimated to be obese (BMI>30)	1,135	1,219	1,070	656	744	208	169	5,202

Source: ONS PE; Health Survey for England 2011; Lancashire and South Cumbria Agency (LaSCA); North West Bowel Cancer Screening Programme; Public Health England Disease Prevalence Models

Managing Risk in Primary Care

Whilst there have been significant improvements in the detection and recording of risk factors in primary care, **more could be done to identify people with conditions which contribute to cardiovascular disease. We believe that there are still 35,000 residents in the Borough with undiagnosed high blood pressure, 20,000 with undiagnosed kidney disease, and over 3,300 with undiagnosed diabetes. The Health Checks programme offers an opportunity to identify people with these risk factors in a wide range of community settings including public events and leisure services**.

Table 11: Cheshire East Residents with Undiagnosed Risk Factors for Cardiovascular Disease

	Expected	**Diagnosed**	**Undiagnosed**	**% Undiagnosed**
High Blood Pressure	92,398	57,091	35,307	38.2%
Diabetes	21,358	17,969	3,389	15.9%
Chronic Kidney Disease	35,307	14,927	20,380	57.7%

Source: QOF, Public Health England Disease Prevalence Models; Exeter mid-2011 population snapsot

National surveys show that the prevalence of hypertension increases progressively with age, from fewer than 10% of people below the age of 35 to more than 70% of people over 75. The condition is often undiagnosed in age groups below the age of 45, and is only diagnosed in about half of people between the ages of 45 and 64. Being diagnosed does not mean that the condition is well controlled, and around 40% of people with diagnosed hypertension have poorly controlled blood pressure, placing them at risk of heart attacks and strokes.

In Cheshire East the estimate of 35,000 people with undiagnosed hypertension hides a different story, which is that a further 26,000 people have hypertension that is diagnosed but not sufficiently well controlled. **The two figures together give an estimate of over 61,000 people whose high blood**

pressure is damaging their health and leading to 118 avoidable heart attacks and strokes every year.

Table 12: Identification and Management of Hypertension in Cheshire East, 2011/12

	Diagnosed hypertension	Undiagnosed hypertension	Total with hypertension	Proportion undiagnosed hypertension	Undiganosed and/or poorly controlled	Heart attacks and strokes that could be avoided
Congleton	4, 045	2, 189	6 , 864	41%	4, 590	9
Knutsford	1, 951	1, 570	3, 521	45%	2, 452	5
Macclesfield	9, 028	6, 131	15, 158	40%	10, 427	20
Poynton	2, 219	1, 560	3, 780	41%	2, 711	5
Wilmslow	4, 398	3, 049	7, 448	41%	5, 220	10
Eastern Cheshire CCG Rural	7, 817	5, 877	13, 694	43%	9, 769	19
Alsager	2, 229	985	3, 214	31%	1, 852	4
Crewe	11, 005	6, 240	17, 245	36%	11, 181	21
Middlewich	2, 256	749	3, 006	25%	1, 741	3
Nantwich	2, 403	1, 030	3, 433	30%	2, 070	4
Sandbach	2, 716	1, 707	4, 423	39%	3, 003	6
South Cheshire CCG Rural	7, 024	3, 589	10, 613	34%	6, 682	13
Cheshire East	57, 091	35, 307	92, 398	38%	61, 697	118

Source: QOF/PHE Disease Prevalence Models

Better Early Management and Prevention in the Community

Familial hypercholesterolemia

A small number of individuals and families are at very high risk of cardiovascular disease, especially those with inherited cardiac conditions such as familial hypercholesterolemia and some causes of sudden cardiac death. **It is estimated that only 15% of the estimated 100,000 cases of familial hypercholesterolemia in England have been diagnosed**. All family members of young people dying suddenly from a presumed cardiac death should be given the option to be tested, so that there can be better identification and management of the condition. In Cheshire East around eleven people under the age of 45 die from cardiovascular disease each year.

Atrial fibrillation

Atrial fibrillation is a heart condition that causes an irregular and often abnormally fast heart rate. A normal heart rate should be between 60 and 100 beats a minute when at rest, but in atrial fibrillation the heart rate may be over 140 beats a minute. This irregular contraction can result in stagnation of blood in the upper chambers of the heart, **with formation of blood clots that can be carried off into the arteries in the brain resulting in a strok**e.

Although there are clear evidence based guidelines for managing people who are at risk, we estimate that there are up to 2,000 high-risk patients across Cheshire East who are not receiving or taking the right amount of blood thinning (anticoagulation) treatment. **Every year, more than one hundred people in the Borough will have a stroke that could have been avoided if they had been taking blood thinning treatment.**

Table 13: High Risk Atrial Fibrillation Patients Stroke Risk, Cheshire East

	Eastern Cheshire CCG	South Cheshire CCG	Cheshire East
Number of people with AF	4, 168	3, 557	7, 725
High risk people who are NOT on anticoagulants	1, 048	915	1, 963
Strokes expected annually in this untreated group	61 (46 – 76)	47 (35 – 59)	108

Source: AF Case Finder and Grasp-AF practice returns, 2012/13

Stroke

Public education campaigns to improve recognition of the symptoms of a stroke have led to more people receiving specialist care. Stroke can usually be recognised quickly using the FAST assessment.

FACE Drooping of the face

ARM Weakness of the arm

SPEECH Slurred speech

TIME Time to call for an ambulance

On arrival at the hospital, patients will be sent for a head scan to identify what type of stroke has occcurred. There are two different types of stroke – ischaemic, which is due to a blood vessel that has been blocked by a clot (85% of strokes) or haemorrhagic, when a blood vessel in the brain bursts causing a brain bleed (15% of strokes).

All patients with a suspected stroke need to be urgently admitted to a specialist stroke unit for assessment and treatment. Those who have had an ischaemic/clot stroke need to receive a clot-busting drug within 3 hours of the onset of a confirmed stroke. They will then be commenced on anticoagulants (blood thinners). This clot busting service can only be offered 24 hours a day, 7 days a week in specialised centres. It is essential that a person who may be suffering a stoke is taken to a specialist centre for treating their stroke as soon as possible.

Within Cheshire East in 2011/12 there were 516 emergency admissions for stroke. Local data suggests only a small proportion of those suffering a stroke are currently being assessed and treated at a specialist stroke centre. At present our local Trusts do not provide an onsite 24 hour specialist stroke service. Therefore we need to ensure that local arrangements are in place so patients presenting with a stroke are taken to a hospital that can deliver emergency stroke care, and where patients can be admitted directly from the emergency department to a specialist stroke unit, to ensure all patients are managed optimally, irrespective of what time or day they present.

Many more people will suffer a mini or 'temporary stroke or Transient Ischaemic Attack. Approximately 10-15 percent of people who have a TIA go on to have a full stroke in 4 weeks. They too must be seen, scanned and treated to ensure that these strokes can be prevented. This assessment and treatment can often take place at a more local hospital.

Heart attack care

Heart attacks are caused by a sudden reduction in the blood supply to a part of the heart muscle. Often there has been a slow build-up of fibro-fatty material (atheroma) over many years inside the wall of the coronary artery. This suddenly breaks through the wall of the artery and causes blood to clot within the artery. The clot is called a coronary thrombosis and leads to 'myocardial ischaemia', this is when the affected heart muscle does not receive enough oxygen in the blood for its needs. If this is sufficiently prolonged or complete, the affected part of the heart muscle dies, and this is called a heart attack or 'myocardial infarction'.

Heart attacks are often accompanied by characteristic symptoms, which include central chest pain, sweating, breathlessness, and abrupt changes in blood pressure, heart rate and heart rhythm sometimes leading to collapse or sudden death.

There are two main forms of heart attack, which are associated with different alterations on the heart tracing electrocardiogram. These are the 'ST-elevation myocardial infarction (STEMI) which require rapid treatment to re-open the blocked coronary artery. These patients are taken by ambulance directly to the nearest Heart Attack Centre. Most of them receive a treatment which involves passing a thin wire into the blocked blood vessel and opening it back up with a small balloon. A stent is left in to keep the artery open in the future (primary percutaneous coronary intervention).

Between April 2012 and March 2013, there were 513 emergency admissions to hospital due to a heart attack. A third of patients overall were admitted to a hospital with a Heart Attack Centre, although this proportion was higher in those areas of the Borough that are closer to the specialist hospitals. Around 90% of those who required surgical treatment received it within ninety minutes of arriving at the Heart Attack Centre.

Table 14: Hospital Performance and Use of Primary PCI in Cheshire East patients with STEMI

	2010 / 11			2011/12		
	Direct admission to Heart Centre	Having Primary PCI	PCI within 90 mins of arrival	Direct admission to Heart Centre	Having Primary PCI	PCI within 90 mins of arrival
South Manchester	63%	98.5%	92%	80%	100%	94%
North Staffs	69%	94.7%	89%	73%	98.8%	88%
England	79%	82.2%	90%	79%	94.7%	92%

Source: Myocardial Infarction National Audit Project (MINAP); Public Health England Cardiovascular Disease Health Profiles

Table 15: Hospital Prescribing of Secondary Prevention in Cheshire East patients with nSTEMI

	2011/2012				
	Aspirin	Beta blocker	ACE inhibitor	Statin	Clopidogrel / Thienopyridine inhibitor
Macclesfield	98%	90%	92%	96%	91%
Leighton	99%	99%	99%	98%	98%
England	99%	96%	95%	95%	97%

Source: Myocardial Infarction National Audit Project (MINAP); Public Health England Cardiovascular Disease Health Profiles

The majority of patients have non-ST-elevation myocardial infarction (nSTEMI). They have a lower early risk of death within the first month, but appear to be at similar or even greater long-term risk than patients with STEMI. It is important that they should be admitted to cardiac care units and cared for by cardiologists, who will normally review the blockage and how the heart is performing within the first 2-4 days.

Other aspects of out-of-hospital cardiac care include recognising what has happened, bystander resuscitation and defibrillation, and rapid transport by ambulance to the most appropriate hospital.

People Living with Cardiovascular Disease

There are very sizeable numbers of people in the Borough who are living with one or more of the various manifestations of cardiovascular disease, including 14,400 people who have coronary heart disease, 8,200 who have had a stroke, and 3,000 with heart failure. They need support for self-management, psychological support and, where appropriate, physical activity, rehabilitation or reablement programmes. Some people need support to plan for end of life care.

Conclusion

The actions that are required to reduce the numbers of people who die prematurely from cardiovascular disease can be summarised as:

1. **Lifestyle Changes** – focusing particulary on cigarette smoking, raised blood pressure, raised cholesterol, excess salt intake, and being overweight

2. **Detection and Treatment** – early identification and management of these risk factors via the NHS Health Checks programme, rapid assessment and treatment for heart attacks and stroke, and better secondary prevention of people with established disease including anticoagulation for atrial fibrillation patients at high risk of stroke

3. **"Targeting" of Crewe** and other high-risk communities for lifestyle and detection initiatives

Key Findings

- **Cardiovascular disease** is an overarching term that is used to describe a family of diseases that leads to coronary heart disease (angina and heart attack), stroke, and peripheral arterial disease (affecting the blood vessels of the legs and arms).

- **Cardiovascular disease accounts for approximately a quarter of early deaths each year in Cheshire East** (approximately 250 deaths per year)

    - In Cheshire East the early death rate for cardiovascular disease is better than the England average but worse than expected when compared with other local authorities with similar levels of socioeconomic deprivation

    - In the last decade the number of premature deaths due to heart disease has fallen by 40%, which is believed to be due to reductions in smoking and better clinical management

- **To decrease the number of deaths in the under 75s from cardiovascular disease there will need to be 2 key approaches to management**:
    - **Improve identification of undiagnosed cases**: as there are estimated to be 35,000 people with high blood pressure, 20,000 with kidney disease and 3,300 with diabetes, all of whom are undiagnosed
        - **A Health Check is offered every 5 years to adults aged 40-74** who are not diagnosed with heart disease, kidney disease or diabetes
            - Approximately 100,000 people are eligible for the Health Check over 5 years
            - The aim of the health check is to identify undiagnosed cases of disease
    - **Delivery of a high standard of care**
        - **Instigate** early management and prevention within the community to prevent premature deaths, which will include a high standard of active treatment in primary care, e.g. aggressively managing high blood pressure, and prompt management of an acute event e.g. hospital management of a heart attack
            - E.g. In 2011/12 if all cases of high blood pressure (diagnosed and currently undiagnosed) had been optimally managed, it is estimated that over 100 heart attacks and strokes could be avoided

Chapter Five

Other Major Causes of Premature Death

Lung Disease

Lung (respiratory) disease refers to conditions affecting a person's ear, nose, throat and lungs. It includes common self-limiting illnesses such as colds, sore throats and hay fever. It also includes potentially life-threatening illnesses such as pneumonia and influenza (flu). Levels of illness may be worse if there have been previous hospital admissions for lower respiratory tract disease. Chronic respiratory disease can also result from long-term conditions such as asthma and chronic obstructive pulmonary disease (COPD), or lung damage from fibrosis.

Tobacco smoke is the most important single factor influencing the risk of respiratory disease. The youngest children in our society are most at risk from other people's cigarette smoke. This threat to their health may come from their own family if children breathe second-hand smoke in poorly ventilated indoor rooms. Poor indoor ventilation generating poor indoor air quality and leading to damp conditions also influences a child's risk of respiratory disease.

Smoking rates in Cheshire East are significantly lower than the England average although there are differences between LAP areas with Crewe having particularly high rates. Locally, more pregnant women smoke at the time of delivery than the England average and again there are differences between LAPs with Crewe having the highest rates.

Last year, I used my Annual Public Health Report to draw attention to the increased risk of hospital respiratory admissions among young children who live in areas that have high rates of adult smoking. Many of these communities also have high levels of child poverty and deprivation, which can also add to children's needs for early help.

Following the publication of my Report, NHS South Cheshire CCG acted quickly to look into the reasons why children are being admitted to hospital. The CCG is now working closely with the specialist children's service at Mid Cheshire Hospitals Trust to develop alternatives to hospital admission and to improve primary care clinical pathways for children with chronic respiratory disease though community-based alternatives in the early stages of the clinical pathways.

The origins of most chronic respiratory disease in childhood are caused by repeated exposure to external factors including cigarette smoke and recurrent respiratory infections. During the five years from 2008/09 to 2012/13, the number of children and young people on general practice chronic respiratory disease registers in Cheshire East increased by over 20%, and the figure currently stands at over 2,500 children. Most of these children have asthma although some will have a range of other respiratory disorders. These children reinforce my Call to Action, as many of them will take their respiratory problems with them into adult life and possibly die prematurely during the decades to come.

Table 16: Children with Chronic Respiratory Disease, Ages 6 months to 15 years, Cheshire East

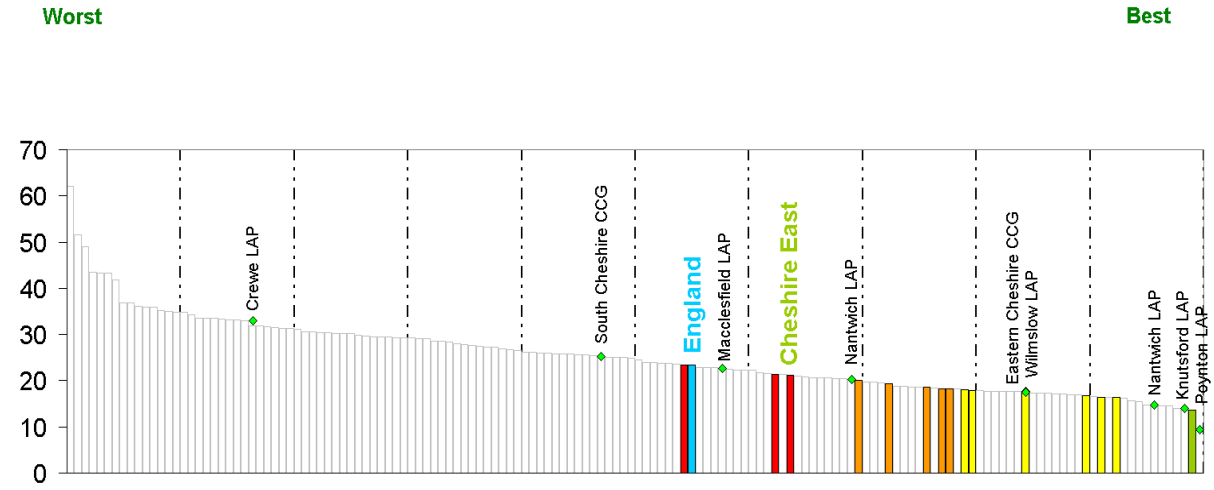
Year	Number of children, aged 6 months to 15 years
2012/13	2,544
2011/12	2,486
2010/11	2,503
2009/10	2,082
2008/09	2,114

Source: Immform

Early Deaths from Respiratory Disease

Cheshire East has early death rates due to respiratory disease which are slightly better than the England average and is consequently ranked at 54 out of 149 local authorities. However when compared with similar local authorities, Cheshire East is significantly worse than average and is ranked at 13 out of 15 local authorities. This is mainly due to high rates of early deaths due to respiratory disease in the Crewe LAP.

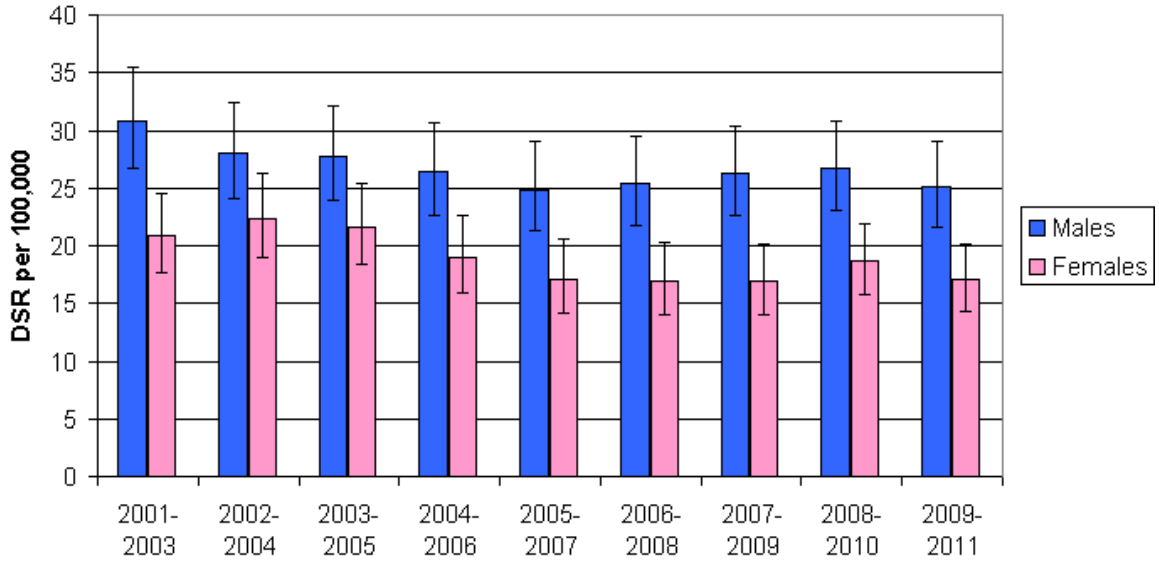
Figure 27: Premature Mortality from Respiratory Disease, Directly Standardised Rate per 100,000, persons aged 75 and under, 2009-2011, Local Authorities Ranked by Mortality Decile



Source: Public Health England Longer Lives, PHMF/ONS PE

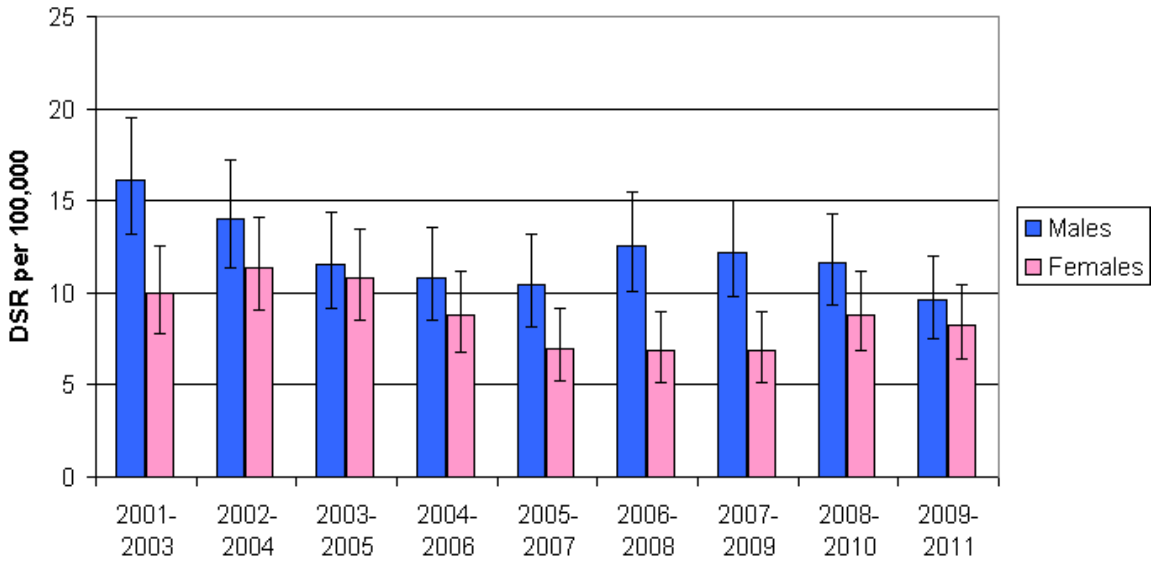
Respiratory disease is responsible for 9.3% of early deaths in Cheshire East, with COPD causing 44% of these. Although these rates fell between 2001-2003 and 2005-2007, there have been no further reductions in mortality since then. There is also some evidence that deaths from COPD have increased among women in recent years.

Figure 28: Premature Mortality Rates due to Respiratory Disease (J00-J99) in Cheshire East



Source: PHMF/ONS PE

Figure 29: Premature Mortality Rates due to COPD (J40-J44) in Cheshire East



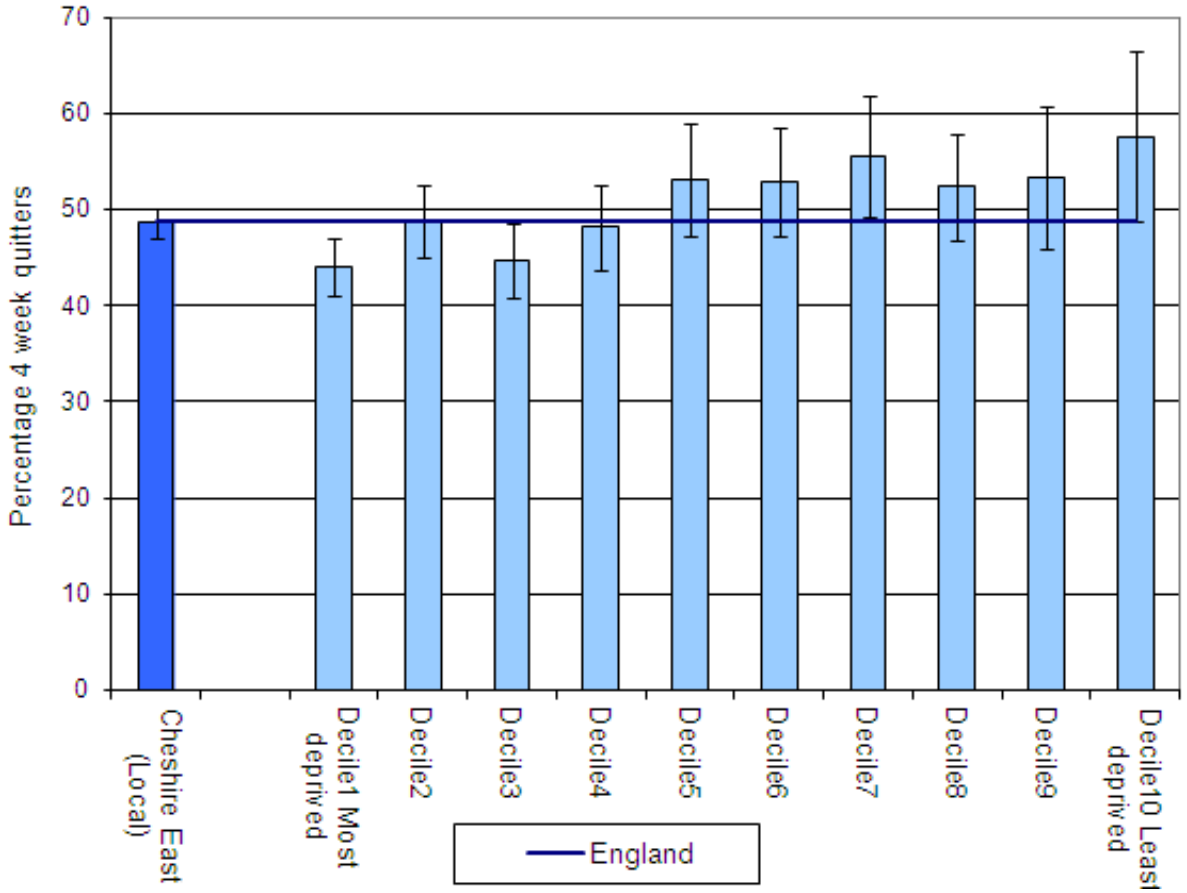
Source: PHMF/ONS PE

As highlighted in Chapter Three, the more deprived areas of the borough have higher levels of smoking. Not only does smoking result in increased levels of lung and upper gastrointestinal cancers but it is also highly influential in COPD. In fact smoking cessation is the most effective intervention to reduce the risk of developing COPD and also the most effective intervention to stop the progression of the disease (http://www.inhale.nhs.uk/).

In Cheshire East 17% of people aged 16 years and over smoke. However the variation in smoking prevalence between LAPs is from 11% for Poynton LAP to 23% for Crewe LAP, placing Crewe LAP significantly higher than the Cheshire East average. Macclesfield LAP is also above the Cheshire East average but only by 0.2%. South Cheshire Clinical Commissioning Group which includes Crewe has an average of 20% smoking prevalence. Local research carried out in 2009 showed that the Polish migrant community in Crewe had a smoking prevalence of 48%, more than double the Crewe LAP prevalence (Cheshire East JSNA Smoking Prevalence in Adults).

Cheshire East runs a stop smoking service 'Smokefree' which supports people who wish to quit. This service provides specific help to pregnant women and new mothers and the polish community as well as young people and those with mental health problems as well as the wider community. Nationally, there has been a downwards trend in the numbers of people who are quitting smoking. This is attributed to the fact that lighter or social smokers have already quit and the majority of the smokers are now heavier smokers who are less interested in quitting. Cheshire East's smoking quit rates are in line with the England average, but this masks wide variations within the borough based on deprivation (Figure 30). **The most deprived people, who are the heavier smokers, are the least likely in Cheshire East to quit. Whilst those in less deprived groups are more successful at quitting smoking.**

Figure 30: Smoking Quit Rates, Percentage successfully quit at 4 weeks, persons aged 16+, 2010/11



Source: The Information Centre for Health and Social Care, www.ic.nhs.uk/statistics-and-data-collections/health-and-lifestyles/nhs-stop-smoking-services, CECPCT Stop Smoking Service Quit Manager Database, NHS Postcode Directory

Asthma

Asthma can be difficult to diagnose in young children, one of the main difficulties being the changing nature of the condition. In older children a range of tests of 'bronchial function' may be used to confirm the diagnosis. Many young people start to smoke at an early age, and over 6% of children are regular smokers by the age of 14, and 11% by the age of 15. General Practitioners ask about and record smoking status on an annual basis when reviewing young people with asthma in this age group. The lower rates of recording of smoking status in some large towns may be due to fewer young people attending for their annual reviews in these towns.

Table 17: Young People aged 14 to 19 years with Asthma with Smoking Status Recorded in the Last 15 Months

Area	Status Recorded	All Asthma aged 14-19	Proportion
Knutsford	32	35	91%
South Cheshire CCG Rural	137	150	91%
Wilmslow	42	46	90%
Poynton	25	28	90%
Middlewich	23	26	89%
Nantwich	24	27	87%
Alsager	21	25	87%
Cheshire East	**691**	**814**	**85%**
Sandbach	12	14	84%
Crewe	94	113	83%
Macclesfield	111	137	81%
Eastern Cheshire CCG Rural	126	156	81%
Congleton	44	56	79%

Source: QOF 2011/12

Cheshire East has nearly 23,000 people who have active asthma, although there are minor variations in different areas. Of these 23,000 people, over 5,000 were diagnosed during the six years from 2006/07 to 2011/12. Accurate diagnosis of asthma is important, and doctors should be able to demonstrate changes in lung function either over time or in response to treatment in order to confirm the diagnosis. This will avoid untreated symptoms as a result of under-diagnosis, or inappropriate treatment as a result of over-diagnosis. Both scenarios have implications for the health of the patient and the costs of providing healthcare.

Table 18: Patients on GP Asthma Registers, 2011/12

Area	Number	Proportion
Congleton	1,785	7%
Sandbach	1,211	7%
Alsager	784	6%
Poynton	861	6%
Middlewich	851	6%
South Cheshire CCG Rural	2,602	6%
Nantwich	851	6%
Cheshire East	**22,876**	**6%**
Knutsford	825	6%
Eastern Cheshire CCG Rural	3,130	6%
Crewe	4,588	6%
Macclesfield	3,589	6%
Wilmslow	1,801	6%

Source: QOF 2011/12

Across Cheshire East, around 17% of people with asthma do not have a complete check as to whether they have asthma or not (called a measure of variability or reversibility). This proportion varies from 11% in Alsager to 24% in Crewe.

Table 19: Patients aged 8 years and over diagnosed with Asthma since 1 April 2006 with Measures of Variable Lung Function, 2011/12

Area	Variable	Asthma	% of patients
Alsager	172	194	89%
Poynton	121	139	88%
South Cheshire CCG Rural	824	949	87%
Nantwich	186	219	85%
Knutsford	180	212	85%
Macclesfield	605	717	84%
Middlewich	179	214	84%
Cheshire East	**4,245**	**5,125**	**83%**
Sandbach	76	92	82%
Eastern Cheshire CCG Rural	686	836	82%
Wilmslow	352	434	81%
Congleton	336	427	79%
Crewe	527	691	76%

Source: QOF 2011/12

Carefully structured care has been shown to produce benefits for patients with asthma. Reviewing the recording of peak expiratory flow levels, checking inhaler technique, reviewing current

treatment and the promoting of self-management are common themes of good care. This type of review is associated with fewer episodes and a lower number of days lost from normal activity.

In Cheshire East 73% of asthma patients have had a structured review of their asthma care. This proportion varies from 63% in Sandbach to 79% in Alsager.

Table 20: Patients with Asthma who have had an Asthma Review in the Preceding 15 Months, 2011/12

Area	Review recorded	All Asthma Patients	Proportion
Alsager	618	784	79%
Knutsford	647	825	78%
Congleton	1,346	1,785	75%
South Cheshire CCG Rural	1,956	2,602	75%
Wilmslow	1,346	1,801	75%
Eastern Cheshire CCG Rural	2,296	3,130	74%
Macclesfield	2,613	3,589	73%
Cheshire East	**16,613**	**22,876**	**73%**
Nantwich	612	851	72%
Poynton	610	861	71%
Crewe	3,209	4,588	70%
Middlewich	595	851	70%
Sandbach	765	1,211	63%

Source: QOF 2011/12

Chronic Obstructive Pulmonary Disease

Chronic Obstructive Pulmonary Disease (COPD) is a common condition with high death rates. The most effective treatment is stopping smoking. Oxygen treatment has been shown to prolong life in the later stages of the disease and has also been shown to help people take exercise and improve their mood. Many people respond to inhaled drug treatments. Pulmonary rehabilitation[8] has been shown to produce an improvement in quality of life. The majority of patients with COPD are managed by general practitioners, who refer patients to hospital specialists when required.

There are 6,070 people with COPD in Cheshire East, which represents just less than 5% of the total population. Areas with an older population structure will have higher numbers of cases.

[8] Pulmonary rehabilitation is designed to help the patient cope with their breathlessness and feel stronger and fitter at the same time. People often reduce the amount of activity they do to reduce the likelihood of getting out of breath. However, this does not help, as over time patients become unfit, tired and more breathless. Pulmonary rehabilitation can help by breaking that vicious cycle. A typical pulmonary rehabilitation course includes: a physical exercise programme, carefully designed for each individual; advice on lung health and coping with breathlessness; a friendly, supportive atmosphere. With the support of trained health professionals - physiotherapists, nurses, occupational therapists, doctors and many others – a rehabilitation course teaches patients how to increase their activity carefully, cope with breathlessness and manage periods of panic better. Adapted from information at http://www.blf.org.uk/Page/Pulmonary-rehab)

Approximately 15 per cent of people with COPD (900 patients locally) also have asthma, and these patients will appear on both disease registers.

Table 21: Patients on GP COPD Registers, 2011/12

Area	COPD Patients	Percentage of Total Population
Alsager	248	7%
Nantwich	218	6%
South Cheshire CCG Rural	645	6%
Sandbach	224	5%
Middlewich	301	5%
Poynton	183	5%
Cheshire East	**6,070**	**5%**
Crewe	1,299	5%
Knutsford	228	5%
Congleton	440	5%
Macclesfield	1,061	5%
Wilmslow	469	4%
Eastern Cheshire CCG Rural	754	4%

Source: QOF 2011/12

In 2011/12 a total of 592 patients were newly diagnosed with COPD. New patients should have the presence of airflow obstruction confirmed using special tests which show how well a person can breathe. 'Spirometry' supports the diagnosis and grading of how severe the disease is. Locally, 69% of new patients had a diagnosis that was supported by spirometry. This proportion varied from 53% in Alsager to 86% in Middlewich.

Table 22: Patients with COPD Diagnosed during 2011/12 where the diagnosis was confirmed by post bronchodilator spirometry

Area	Spirometry	New COPD	Percentage of New
Middlewich	23	27	86%
Congleton	22	28	78%
Wilmslow	35	47	74%
Macclesfield	87	119	73%
Knutsford	21	30	70%
Eastern Cheshire CCG Rural	50	72	70%
Cheshire East	**409**	**592**	**69%**
Crewe	83	121	69%
Sandbach	11	17	65%
Poynton	14	23	63%
Nantwich	17	29	59%
South Cheshire CCG Rural	35	59	59%
Alsager	11	21	53%

Source: QOF 2011/12

Table 23: Patients with COPD with a record of FEV19 in the Preceding 15 Months, 2011/12

Area	FEV1	Percentage of COPD
Sandbach	180	80%
Wilmslow	371	79%
South Cheshire CCG Rural	504	78%
Knutsford	178	78%
Alsager	189	76%
Crewe	988	76%
Middlewich	228	76%
Cheshire East	**4,542**	**75%**
Poynton	137	75%
Eastern Cheshire CCG Rural	548	73%
Nantwich	157	72%
Macclesfield	762	72%
Congleton	300	68%

Source: QOF 2011/12

[9] FEV1 is a clinical test which measures the volume of air expelled in the first second of a forced expiration. This will be reduced in people who have either obstructive or restrictive disease.

Table 24: Patients with COPD who have had a clinical review and assessment of breathlessness, 2011/12

Area	Number Attending for a Clinical Review	Percentage of COPD
Knutsford	195	87%
Sandbach	186	83%
Poynton	151	82%
Nantwich	177	81%
Wilmslow	380	81%
South Cheshire CCG Rural	521	81%
Middlewich	243	81%
Macclesfield	849	80%
Cheshire East	**4,800**	**79%**
Eastern Cheshire CCG Rural	591	78%
Crewe	1,003	77%
Congleton	325	74%
Alsager	180	73%

Source: QOF 2011/12

Conclusion

In 2011, a total of 90 people under 75 years of age died from respiratory disease in Cheshire East. Although the deaths were spread across the borough, more were seen in South Cheshire CCG (50) which has an under 75s mortality rate from respiratory disease of 28 per 100,000 (Inhale CCG Profiles). This compares to 40 premature deaths in Eastern Cheshire CCG which has an under 75s mortality rate from respiratory disease of 19 per 100,000 (Inhale CCG Profiles). As has been highlighted before, the reason for this difference is Crewe. The higher rates of deprivation in that area directly link to unhealthy lifestyle choices including high rates of smoking**. This does mean however, that if rates of smoking in Crewe LAP can be reduced, large health gains can be made in the area.**

Smokers with asthma have been shown to have poorer control of their condition with higher incidences of asthma attacks than non-smokers. Locally, the difference in emergency admissions to hospital for asthma between South Cheshire CCG and Eastern Cheshire CCG seems to reflect this. South Cheshire CCG has significantly worse emergency admission rates (per 100 patients on asthma register) compared to the England average (2.5% vs 1.8%). Compared to peers within the ONS Cluster (Prospering Smaller Towns) South Cheshire CCG has the worst rates of emergency admission for asthma (55 out of 55) (Inhale CCG Profiles). Eastern Cheshire CCG however, is not significantly different than the England average (1.9% vs 1.8%), though it is higher than average for the ONS Cluster (Prospering Smaller Towns) (46 out of 55) (Inhale CCG Profiles).

Quitting smoking will not only benefit the smoker themselves, but also their family. There is evidence that passive smoking experienced during infancy predisposes children to conditions such as asthma. There is also evidence that exposure to passive smoke at home delays recovery following

an acute asthma attack (Inhale CCG Profiles). In Cheshire East, in 2012/13 there were 2,544 children aged 6 months to 15 years who have been diagnosed with Chronic Respiratory Disease (Table 16). This has increased by 430 children since 2008/09. These children are a high risk and who need to be protected against exposure to passive smoking.

Children learn their behaviour from adults and become aware of smoking at an early age (3 out of 4 children are aware of cigarettes before they reach 5 years old). If children see smoking as a normal part of everyday life they are more likely to become smokers themselves (http://www.cheshireeast.gov.uk/social_care_and_health/health_advice/healthy_living/smoke_free.aspx). This can lead to a perpetual cycle of ill health, with poorer control of chronic conditions such as asthma.

The focus of the new initiative, 'smokefree families' in Crewe LAP, will help to improve the health of the youngest in that community. This initiative supports pregnant women and new mothers and their families to quit smoking. By reducing the smoke that infants and children are exposed to, the rates of asthma and other respiratory conditions will reduce. This will in turn improve their future health, as they will not be carrying these conditions through into adulthood and thus reducing their future risk of premature death. It is important to remember that certain health promotion actions have a wider impact than just the person making the lifestyle change. By stopping smoking a mother or father is protecting their children's health also.

Key Findings

- **Respiratory disease is responsible for almost one in ten early deaths in Cheshire East**
    - This is better than the England average but significantly worse than average when compared to similar local authorities
- **The most common respiratory diseases are asthma and COPD**
    - The numbers diagnosed are increasing
    - Most patients are well managed, however outcomes are generally poorer amongst those from the most deprived communities
- **Exposure to tobacco smoke is the most important factor influencing the risk of respiratory disease**
    - Overall smoking rates, at 17% in Cheshire East, are significantly lower than the England average
    - The number of people who smoke varies significantly across Cheshire East, correlating with levels of deprivation; Crewe has the highest smoking rates, particularly amongst the Polish community
    - More pregnant women smoke at the time of delivery in Cheshire East compared to the national average

- ‘Smokefree’ provides specific help to pregnant women, new mothers and the Polish community as well as the wider population: supporting an individual to stop smoking will not only benefit the smoker themselves, but also their family

Liver Disease – A Growing Epidemic

Liver disease is strongly associated with lifestyle and deprivation. Damage and scarring of the liver can be caused by drinking large volumes of alcohol at younger ages, or by being overweight and obese, and by certain infections linked to drug misuse. A key characteristic of liver disease is that it shows few symptoms and can go undiagnosed until it becomes very advanced. People with liver disease often die at a younger age than other causes of premature mortality, with a high proportion of people being in their forties and fifties.

The number of people under the age of 65 on general practice chronic liver disease registers has increased rapidly from 912 in 2008/09 to 1,353 in 2010/11 and 1,628 in 2012/13. There is little data on under 18 year olds as liver disease is asymptomatic in its early stages. Cheshire East has high alcohol specific admissions in the under 18s compared to the national average (Figure 33). Though the numbers are small (67 between 2008/09-2010/11), these young people represent the tip of an iceberg. We know unhealthy drinking habits are common amongst our young people including binge drinking and therefore we can be certain, that within ten years large numbers of relatively young adults will be presenting with liver disease.

Alcoholic liver disease is one of the leading forms of liver damage. Alcohol dependence is common and is estimated to affect around 5.9% of the population. Prolonged and excessive use of alcohol damages the liver cells, beginning with reversible fatty change, then inflammation (hepatitis) and irreversible cirrhosis (scarring). Between 90-100% of heavy drinkers have fatty liver changes and 20% will go on to develop cirrhosis.

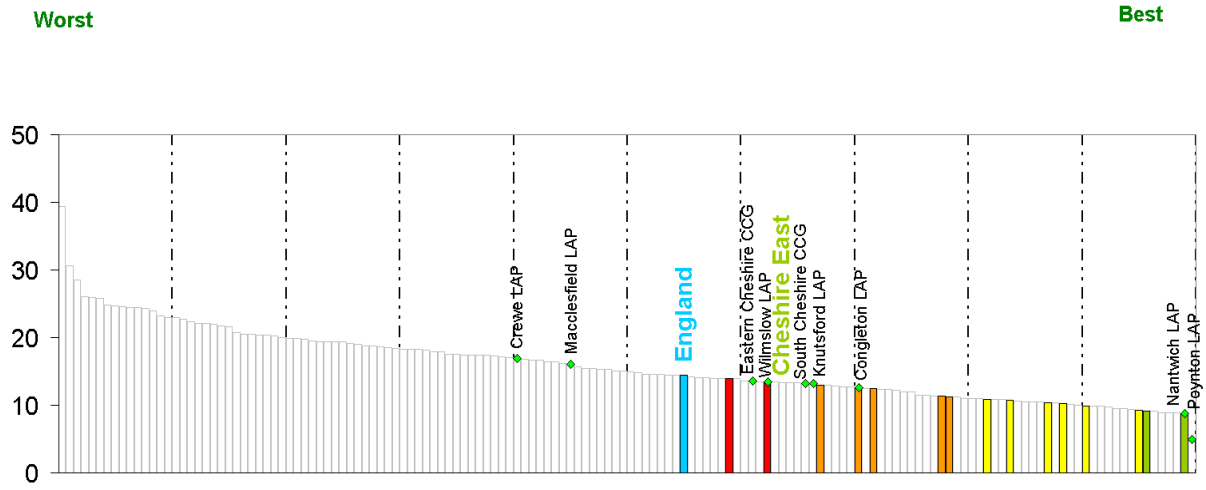
Non-alcoholic fatty liver disease is a significant and increasing cause of liver disease. Around 65% of people with obesity and 90% of people with diabetes have excess fat in their liver, and some will go on to develop chronic liver disease. One in five people are estimated to have early stages of this disorder, reflecting the high rates of obesity in the population.

Viral infections of the liver can cause chronic liver disease, particularly hepatitis C infection from injecting drug users sharing contaminated equipment. Effective treatments are available to clear the body of hepatitis C infection, and current and ex-drug users should all be offered testing. Hepatitis B is a less common cause and is spread by sexual contact or by sharing drug equipment. Hepatitis B can also be passed from an infected mother to her baby during birth, but antenatal screening for hepatitis B has made this a very uncommon event.

Deaths from Liver Disease

Liver disease caused 5% of all early deaths in Cheshire East in 2009-2011, and over half of these were due to alcoholic liver disease. The coloured bars in Figure 31 represent other local authorities with similar socioeconomic profiles to Cheshire East. Those coloured green are significantly better than average for the group and those in red are significantly worse. The early death rates in Cheshire East are worse than expected (it is 56th out of 150 local authorities), and this is due to higher numbers of early deaths in Crewe and Macclesfield.

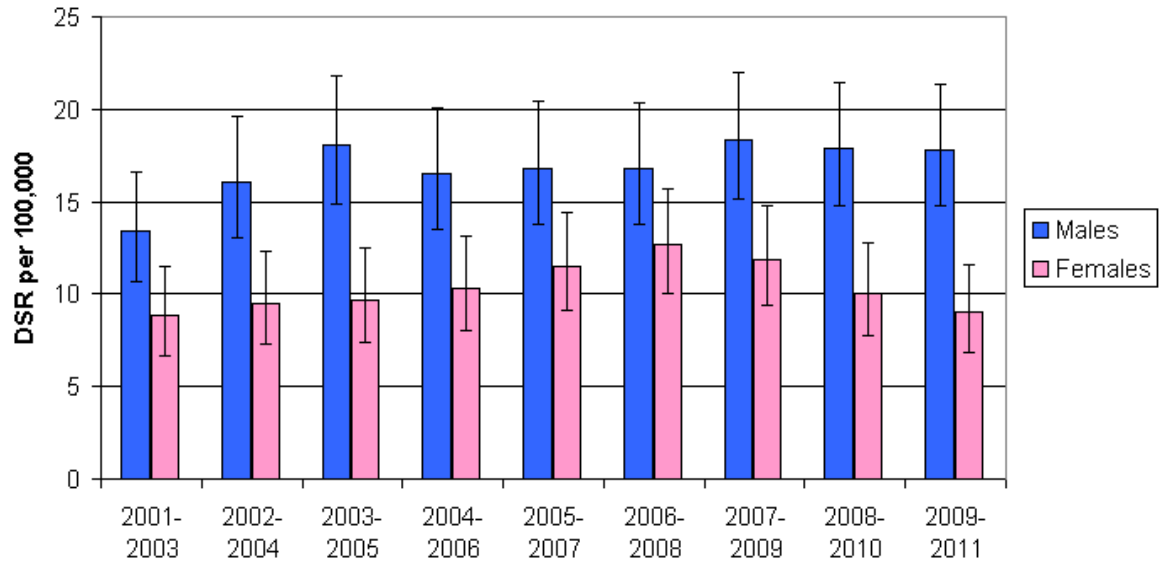
Figure 31: Premature Mortality from Liver Disease, Directly Standardised Rate per 100,000, persons aged under 75, 2009-2011, Local Authorities Ranked by Mortality Decile



Source: Public Health England Longer Lives; PHMF/ONS PE

Male death rates in Cheshire East have remained constant for several years and are around twice as high as females. A rise in female mortality occurred between 2001 and 2008, peaking in 2006-8 when it was significantly higher than in 2001-3. It has since been declining.

Figure 32: Directly Standardised Premature Mortality Rates in Cheshire East - Liver Disease (B15-B19, C22, I81, I85, K70-K77, T86.5)



Source: PHMF/ONS PE

An Overview of Liver Disease

A variety of indicators can be used to assess potentially unwarranted variations in liver disease at a local level. Cheshire East's position within national quintiles (fifths) is as follows:

Figure 33: Factors Contributing to Liver Disease: Cheshire East's Position Nationally by Quintile

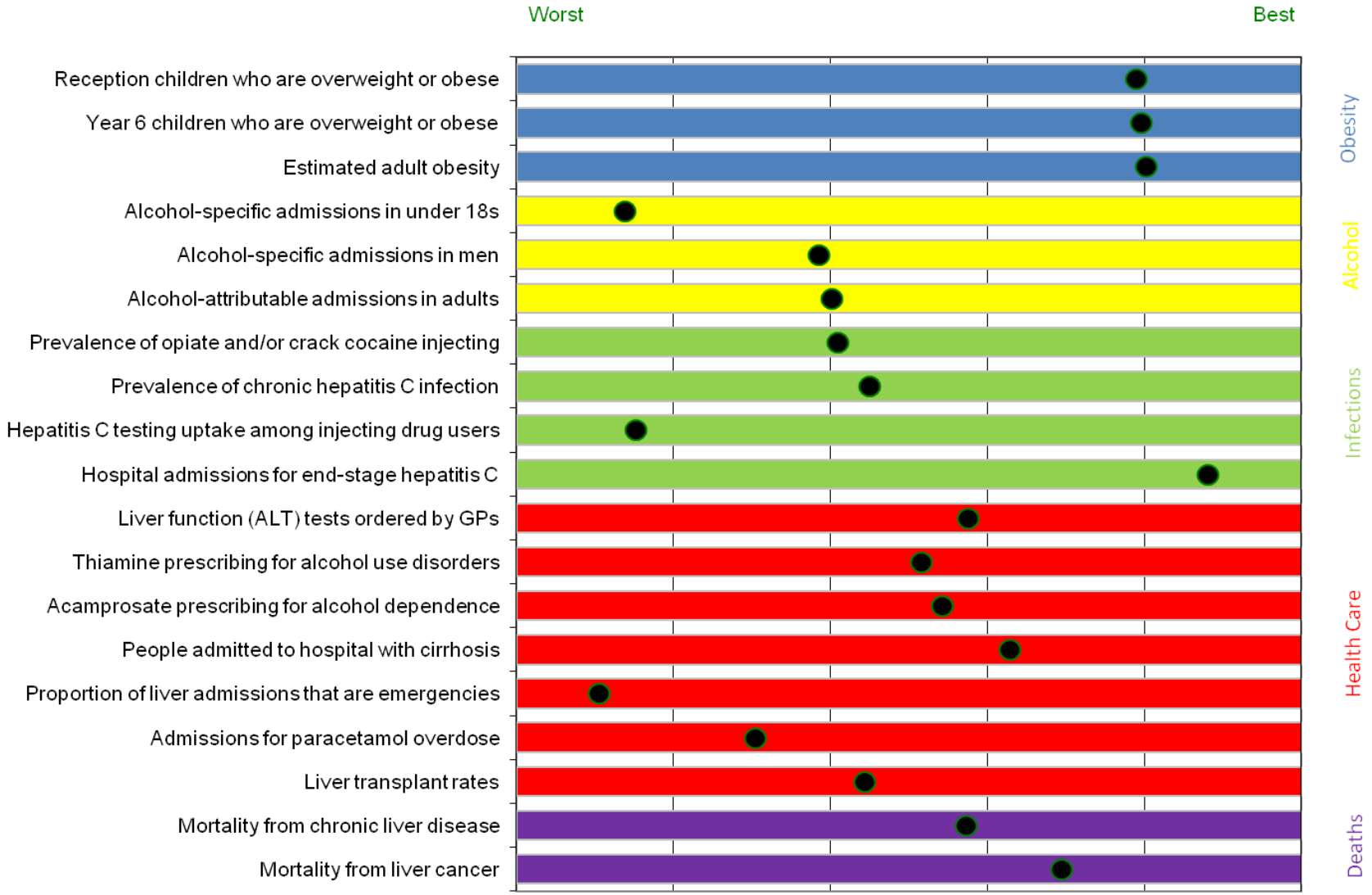


Table 25: Factors Contributing to Liver Disease in Cheshire East

Indicator	Time Period	Statistic	Cheshire East No. per year	Cheshire East Value
Obesity				
Reception children who are overweight or obese	2011/12	%	792	21.0
Year 6 children who are overweight or obese	2011/12	%	1034	30.8
Estimated adult obesity	2006-2008	%	63700	21.7
Alcohol				
Alcohol-specific admissions in under 18s	2008/09-2010/11	Rate per 100,000	67	88.6
Alcohol-specific admissions in men	2010/11	DSR per 100,000	820	437.5
Alcohol-attributable admissions in adults	2010/11	DSR per 100,000	8455	1832.0
Infections				
Prevalence of opiate and/or crack cocaine injecting	2009/10	Rate per 1,000		3.4
Prevalence of chronic hepatitis C infection	2006-2008	Rate per 100,000		453.1
Hepatitis C testing uptake among injecting drug users	2011/12	%		35.1
Hospital admissions for end-stage hepatitis C	2008/09-2010/11	Rate per 100,000		1.2
Health care				
Liver function (ALT) tests ordered by GPs	2012	Rate per 1,000		298.4
Thiamine prescribing for alcohol use disorders	2011/12	Rate per 1,000		3.1
Acamprosate prescribing for alcohol dependence	2011/12	Rate per 1,000		0.6
People admitted to hospital with cirrhosis	2006/07-2010/11	Rate per 100,000		86.6
Proportion of liver admissions that are emergencies	2010/11	%		50.3
Admissions for paracetamol overdose	2010/11	Rate per 100,000		128.3
Liver transplant rates	2006/07-2010/11	Rate per 1,000,000		12.1
Deaths				
Mortality from chronic liver disease	2008/10	DSR per 100,000	43	9.7
Mortality from liver cancer (u75)	2006-2010	DSR per 100,000		1.2

Source: NHS Atlas of Variation in Healthcare for People with Liver Disease; National Child Measurement Programme (NCMP); Public Health England Estimates of Adults Health and Lifestyles, 2006-2008; Local Alcohol Profiles (LAPE); PHMF/ONS PE

Overall these indicators suggest that there appears to be an average or low-to-average burden from liver disease locally; there is also an indication that there may be high or hazardous levels of drinking among young people, with high alcohol specific admissions less than 18 years old. It also implies that we are not identifying opportunities to reduce the impact of disease early enough with high rates of

emergency admissions. Preventative measures need to involve a combination of public policy initiatives such as action on obesity and harmful alcohol use, and increasing public awareness of liver health. Additionally, people who are at risk of viral hepatitis should be offered testing for hepatitis B and C, and treatment offered for hepatitis C infection.

Improved detection of the early signs of liver disease should take place through appropriate risk assessment strategies in local populations, with the use of appropriate testing to identify liver disease that can be reversed or treated. The Clinical Commissioning Groups and the Local Authority can ensure that their staff are trained in alcohol awareness and the delivery of alcohol screening and brief interventions, and take every opportunity to 'Make every contact count' by checking for alcohol misuse.

The rate of spending on liver problems by the local NHS in 2010/11 was in the top fifth of areas in England, which suggests a need to redistribute resources rather than increase overall investment.

Effective Interventions to Reduce Harm From Alcohol

The National Institute of Health and Care Excellence (NICE) have recommended the following evidence-based interventions to reduce harm from alcohol in the population:

- Making alcohol less affordable by introducing a minimum price per unit of alcohol which reflects its health and social costs
- Make it less easy to buy alcohol by reducing the number of places selling it and the times at which it can be sold
- Prevent alcohol sales to those who are underage, intoxicated, and those making illegal purchases for others
- Reduce exposure of children and young people to alcohol advertising which is associated with starting to drink and increased drinking
- Screening using questionnaires to identify those at risk of alcohol harm (including children and young people), and then using brief interventions and further support to achieve behaviour change

Locally a number of the NICE recommendations are being implemented or addressed. The Cheshire East Cabinet has already agreed in principle to the use of a bye-law to introduce Minimum Unit Pricing, and the Council is continuing to work with other authorities in the North West to determine the most appropriate way to move forward together with respect to this.

In terms of redistributing resources, the new national alcohol screening and risk reduction pathway in the NHS Health Check Programme (for more information see Chapter Four) will allow people at risk of harm from their own drinking to be identified and 'brief interventions' delivered to them. Local alcohol and drug services are being redesigned to better meet the needs of the local population and achieve better outcomes from preventive actions.

Key Findings

- **Liver disease causes 5% of the early deaths in Cheshire East** (approximately 50 deaths per year)
    - Half of these deaths are due to alcoholic liver disease

- The number of deaths is better than the England average but worse than expected when compared to similar local authorities, this is due to higher numbers of early deaths in Crewe and Macclesfield

- **Liver disease is an important disease** because:
  - There are few symptoms so it can go undiagnosed until the disease is at an advanced stage making it more difficult to treat
  - The number of people diagnosed with chronic liver disease is increasing; the number of people under the age of 65 on general practice chronic liver disease registers has increased rapidly from 912 in 2008/09 to 1,353 in 2010/11 and 1,628 in 2012/13

- **The key findings amongst national indicators suggest liver disease is impacting on health care usage locally**:
  - A high number of people admitted to hospital have been drinking alcohol
  - Compared to nationally, a high number of under 18s are admitted to hospital due to alcohol consumption
  - A high proportion of people with liver disease require emergency admissions

Chapter Six

Road Traffic Accidents and Suicide

We have seen from Chapter One that an estimated 600 deaths could be avoided each year in Cheshire East if we were able to tackle the top four causes of premature death (cancer, heart disease and stroke, lung disease and liver disease). There are two further important yet potentially avoidable causes of premature death which the national call to action did not explore, but my annual report needs to highlight because of their importance to Cheshire East. These are deaths due to road traffic accidents and suicide.

Road Traffic Accidents

A road traffic accident refers to personal injury occurring on a public highway in which at least one vehicle, or a vehicle in collision with a pedestrian, is involved (Department for Transport, 2013a). A road traffic casualty is a person killed or injured in a road traffic accident. **Although the number of deaths attributed to road traffic accidents is falling nationally, in 2012 1,754 people were killed on Britain's roads, and approximately 200,000 were seriously injured.** (EuroRAP, 2013)

From a national perspective, we know that that:

- **Despite high usage, motorways are deemed less risky for individual road users:** one in ten of all fatal or serious collisions occur on motorways
- **Single carriageway A-roads carry the highest risk of fatal or serious collisions**: almost two thirds of fatal or serious collisions occur on these roads
- **The characteristics of the road user and driving conditions are important:** one in five fatal or serious road collisions involve a motorcycle, despite motorcycles accounting for just 1% of road users

Key factors can increase the risk of an accident occurring (Table 26).

Table 26: Factors associated with an increased risk of the occurrence of a road traffic accident

	Associated with increased risk of a road traffic accident
Driver	Young and male
	Riding a motorcycle
Environmental Conditions	Darkness
	Poor Visibility
Road Conditions	Mixing high speed traffic with vulnerable road users
	Defects in road design, layout and maintenance

Key risk factors for road traffic injuries include:

- **Excessive speed**: reported in 25% of all fatalities on the roads in 2011.
- **Poor skill**: due to inexperience, driving under the influence of alcohol or drugs, or becoming distracted, for example using a mobile phone whilst driving.
- **Failure to take adequate protection:** e.g. not using motorcycle helmets (which can reduce risk of death by 40%), safety belts and child restraints (which can reduce risk of infant death by 70%).

Drivers of all vehicles need to take responsibility for their actions upon the road whilst driving. They should be aware of, and drive appropriately for, the road and the conditions and reduce excessive speed.

Serious road traffic accidents require a multiagency response, often requiring support from the Police, Fire and Rescue services and the NHS. **A multiagency response is costly: it is estimated that the cost of managing a fatal motorway crash is in excess of £2 million, whilst managing a serious crash on an A-road costs £200,000; this does not include the intangible costs borne by the individual, family, businesses and private owners.** Most accidents occur on roads owned by the Local Authority, rather than the Highways Agency controlled motorways. Road traffic accidents cost English local authorities an average of £2 billion annually. (Road Safety Foundation, 2011)

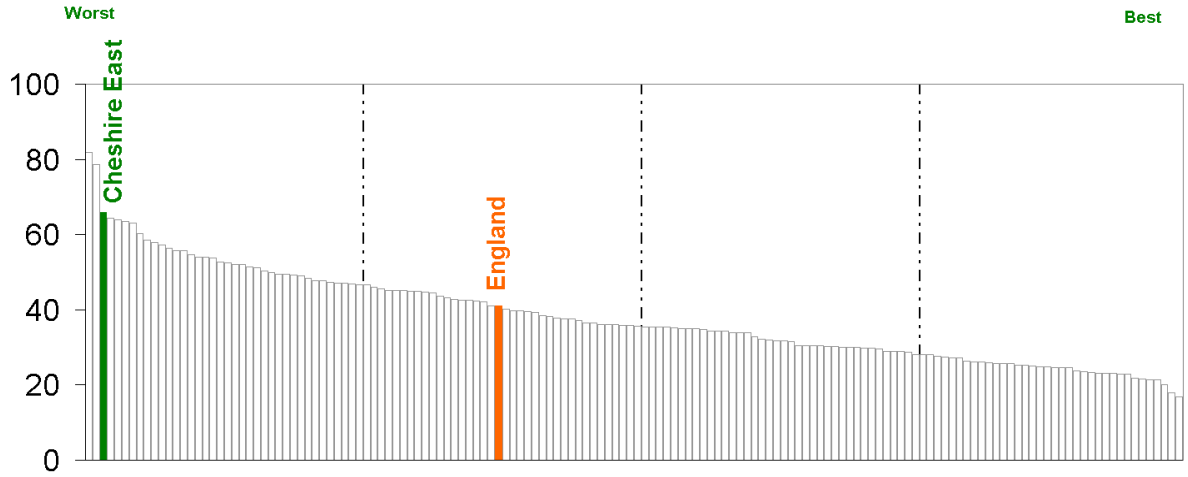
Road Traffic Accidents in Cheshire East

Over 2010-2012, 732 people were killed or seriously injured on Cheshire East roads, not all of whom were Cheshire East residents. This equates to approximately 244 deaths and serious injuries annually. As Figure 34 shows, this places Cheshire East much higher than the England average.

Using 2011 as an example year, there were 1,759 road traffic collisions in Cheshire East resulting in 12 deaths, 201 severe casualties and 846 slight casualties (Department for Transport, 2013e). Eighty-six percent of these collisions occurred on a Cheshire East Council owned road; 57% occurred on a rural road.

Of those who were fatally and seriously injured, 21 (9%) were under the age of 16 whilst 51 (21%) were aged 16-25. Males made up 69% of those killed or seriously injured.

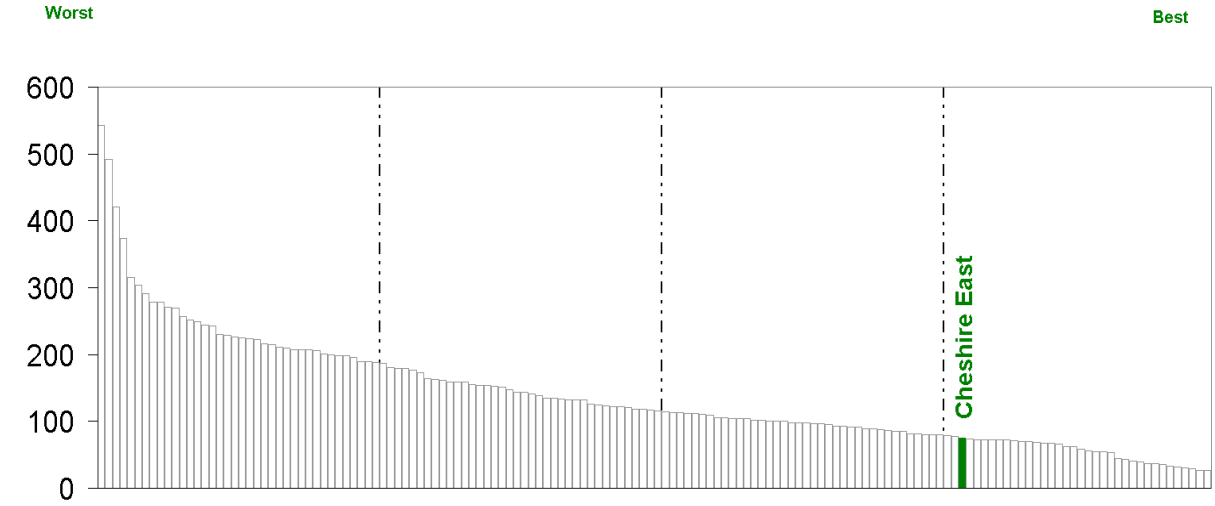
Figure 34: Killed or Seriously Injured Casualties on England's Roads, all ages, per 100,000 resident population 2010-2012



Source: Department for Transport (N.B. above figures exclude City of London which is an outlier)

Although, Cheshire East has high numbers of serious casualties on its roads, given the size of the resident population it has a much larger than average road network. **Therefore when the number of casualties is compared to the length of the local authority's road network, Cheshire East has a relatively low rate of casualties compared to other local authorities (Figure 35).**

Figure 35: Number of Fatal and Serious Casualties per Billion Vehicle Miles Where the Local Authority is the Road Owner in 2011



Source: Department for Transport

Data from 2012-2013 indicates that 72% of those killed or seriously injured on Cheshire East roads were Cheshire East residents, indicating that over a quarter of casualties were not local people.

Road traffic accidents were responsible for 1.1% of all premature deaths in Cheshire East residents in 2009-2011; 1.4% amongst males and 0.7% amongst females, and represented 33% of early deaths due to accidents. Some of these premature deaths will have occurred on roads outside Cheshire East.

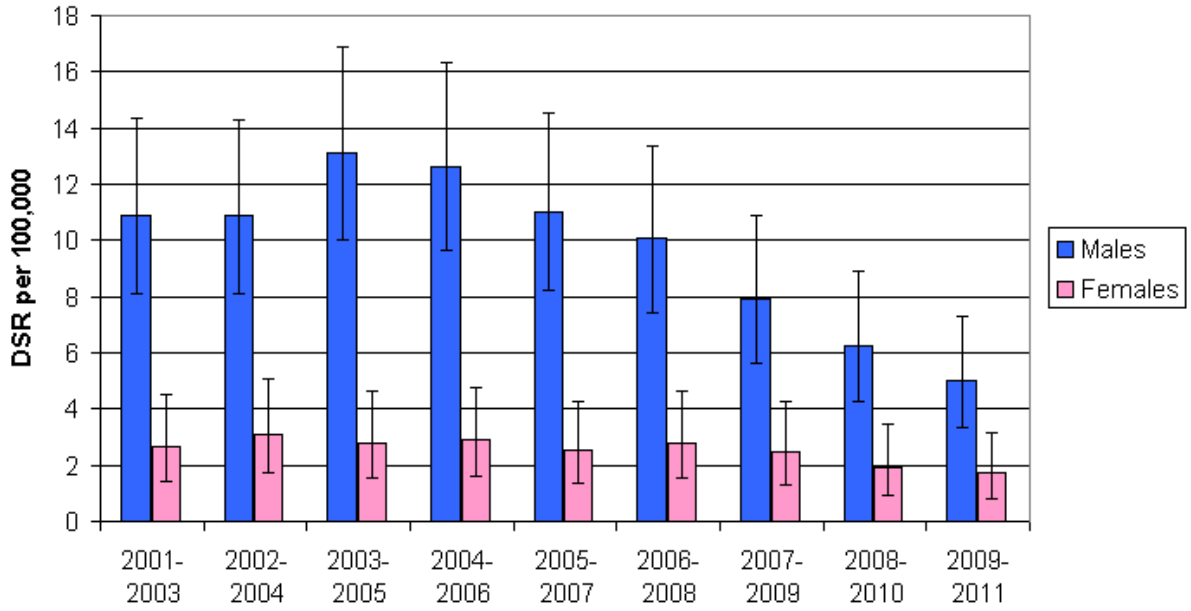
Table 27: Premature Deaths and Death Rate due to Road Traffic Accidents by Sex, Cheshire East (2009-2011)

	Males (2009-2011)	Females (2009-2011)
Number of premature deaths (over three years)	27	10
Directly standardised premature mortality rate (per 100,000)	5.0	1.7

Source: PHMF/ONS PE

Over the last decade the there has been a substantial decrease in the premature death rates due to road traffic accidents, particularly amongst males; Figure 36 shows that the male premature death rate due to traffic accidents has fallen by 54% between 2003-05 and by 2009-11. There is also evidence to suggest a decrease in the number of early deaths due to transport accidents in males aged 15-24, however overall numbers of deaths are so small that firm conclusions cannot be drawn.

Figure 36: Direct Standardised Premature Mortality Rates in Cheshire East - Transport Accidents (V01-V99)

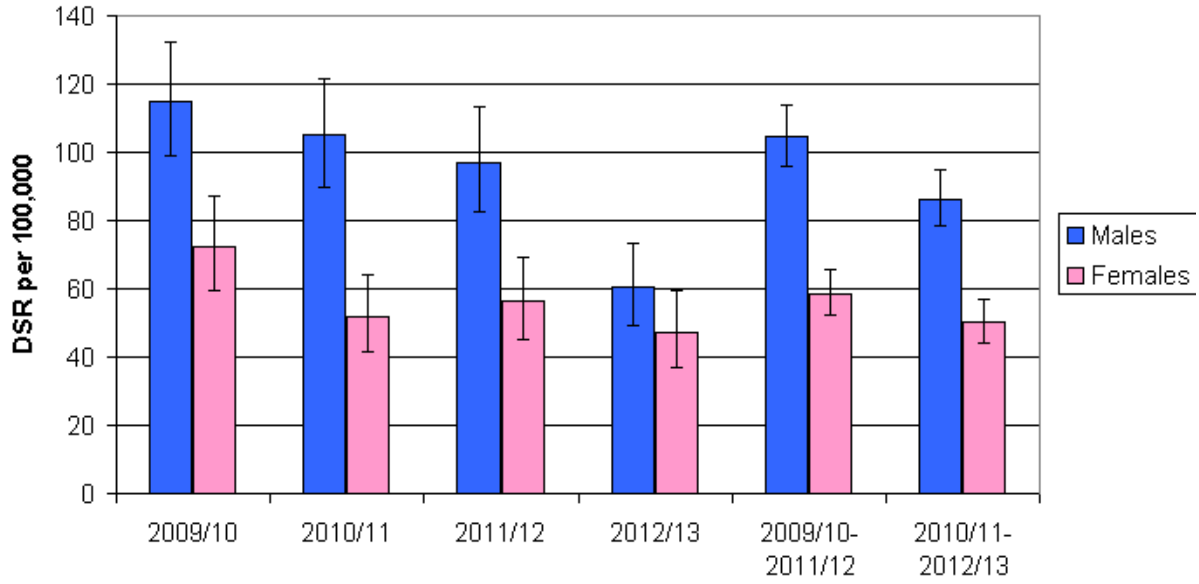


Source: PHMF/ONS PE

Road Traffic Accident Hospital Admissions

In 2012-2013 there were 170 hospital admissions for people aged under 75 in Cheshire East due to a road traffic accident; numbers have decreased between 2009/10 to 2012/13 (with a decrease of 48% for males and 35% for females).

Figure 37: Directly Standardised Hospital Admission Rate Amongst the Under 75s in Cheshire East - Transport Accidents (V00-V98)



Source: Inpatient CDS/ONS PE

Road Use in Cheshire East

Cheshire East has in excess of 1,770 miles of roads, which is **higher than the British average for a local authority** (Department for Transport, 2013). The M6 motorway runs through the area, and there is a large network of major principle roads, many of which are rural.

Table 28: Roads in Cheshire East

Road Type	Miles in Cheshire East in 2011	Proportions
Major trunk roads	33.7	**Motorway**: 87.2% **Rural A trunk roads**: 12.8%
Major principal roads	258.1	**Rural**: 77.3% **Urban**: 22.7%
Minor roads	1,481	**Rural**: 60.9% **Urban**: 39.1%

Source: Department for Transport

The number of vehicle miles travelled in Cheshire East is higher than the British average for a local authority, with a particularly high usage by heavy goods vehicles (HGVs) but also higher than average usage by cars, taxis and light goods vehicles (LGVs).

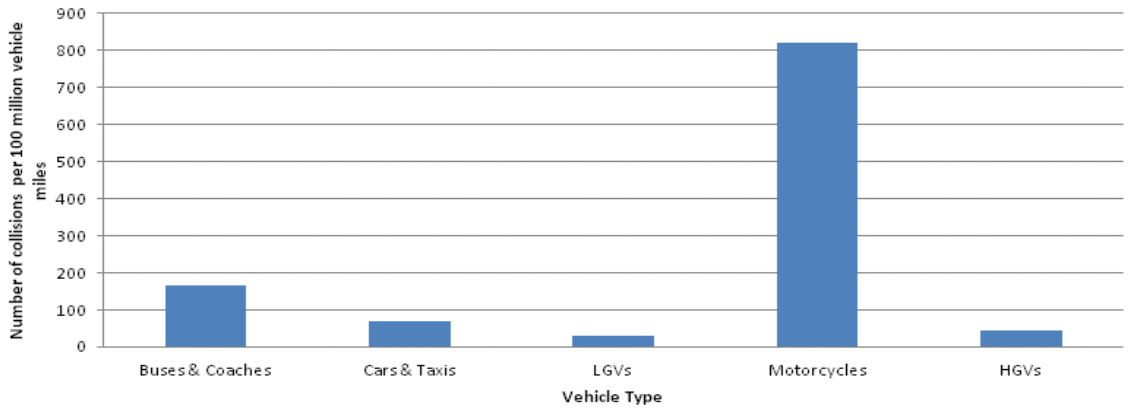
Table 29: Vehicle Miles Travelled by Vehicle, Cheshire East and Nationally

	Cars and taxis	LGVs	HGVs	Motorcycles	Buses and coaches	All motor vehicles
Vehicle miles travelled in 2011 (million miles) in Cheshire East	2,187	323	215	17	14	2,756
Average of British local authorities	1,168	201	77	14	14	1,475
Percentage higher than British average	87%	60%	278%	19%	2%	87%

Source: Department for Transport, 2013d

Whilst accidents involving motorcycles represented only a small proportion (7%) of the overall number of accidents, those who ride a motorcycle are at increased risk of being involved in an accident (Figure 38).

Figure 38: Vehicle Accident Rate in Cheshire East, 2012



Source: Department for Transport (http://road-collisions.dft.gov.uk/indicators)

EuroRAP (the European Road Assessment Programme) assesses Britain's transport network and annually publishes 'Britain's persistently highest risk roads'. **Three roads within Cheshire East feature in the 2013 list, including the A537 Macclesfield to Buxton road, known locally as 'the Cat and Fiddle', which is ranked as the highest risk road nationally**.

The characteristics of the 3 roads are summarised in Table 30. All are rural single carriageway A roads, for which a 12-13 km section is causing concern. 'Run offs' were the most common form of crash on these roads. Motorcycles were implicated in over half of collisions on the 'A537' and 'A54' routes.

Table 30: Summary of EuroRAPs published 'Britain's persistently highest risk roads', summarising roads from Cheshire East

Rank	Route Details				Percentage contribution of crash types (2007-11)							
	Road Number	Route	Length (km)	Type	Number fatal & serious crashes	Motorcyclists involved (%)	Pedestrians involved (%)	Junction (%)	Run offs (%)	Head on (%)	Rear end shunt (%)	Other (%)
1	A537	Macclesfield (Cheshire) to Buxton (Derbyshire)	12	Single	44	66	5	20	32	18	2	23
5	A530	Whitchurch (Shropshire) to Nantwich (Cheshire)	13	Single	23	26	22	30	26	17	0	4
8	A54	Congleton (Cheshire) to Buxton (Derbyshire)	12	Single	28	54	11	11	36	11	4	29

Source: EuroRAP 2013

Profile of the A537 – The Macclesfield to Buxton 'Cat and Fiddle' Road

In 2013 the A537 between Macclesfield and Buxton has ranked the worst persistently high risk route in Britain. The road is a challenging 12km single carriageway A-road across the Peak District National Park, bounded by dry stone walls and rock faces for its entire length.

This road has seen the number of collisions increase by 66% in the last 5 years, and the risk of having a serious accident is 9 times higher on this route compared to the average risk rating for a single carriageway.

- Although the road sees below average usage, it is especially popular in the summer months and at weekends where the road is used for recreation by locals and tourists; the road is commonly enjoyed by car passengers enjoying the scenic views, as well as cyclists and motorcyclists enjoying the challenges of the sharp bends and undulating route.
- The geography of this high-level route means the weather conditions can change quickly, and natural lie of the land means there are many sharp bends.
- The route sees mixed traffic use, particularly attracting cars, cycles and motorbikes.

In response to the number of collisions, an average speed camera system was introduced in 2010 / 11 with early positive feedback. Since then a route management study has been undertaken, and other measures will be implemented next year as a result of the route management review.

Interventions

The Road Safety Foundation has demonstrated that investment made by responsible authorities achieves reductions in death and serious injury. Cost benefit analysis is used to estimate the

economic return from transport schemes. It has been estimated that to ensure all A-roads and motorways reach a minimum safety standard would require a capital investment of £8.2 billion for the UK as a whole. The evidence consistently shows that although it is expensive to invest in developing a safe road infrastructure, investment is good value for money in terms of accidents avoided, disability avoided and lives saved. In England it has been estimated to cost £110 per person to achieve the minimum safety standards across the road network. Therefore if the costs were spread over 10 years, each person would contribute £11 per year, which in turn would generate savings of £27 per person through the reduction in road traffic accidents. Modelling suggests improvements in the road infrastructure would lead to a reduction in fatalities by 40% and would reduce by one third the number of serious injuries. (EuroRAP, 2013)

Locally average speed cameras were introduced in partnership with Derbyshire County Council on the A537 and A54 between Macclesfield / Congleton and Buxton. The remainder of the A537 is currently the subject of a route management review and further measures will be introduced during 2014. Cheshire East Council is working with other Cheshire Authorities and the Police through the Cheshire Road Safety Group to review and upgrade Safety Camera sites across their area.

The A530 has been the subject of a route management study which resulted in two speed limit zones being introduced. A range of other measures are being assessed with a view to them being implemented next year.

Two national documents providing strategic direction for road safety are summarised (Table 31), and are being used to inform local policy. **In addition, the annual EuroRAP (European Road** Assistant **Programme) report 'Measuring to Manage' has proven a useful tool in identifying persistently high risk roads in the area.**

These 3 key resources will be used to inform the Cheshire East Multi-Agency Road Safety Plan (2013-2014).

Table 31: Key National Road Safety Documents

The Strategic Framework for Road Safety **(Department for Transport, 2011)**	Published in 2011, it sets out a vision to ensure that Britain remains a world leader on road safety and that improvements in road safety continue. The framework focuses on: • **Empowering local citizens and service providers** - e.g. ensuring that local authorities make full use of powers such as setting speed limits. • **Education** – developing skills and attitudes e.g. development of a new post-driving test qualification • **Targeted enforcement and sanctions** - e.g. introducing a fixed penalty offence for careless driving.
The Royal Society for the Prevention of	ROSPA has recently published guidance on how to reduce road traffic injuries. It suggests: • **Using the World Health Organisation Safe Systems Model** which is based

Accidents **(ROSPA, 2013)**	on preventing injury via road, vehicle and vehicle speed design. Human error is recognised as a major factor but redesigning the environment may be more effective at preventing injury. • **Reducing traffic volume by addressing excessive dependence on cars** as many journeys could be easily made using other modes of transport e.g. walking and public transport. Planners can consider the likely impact of new developments upon local car usage and planners and health professionals may work together to maximise their positive health benefits. • **Understanding and addressing the social equity aspects of road safety.** Road injury is associated with deprivation. Overcrowded housing and lack of garden space can influence children's risk of road injury. Provision of safe play areas for children can be useful.

Locally, the Cheshire East Strategic Road Safety Board (CESRSB) is responsible for identifying priorities and agreeing the Cheshire East Multi-Agency Road Safety Plan (2013-2014). There are also two Road Safety Delivery Groups, in the North and South of the area, who are responsible for implementing and delivering the road safety plan.

Implementation of the Cheshire East Multi Agency Road Safety Plan for 2013-2014 is currently underway. It is a joint effort between Cheshire Fire and Rescue Service, Cheshire Constabulary and Cheshire East Council/Ringway Jacobs and is based on the principles of education, enforcement and engineering. This has involved various activities including:

- Enforcement of road traffic laws
- Promotion of advanced rider training amongst motorcycle riders
- Promoting the National Driver Offender Retraining Schemes (NDORS) which results in offending drivers completing road safety courses
- Supporting driving campaigns across target roads
- Targeted patrolling, intervention, education and enforcement to respond to locally identified concerns
- Use of speed identification units (SIDs), which inform drivers of their speed in relation to the posted speed limit of the road in response to local concerns in respect of speed and to support Community Speedwatch Schemes
- Support for the United Nations Road Safety Week
- Road safety education in schools across Cheshire East including Bikeability courses
- Road safety audits to identify specific issues during design and construction

- Review of High Collision / Casualty route signing
- Review of approach to 30 mph and 20 mph speed limits within Cheshire East

Over the next year the following work will be undertaken:

- Continued implementation of the Cheshire East multi-agency road safety plan
- Development of public health involvement in planning processes with respect to health impact assessment
- Monitoring of impact on road injuries of wider Council policies such as the 'lights out' policy in parts of Cheshire East
- Further work to establish burden of 'killed and seriously injured on the roads of Cheshire East'.
- 'Reducing the number of children and young people killed or seriously injured on Cheshire East's roads' to be a priority of the Cheshire East Health and Wellbeing Strategy.

The CESRSB will also need to consider how the 'high risk roads' identified by EuroRAP will be managed in light of the newly published results.

Conclusion

Cheshire East has an extensive road network, where a higher than average number of vehicle miles are driven. The M6 motorway runs through the area, and there is an extensive rural A-road network; single carriageway A-roads are recognised to carry the highest risk of serious collision. This local authority has a high rate of fatal and serious casualties resulting from road traffic accidents per 100,000 population, but comparatively low numbers in relation to the size of the road network. Over 86% of serious collisions occur on a Cheshire East Council owned road, rather than affecting the Highways Agency controlled motorways and strategic A-roads. In 2013 three rural single carriageway A-roads in Cheshire East were identified amongst the highest risk roads in Britain.

The number of serious injuries and deaths in Cheshire East is high, however the rate of deaths and hospital admissions following a road traffic accident have reduced substantially over the last decade. Despite improved outcomes, rates are still high, though some trends are apparent and we can characterise that:

- Young males are most commonly involved in road traffic accidents
- A high proportion of incidents involve motorcycles
- Over a quarter of those killed or seriously injured on Cheshire East roads are not Cheshire East residents

The evidence base tells us that investing in the development of a safe road infrastructure is expensive, but cost effective, and successful in accident avoidance. Local priority needs to be given to promote multiagency working and continue the successful implementation of the 'Cheshire East Multi Agency Road Safety Plan for 2013-2014'.

Key Findings

Early Deaths Due to Road Traffic Injury in Cheshire East

- Cheshire East has a high number of fatal and serious road traffic accidents in comparison to the number of residents. but comparatively low numbers in relation to the size of the road network
- Young males and motorcyclists are frequently involved in the collisions
- Over a quarter of those killed or seriously injured on Cheshire East roads are not Cheshire East residents.
- Road users must take responsibility for their actions whilst driving and drive appropriately for the road and conditions.

Roads and their usage in Cheshire East

- Cheshire East has an extensive road network and a higher than average numbers of vehicle miles are driven
- Cheshire East has a large rural A-road network, some of which are recognised to carry the highest risk of fatal or serious collisions

Cheshire East Multi-Agency Road Safety Plan (2013-2014)

- Investment to develop a safe road infrastructure is expensive but cost effective and successful in accident prevention
- Priority needs to be given to promote multiagency working to support implementation of the Cheshire East Multi Agency Road Safety Plan for 2013-2014

Suicide

Suicide is the act of intentionally ending your own life (NHS Choices, 2012a). In 2011, there were 4,509 suicides recorded in England and nearly 76% of these occurred in males (Scowcroft, 2013). Many more people have attempted suicide. Peak risk for suicide occurs at age 40-44 for males and age 50-54 for females and suicide rates have remained relatively stable over the last ten years with a slight increase noted between 2010 and 2011 (Scowcroft, 2013).

The Global Burden of Disease Study reported that self-harm was the eighth leading cause of Years of Life Lost (YLLs) in the UK but the second top cause amongst those aged 20-54, behind ischaemic heart disease (Murray et al, 2013). Burden of disease in terms of Years of Life Lost is consistent with the average for similar, economically developed countries.

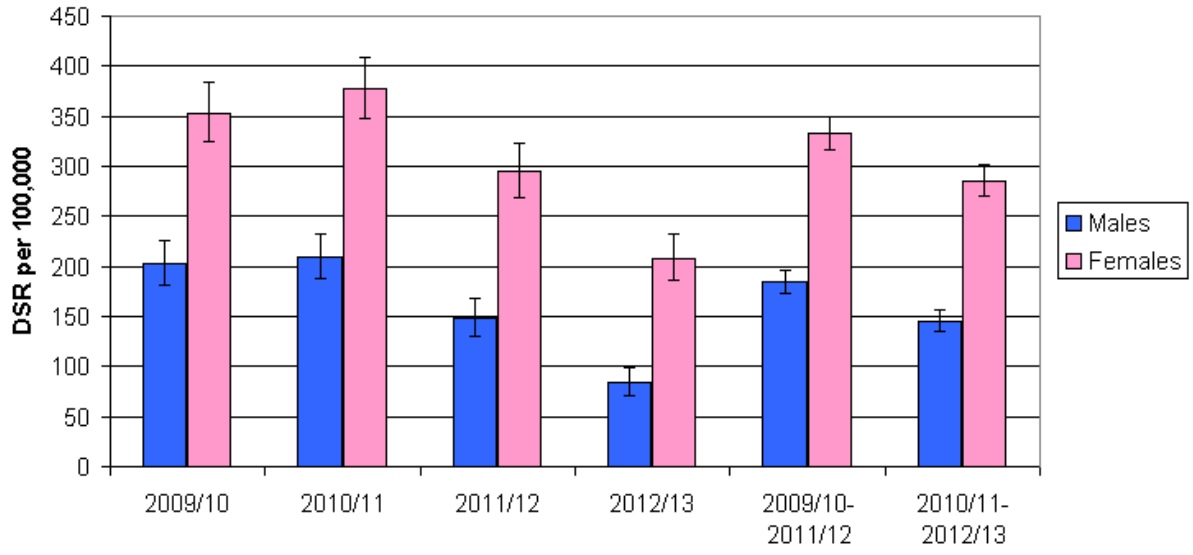
Reasons for suicide are complex but certain factors increase a person's vulnerability (NHS Choices, 2012). These include but are not limited to: past experiences e.g. abuse, having a mental health conditions e.g. depression, schizophrenia (see Chapter 7), being gay, lesbian or transgender, being in debt, homelessness, being a war veteran, being in prison or recently released from prison or working in an occupation that provides access to potential ways of dying by suicide e.g. being a doctor.

Hospital Admissions due to Self-Harm

Cheshire East has higher than England average rates of hospital stays for self-harm for the whole population (284 compared with 212 per 100,000) (APHO, 2012).

Amongst those aged 75 and under, there were 659 admissions due to intentional self-harm in 2010/2011 – 2012/2013. Between 2009/2010 and 2012/2013 there was a sharp decrease in the number of admissions in the under 75s recorded as due to intentional self-harm. Amongst males this decrease was 59% and amongst females this was 19%. However, it is possible that this decrease could be due to an artefact (i.e. the way these admissions are recorded).

Figure 39: Directly Standardise Admission Rate for people aged under 75 in Cheshire East - Intentional Self-Harm (X60-X84)



Source: PHMF/ONS PE

Early Deaths due to Suicide in Cheshire East

In the United Kingdom, suicide is defined as deaths given an underlying cause of intentional self-harm or injury/poisoning of undetermined intent (ONS, 2013). The UK suicide rate increased significantly between 2010 and 2011, from 11.1 to 11.8 deaths per 100,000 population. There were 4,552 male suicides in 2011 (a rate of 18.2 suicides per 100,000 population) and 1,493 female suicides (5.6 per 100,000 population) (ONS, 2013).

Suicide is responsible for 2.2% of early deaths in Cheshire East; 3.0% in males and 1.1% in females. However, when 'injury undetermined' is also included, these figures are 2.5%, 3.4% and 1.2% respectively. As Table 32 shows, the suicide rate for males in Cheshire East (12 per 100,000) is significantly lower than the UK rate. This is also the case for the female suicide rate in Cheshire East (3 per 100,000). **However, although the rates are much lower in Cheshire East, the higher number of suicides seen in men compared to women reflects the national picture.**

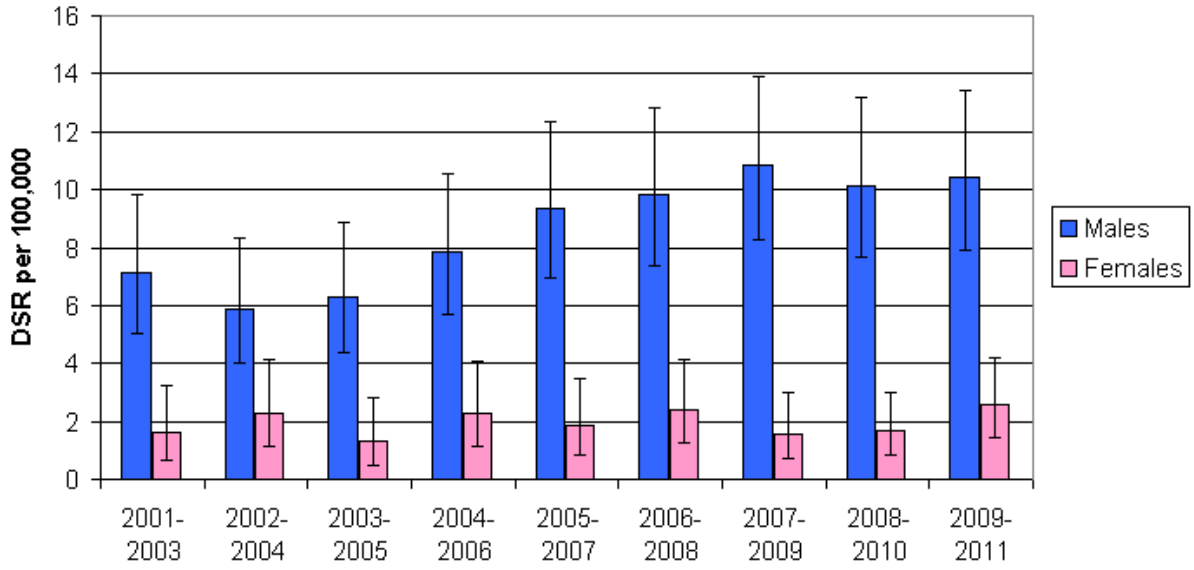
Table 32: Premature Deaths due to Deliberate Self-Harm and Deliberate Self-Harm and Injury Undetermined in East Cheshire, 2009-2011

	Males (2009-2011)	Females (2009-2011)
DELIBERATE SELF-HARM AND INJURY UNDETERMINED		
Number of premature deaths	65	17
Directly standardised premature death mortality rate (per 100,000)	12	3

Source: PHMF/ONS PE

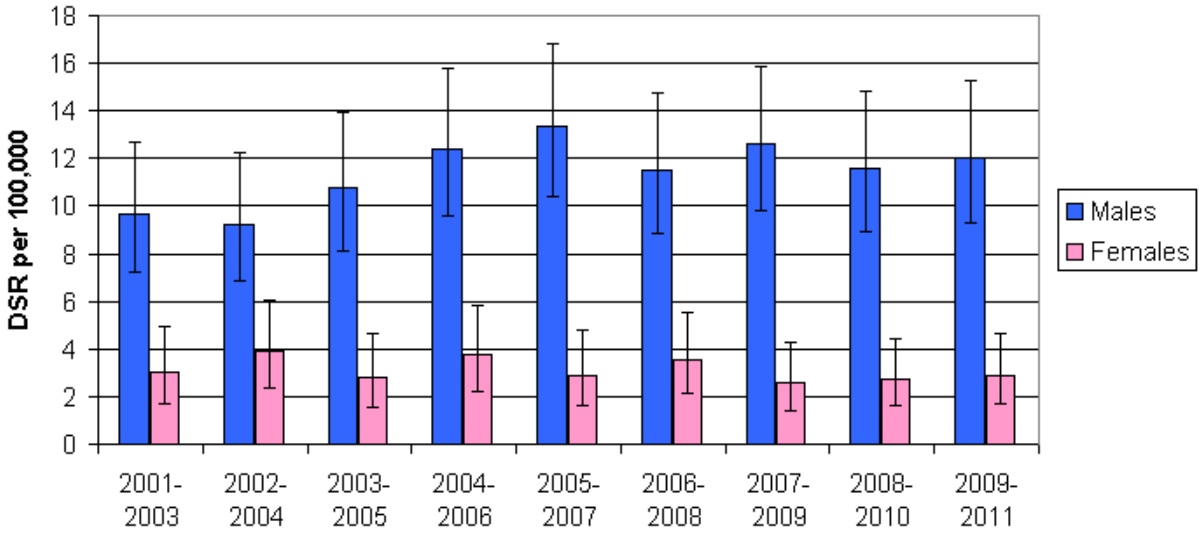
Between 2001-03 and 2009-2011 there was an increase in early death rates due to suicide of around 49%. When 'injury undetermined' is also included, the increase is 17%. Males, already at comparatively high risk of suicide, accounted for most of this rise, with an 85% increase (36% if injury undetermined included) between 2002-2004 and 2007-2009. The reasons for this increase are unclear. The period between 2007 and 2009 coincides with the start of the global recession. However, increases in suicide rates usually lag behind any economic downturn and it is clear that the upward trend started before the 'crash'. It may in part be related to greater alcohol misuse during this period.

Figure 40: Directly Standardised Mortality rate in persons aged under 75 in Cheshire East - Intentional Self-Harm (X60-X84)



Source: PHMF/ONS PE

Figure 41: Directly Standardised Mortality rate in persons aged under 75 in Cheshire East - Suicide and Injury Undetermined (ICD10 X60-X84, Y10-Y34, excluding Y33.9)



Source: PHMF/ONS PE

In 2009-2011, Knutsford LAP had the highest rates of male early deaths due to suicide and injury undetermined whilst Congleton LAP had the lowest rates. For females, Knutsford LAP also had the highest rates whilst Poynton LAP had no suicides in 2009-2011.

It is not possible to make comment on the relationship between suicide and local deprivation due to the small numbers involved.

Improving Mental Health and Wellbeing: Effective Interventions

In September 2012, 'Preventing suicide in England - A cross-government outcomes strategy to save lives' was published (Department of Health, 2012a). It outlined six key areas of action to support a reduction in suicide rate as well as better support for those bereaved or affected by suicide:

- Reduce the risk of suicide in key high-risk groups
- Tailor approaches to improve mental health in specific groups
- Reduce access to the means of suicide
- Provide better information and support to those bereaved or affected by suicide
- Support the media in delivering sensitive approaches to suicide and suicidal behaviour
- Support research, data collection and monitoring

The Foresight report on Mental Capital and Wellbeing summarises what is important at different life stages:

- **Children**
  - addressing maternal diet, stress and smoking and alcohol and drug misuse, skills coaching for parents, ensuring good housing quality, prioritising looked-after children.
- **Adolescence**
  - addressing alcohol and substance misuse.
- **Mental ill-health in adults and children**
  - addressing the risk factors (debt, employment, housing, urbanisation, exposure to crime), early diagnosis, addressing stigma and discrimination.
- **Adults: learning**
  - addressing the need to train and develop through working life.
- **Adults: working life**
  - improving access to work for those with mental health problems, ensuring mental health in the workplace.
- **Older adults**
  - addressing cognitive decline and other forms of mental ill health**,** promoting mental capital and wellbeing of older adults.

Recommendations for Healthcare Commissioners and Providers

It is recommended that healthcare commissioners and providers ensure full implementation of NICE Quality Standards for Self-Harm, QS34. (National Institute of Health and Care Excellence, 2013). Therefore people who have self-harmed should:

- Be cared for with compassion and the same respect and dignity as any service user.
- Have their physical health, mental state, social circumstances and risks of repetition or suicide assessed after an episode of self-harm.
- Be offered a comprehensive psychosocial assessment
- Be checked regularly by healthcare staff, and accompanied when required, when they are in hospital or another part of the health service, to make sure they are safe.

- Be cared for in a safe physical environment that reduces the risk of harming themselves further while in hospital or another part of the healthcare service.

And if having long-term support they should:

- Have a risk management plan developed with their healthcare professional that helps them reduce their risk of harming themselves again.
- Discuss the possible benefits of psychological treatments for self-harm with their healthcare professional.
- If moving between mental health services, agree a plan with their healthcare professionals that describes how they will be supported while they move from one service to another.

Healthcare commissioners and providers should also ensure full implementation of NICE Quality Standards regarding Depression in Adults (QS8) (NICE, 2011) and Service User Experience in Adult Mental Health (QS14) (NICE, 2011).

Conclusion

Although the numbers affected by suicide are relatively small compared to the other causes of premature deaths, many are avoidable. Suicide accounts for approximately 2% of early deaths each year in Cheshire East, with approximately 27 deaths per year in the under 75s.

In Cheshire East suicide rates for males and females are significantly lower than the national rates; locally the number of male death was 3 times higher than female deaths, and this male predominance is a phenomenon recognised nationally. Knutsford LAP had the highest rates of early death by suicide for both males and females, but it is difficult to draw any firm conclusions about the relationship between suicide, area of residence or local deprivation due to the small numbers involved.

In contrast, hospital admission rates for self harm in Cheshire East are higher than the national average though admission rates are falling; admission rates are significantly higher for females compared to males.

Reasons for suicide are complex but certain factors increase a person's vulnerability. A previous attempted suicide or history of self harm should also be considered in the risk assessment. It is recommended that healthcare commissioners and providers ensure full implementation of 'NICE Quality Standards for Self-Harm, QS34' and the 'Preventing suicide in England - A cross-government outcomes strategy to save lives' guidance to decrease the risk of suicide in identified high risk groups.

Key Findings

- Suicide accounts for approximately 2% of early deaths each year in Cheshire East (averaging approximately 27 cases per year)
- Suicide rates for males and females are significantly lower than the national rate

- Hospital admission rates for self harm in Cheshire East are higher than the national average, though admission rates are falling

Chapter Seven

Mental Health and Premature Deaths

In 2011 the Department of Health published 'No health without mental health- A cross-government mental health outcomes strategy for people of all ages' (Department of Health, 2011). It outlined how mental health is everyone's business and how a life course approach would be taken to improve the mental health and wellbeing of the population and keep people well. In addition, steps would be taken to improve outcomes for people with mental health problems through high-quality services that are equally accessible to all. Six shared objectives were described:

- More people will have good mental health
- More people with mental health problems will recover
- More people with mental health problems will have good physical health
- More people will have a positive experience of care and support
- Fewer people will suffer avoidable harm
- Fewer people will experience stigma and discrimination

Cheshire East: Depression and Anxiety Disorders

It is estimated that over 35,000 people aged 18-64 (16% of the population) in Cheshire East have a common mental disorder (i.e. depression and/or anxiety disorders) (PANSI, 2012). Depression is more than feeling simply unhappy; it is a disorder causing persistent symptoms of low mood, feelings of hopelessness & helplessness and lack of energy or motivation (NHS Choices, 2012b). Anxiety disorders are those which are associated with feelings of worry or fear that affect everyday life (NHS Choices, 2012c).

Around 16,000 people aged 18-64 in Cheshire East are estimated to have two or more psychiatric disorders (PANSI, 2012). Around 6,500 people aged 65 or over are estimated to have depression in Cheshire East with over 2,000 of these suffering from severe depression (POPPI, 2012).

Good medical practice is for people diagnosed with depression to receive an assessment of severity of their depression. **Locally, 72% of those diagnosed in the previous year (in 2011/2012) received this assessment, but only 51% received the recommended follow-up assessment 4-12 weeks later**.

Cheshire East: Psychoses

Psychoses are particular types of mental health problems that stop the person from thinking clearly, telling the difference between reality and their imagination (leading to hallucinations and delusions), and acting in a normal way (NHS Choices, 2012). They are associated with conditions such as schizophrenia and even severe forms of depression. Data from GP practice registers indicate that psychoses affect 0.75% of the local population with figures varying by Local Area Partnership Area in Cheshire East.

Table 33: Prevalence of Schizophrenia, Bipolar Illness and Other Psychosis

Local Area Partnership	Prevalence of schizophrenia, bipolar disorder and other psychoses
Congleton	0.70%
Crewe	0.78%
Knutsford	0.75%
Macclesfield	0.87%
Nantwich	0.73%
Poynton	0.64%
Wilmslow	0.70%

Source: QOF 2011/12

One of the Public Health outcomes for 2013-16 is to reduce excess under 75 mortality rate in adults with serious mental illness (Public Health Outcomes Framework for England, 2013-2016). This indicator is of particular importance as **there is a lot of evidence that links poor mental health with poor physical health, and poor physical health can lead to poor mental health. For this reason, it is recommended that those people with diabetes and/or coronary heart disease are screened for depression (see below). In 2011-2012, across Cheshire East, nearly 25,000 people were screened as recommended.**

In 2010 The Royal College of Psychiatrists produced a position statement on the importance of mental health in public health. It identified it as a key part of public health. Mental illness influences premature mortality in the following ways:

- people with schizophrenia and bipolar disorder die on average 20 years earlier than the general population, largely owing to physical health problems
- people with mental disorder(s) smoke almost half of all tobacco consumed and account for almost half of all smoking-related deaths. Rates of smoking on in-patient mental health units are 70%, compared to 21% in the general population
- depression doubles the risk of developing coronary heart disease
- people with depression have a significantly worse survival rate from cancer and heart disease
- people with two or more long-term physical illnesses have a seven-fold greater risk of depression
- excessive consumption of alcohol is associated with higher levels of depressive and affective problems, schizophrenia and personality disorders as well as with suicide and self-harm. (RCPSYCH, 2010)

This highlights that many of the problems are circular. For example, if you drink large amounts of alcohol you increase your risk of poor mental health. Poor mental health increases your risk of developing physical poor health. Physical illnesses can lead to poorer mental health which can in turn lead to an increased risk of premature mortality. **By increasing the focus on metal health some**

of these issues can be addressed which will have knock on benefits for poor physical health and premature mortality rates.

For many people poor mental health can begin in childhood. The Royal College of Psychiatrists have estimated that half of all mental illnesses begin by the age of 14 and three-quarters by the mid-20s. There is a direct corrolation with deprivation; as children from the poorest households have a three-fold greater risk of mental ill health than children from the richest households.

In Cheshire East, approximately 60 young people under the age of 18 have a mental illness serious enough to require Tier 4 children and adolescent mental health services (CAMHS). These are tertiary level services provided in day units, highly specialised outpatient teams and in-patient units. There are about 100 hospital admissions annually.

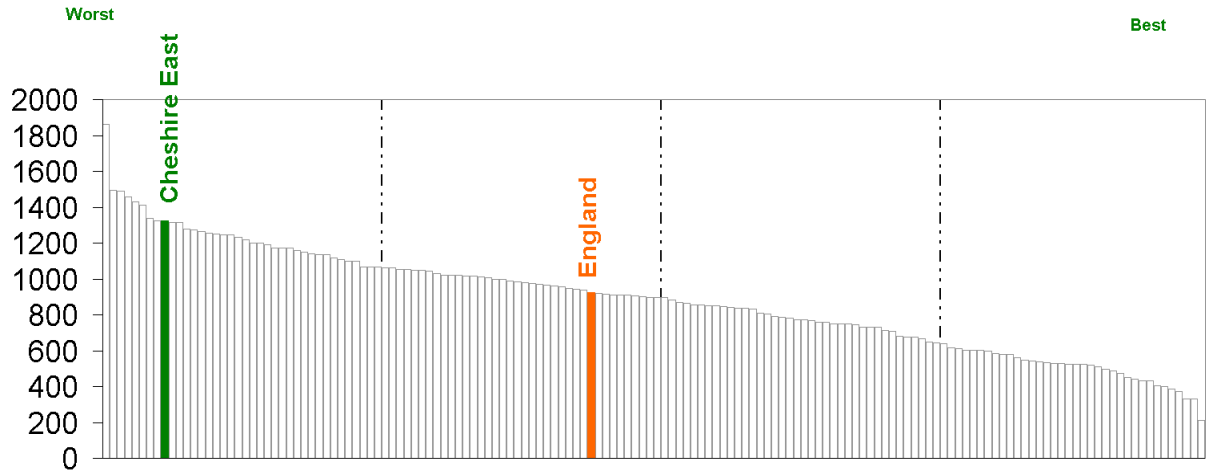
A further 1,400 children or young people in Cheshire East require support from a Tier 3 multi-disciplinary team or service working in a community mental health clinic or child psychiatry outpatient service, providing a specialised service for children and young people with more severe, complex and persistent disorders.

There are many additional children and young people who have less serious mental health conditions being treated in the community.

People with a "serious mental illness" are those who have been in contact with specialist secondary mental health services at any time over the previous three years – including inpatients, outpatients, and people in contact with community services. Many are offered an annual health check by their general practice to help pick up and manage the high smoking, diabetes, cholesterol, hypertension and obesity rates.

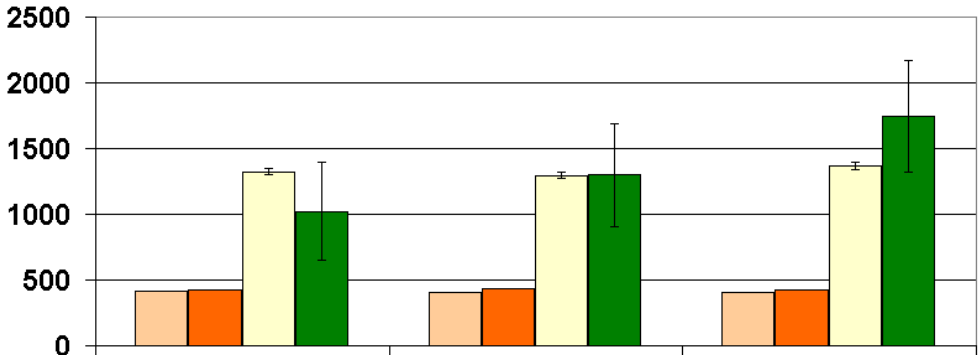
Cheshire East has one of the highest excess mortality rates for adults under 75 with a serious mental illness in the country.

Figure 42: Directly Standardised Excess Mortality Rate per 100,000, adults aged under 75 with Serious Mental Illness, 2010/11



Source: PHOF Data Tool, HSCIC

Figure 43: Comparing General Population Mortality Rates (Gen) with Mortality Rates for People with Serious Mental Illness (SMI), mortality rates per 100,000 adults



	2008/09	2009/10	2010/11
England	419	404	402
Cheshire East	429	431	423
England - SMI	1323	1295	1366
Cheshire East - SMI	1022	1297	1745

Source: PHOF Data Tool, HSCIC

In Cheshire East, the death rate among people with serious mental illness has worsened between 2008-2011. The risk of death in this group is now over four times higher than the general population. Most excess deaths among the seriously mentally ill are due to cardiovascular and respiratory disease, cancers and accidents.

It is not possible to consider this data at small area level (LAP etc). However, we can state with confidence that the majority of serious mental illness will be found in those areas which experience higher levels of deprivation, such as Crewe, with a corresponding impact on the levels of premature mortality seen in these areas.

The NICE Quality and Outcomes Framework Briefing Paper and Peer-reviewed publications suggest that the health of people with serious mental illness can be improved by:

- Checking for risk factors in adults with serious mental illness
- Identifying, preventing and treating modifiable risk factors including smoking, alcohol use, diabetes, high cholesterol, hypertension and obesity
- Closer working between mental health clinicians and general practitioners
- Access to specific treatment programmes (e.g. smoking cessation)
- Suicide prevention strategies
- Improving access to breast, bowel and cervical screening programmes for adults with serious mental illness who are in the relevant age groups
- NICE guidance for people with bipolar disorder and schizophrenia advises that an annual physical health check is part of the role of primary care

One example of a recent local public health intervention to improve the physical health of mental health patients is the plan to make the Cheshire and Wirral Partnership NHS Trust sites smokefree.

This is a joint venture between the Trust and Stop Smoking Services and is launching in October 2013. In-patients will be supported, whilst attending the hospital for treatment, to reduce their cigarette consumption and where possible quit for good.

There are also plans to implement a Mental Wellbeing pathway with the local NHS Health Check Programme (see Chapter 4). This will focus on raising awareness of the 'Five Ways to Wellbeing'. Locally services will work towards the ChaMPs (a public health collaborative service in the North West) 'Mental Health Implementation Framework'. The framework identifies specifically that 'Commissioners and providers of public health services' should:

- Develop a clear plan for public mental health
- Champion 'mental health for all' – articulate the case
- Support positive parenting
- Commission or provide training to the wider workforce
- Ensure health improvement includes needs of people with mental health problems
- Strengthen mental health services and access
- Set ambitious expectations and monitor outcomes

Conclusion

The premature death rate amongst people with serious mental health in Cheshire East is unacceptably high. The risk of death amongst this group is now four times higher than the general poulation.

As highlighted by the 2010 RCPSYCH report, mental health is a key component of public health. Improving follow-up assessments of those with a depression diagnosis will help to identify those at greatest risk of premature mortality. Also, a focus on the mental health of cardiovascular, respiratory disease and cancer patients, three of the four main causes of premature death amongst the seriously mentally ill, would help to identify those patients who are also suffering from poor mental health and who would benefit from accessing mental health services. As the RCPSYCH reported people with depression have a significantly worse survival rate from cancer and heart disease. By identifying these patients locally we can reduce the burden of disease and premature death that falls disproportionaltely upon those with serious mental health conditions.

Key Findings

- Mental health is a key part of public health.
- Cheshire East has one of the highest excess death rates for adults less than 75 with a serious mental illness in the country.
    - Their risk of premature mortality is over four times higher than the general population.
    - Most excess deaths among the seriously mentally ill are due to cardiovascular and respiratory disease, cancers and accidents.

- There is a lot of evidence linking poor mental health with poor physical health and poorer health outcomes; poor physical health can also lead to poor mental health.
- Half of all mental illnesses begin by the age of 14 and three-quarters by mid-20s.
    - Around 16,000 people aged 18-64 in Cheshire East are estimated to have two or more psychiatric disorders
- There is a direct corrolation between mental illness and deprivation in children and young people.
    - Children from the poorest households have a three-fold greater risk of mental ill health than children from the richest households.
- Over 35,000 people aged 18-64 (16% of the population) in Cheshire East have a common mental disorder (i.e. depression and/or anxiety disorders).

Chapter Eight

Vision

The annual public health report from the Director of Public Health is a view of the local population's current health. However, this annual public health report is also a call to action, with a vision for how things must change.

We need to ensure that the parents of tomorrow's children and young people of today, are healthy and take responsibility for their own health and wellbeing. If we act now we can reduce the fatty deposits already settling in the arteries of the year 6 children who are obese. We can reduce their lifetime risk of heart disease, stroke, diabetes, cancer AND premature mortality as well as pushing back the age at which their parents' generation become affected by these conditions. All, including those not yet born, need their physical, social and economic environment to be conducive to good health. **This needs to happen now to enable us to realise the vision set out in our public health time capsule.** Together, we must systematically and jointly build health and wellbeing, for all age groups, into our work to ensure, with the residents of Cheshire East, that the future for the borough is a healthy vibrant one. To do this we have to develop a new relationship with health which is not only about medical interventions but a recognition that our own actions on a daily basis build up over years to produce excellent or poor health.

If we are looking to the future we cannot ignore the role that technology will play both in transforming our everyday lives yet more, but also in assisting us to manage our health and wellbeing or treat our illnesses. Technological advances in the twentieth and early twenty-first centuries have been transformative from the everyday with microwaves, smart TVs and mobile phones to advances in aviation and medicine.

Globally, technology companies are considering how they can work in the health economy. The Google co-founder suggests that "Illness and ageing affect all our families. With some longer term, moonshot thinking around healthcare and biotechnology, I believe we can improve millions of lives"(http://www.bbc.co.uk/news/technology-24158924).

The BBC article by journalist Jane Wakefield (http://www.bbc.co.uk/news/technology-24158924) has highlighted that increasingly big data is being used to help "solve" health issues. For example data analytics are being used to predict who may be more prone to getting MRSA. Chris Roche, EMC's chief technology officer for big data is quoted stating "There is a focus on big data now. It is about changing the current model of healthcare to a wellness model by combining genomic data [information about DNA] with clinical data to give personalised medical care".

Dragon Rouge, a global design and innovation business working with some of today's well-known brands has explored what the world will look like in 2030. One of the case studies describes a lady who feels tired. In 2030 she does not discount her symptoms or attend her GP but looks to her implant which tells her that her immune system is 'low' and suggests she eats a diet high in vitamins and iron for three days. It also lets her know that a stomach bug is prevalent in her area and that an

over the counter supplement will help protect her against getting it. This image of a tailored healthcare with the individual protecting their own health is an important vision for the future.

However, different generations will have different needs and technology is only part of the solution. Those born between 1925 and 1965 have benefitted from advances in medicine combined with active lives, particularly during their childhood and up to middle age or retirement. Recent changes in society, industry and technology have meant that the generations born from 1965 onwards have led a much more sedentary lifestyle. It is now predicted that by 2030 nearly half the population will be obese; increased numbers of people will suffer from heart disease, diabetes, cancer and stroke.

Table 34: Burden of Disease in Cheshire East, 1992-2031

	1992	2012	Difference between 1992-2012	Predictions for 2031
Births	4,186	4,013	↓ 9.6%	
Deaths	3,780	3,420	↓ 9.0%	
Population	342,000	371,000	↑ 8.3%	
Smokers	28%	17%	↓ 40%	
CVD Admissions	1,347	1,209	↓ 10%	
Lung Cancer	216	246	↑ 14%	
Bowel Cancer	160	267	↑ 67%	374
Breast Cancer	165	323	↑ 96%	481
Diabetics	5,581	17,268	↑ 309%	28,955
Drug Users	319	1,139	↑ 380%	1,959

Source: Annual Public Health Report (1992) and Cancer Commissioning Tool Kit

The age at onset of these diseases will reduce and more people will be affected. The length of time people will live with multiple chronic conditions will increase. Years of life expectancy and healthy life expectancy for the first time in generations and poor health will become the norm for many. The social and economic impacts of such change are significant.

That will happen unless we act now.

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Appendix One: Premature Mortality, Directly Standardised Rate per 100,000, Males aged under 75, 2009-11

MALES	All Cause Ave. Annual deaths	DSR	UCI	LCI	Cancer Ave. Annual deaths	DSR	UCI	LCI	Circulatory Disease Ave. Annual deaths	DSR	UCI	LCI	Respiratory Disease Ave. Annual deaths	DSR	UCI	LCI	Liver Disease Ave. Annual deaths	DSR	UCI	LCI
Local Area Partneships (LAPs)																				
Congleton LAP	158	269.1	245.6	294.2	67	107.5	93.4	123.1	43	69.8	58.5	82.7	13	22.2	15.8	30.3	8	15.2	9.9	22.2
Crewe LAP	158	341.0	312.0	372.1	53	110.7	94.8	128.6	43	91.4	76.9	108.0	17	35.3	26.6	46.1	10	23.5	16.2	33.1
Knutsford LAP	38	242.9	200.3	291.7	13	77.7	55.9	105.1	10	59.2	39.3	85.4	3	14.6	6.5	28.4	2	14.3	5.5	30.8
Macclesfield LAP	127	313.3	283.5	345.4	53	126.5	108.3	147.1	31	77.2	62.8	93.9	13	31.4	22.7	42.3	10	24.3	16.5	34.6
Nantwich LAP	61	263.1	227.1	303.2	27	114.0	91.2	140.9	16	69.3	51.8	90.9	5	20.7	11.8	33.7	2	11.4	4.7	23.2
Poynton LAP	35	211.8	173.0	256.6	17	94.1	70.6	123.0	9	49.9	32.9	72.6	2	11.1	4.2	24.0	1	8.4	2.4	21.4
Wilmslow LAP	57	258.6	222.2	299.4	21	96.1	74.7	122.0	16	72.6	54.3	95.3	5	23.5	13.7	37.7	3	15.5	7.7	28.2
Clinical Commissioning Groups (CCGs)																				
NHS Eastern Cheshire CCG	325	272.6	256.1	289.9	131	104.2	94.4	114.7	85	69.9	61.8	78.8	29	23.1	18.6	28.5	20	17.8	13.7	22.8
NHS South Cheshire CCG	308	299.7	281.2	319.2	120	112.1	101.2	124.0	84	78.7	69.6	88.8	30	27.6	22.3	33.7	17	17.8	13.4	23.2
Towns																				
Congleton	50	306.2	260.0	358.4	18	102.2	77.7	132.1	15	84.4	61.7	112.8	4	26.8	13.7	47.1	3	20.9	9.9	39.1
Knutsford	20	252.7	193.6	324.2	7	76.8	47.8	117.3	6	69.1	41.4	108.7	1	13.6	4.1	34.1	2	28.5	11.0	61.0
Macclesfield	109	328.7	295.3	365.0	45	132.6	112.0	156.1	25	76.0	60.5	94.5	13	36.5	26.3	49.6	8	25.2	16.6	36.8
Poynton	17	175.4	130.9	230.2	10	104.6	71.2	148.5	3	34.4	16.8	62.7	0	3.1	0.2	16.5	1	10.1	1.6	35.3
Wilmslow	45	270.3	228.1	318.3	18	104.0	78.7	135.0	14	83.3	61.0	111.3	4	22.8	12.1	39.4	3	15.9	7.2	30.9
Eastern Cheshire CCG Rural	84	228.6	200.8	259.0	34	84.0	68.8	101.6	21	59.8	45.7	76.8	6	16.3	9.9	25.3	3	9.8	4.6	18.2
Alsager	21	287.7	220.6	368.5	9	119.4	78.3	174.2	5	56.6	31.0	94.8	2	27.9	11.5	57.0	1	15.9	3.6	45.7
Crewe	145	357.9	326.1	392.0	47	112.7	95.6	132.1	40	96.4	80.4	114.7	16	37.5	27.9	49.4	10	25.0	17.0	35.5
Middlewich	20	277.1	213.9	353.5	8	102.4	66.2	151.9	8	101.7	65.7	150.8	1	18.1	5.4	45.2	1	12.0	2.8	34.3
Nantwich	30	345.9	279.6	423.4	13	140.7	100.6	191.7	9	105.4	69.6	153.5	2	25.1	10.5	50.9	1	19.0	5.5	48.1
Sandbach	31	276.1	223.3	337.5	14	120.6	87.6	162.1	7	61.8	39.3	92.8	3	24.0	11.3	45.1	2	17.1	6.5	36.8
South Cheshire CCG Rural	61	215.7	185.7	249.2	30	100.9	81.6	123.5	16	52.2	38.7	68.9	5	17.5	10.2	28.0	2	8.4	3.5	17.1
Cheshire East	**633**	**285.4**	**273.0**	**298.2**	**252**	**107.8**	**100.5**	**115.6**	**169**	**73.8**	**67.7**	**80.4**	**59**	**25.1**	**21.6**	**29.0**	**37**	**17.8**	**14.7**	**21.3**

Appendix Two: Premature Mortality, Directly Standardised Rate per 100,000, Females aged under 75, 2009-11

FEMALES	All Cause Ave. Annual deaths	DSR	UCI	LCI	Cancer Ave. Annual deaths	DSR	UCI	LCI	Circulatory Disease Ave. Annual deaths	DSR	UCI	LCI	Respiratory Disease Ave. Annual deaths	DSR	UCI	LCI	Liver Disease Ave. Annual deaths	DSR	UCI	LCI
Local Area Partneships (LAPs)																				
Congleton LAP	117	192.8	173.3	214.0	56	91.4	78.3	106.1	25	39.2	31.1	48.9	12	18.3	12.8	25.4	6	10.1	6.0	16.0
Crewe LAP	130	279.9	253.6	308.2	56	120.0	103.1	138.9	26	54.4	43.4	67.5	15	30.4	22.5	40.4	4	10.3	5.6	17.3
Knutsford LAP	31	190.6	153.9	233.3	15	89.6	65.9	119.0	6	33.0	19.8	51.9	2	13.2	5.5	27.0	2	12.0	4.6	25.8
Macclesfield LAP	77	183.5	161.0	208.4	40	92.4	77.0	110.1	15	33.8	24.9	44.9	7	14.0	8.7	21.3	3	7.8	3.7	14.7
Nantwich LAP	40	168.3	139.6	201.1	21	85.6	66.3	108.8	7	27.8	17.0	43.0	2	8.6	3.7	17.4	1	6.3	1.8	15.8
Poynton LAP	23	124.4	95.2	159.4	12	65.2	46.3	89.4	4	18.9	10.0	32.5	2	7.7	2.7	17.6	0	1.6	0.1	8.4
Wilmslow LAP	39	162.6	135.4	193.8	19	76.4	58.3	98.5	9	34.4	22.8	49.8	3	11.5	5.5	21.5	3	11.5	5.1	22.3
Clinical Commissioning Groups (CCGs)																				
NHS Eastern Cheshire CCG	220	174.8	161.8	188.5	112	87.3	78.4	97.0	43	31.6	26.5	37.4	17	12.1	9.1	15.8	11	9.3	6.5	13.0
NHS South Cheshire CCG	237	225.4	209.4	242.2	108	100.2	89.9	111.5	49	44.7	37.9	52.3	26	23.0	18.3	28.5	8	8.7	5.7	12.8
Towns																				
Congleton	37	219.6	180.8	264.3	18	106.0	79.7	138.2	8	40.0	25.6	59.6	3	16.4	7.2	32.1	3	17.3	7.7	33.8
Knutsford	15	166.5	121.5	222.8	7	84.7	53.6	127.6	3	34.6	16.8	63.4	1	14.6	4.2	37.0	1	13.0	3.0	37.1
Macclesfield	68	196.2	170.8	224.4	33	92.8	75.9	112.5	14	39.4	28.9	52.7	6	16.4	10.1	25.2	3	9.2	4.4	17.3
Poynton	16	166.1	121.6	221.1	9	90.8	60.2	131.5	2	21.2	8.9	43.0	1	11.3	3.4	28.2	0	2.8	0.2	15.2
Wilmslow	31	165.0	134.0	201.2	15	79.9	59.0	106.1	7	37.7	24.1	56.4	3	13.4	6.0	25.9	2	11.6	4.5	25.0
Eastern Cheshire CCG Rural	54	144.1	122.2	168.8	30	77.3	62.5	94.6	8	19.1	12.4	28.2	2	5.5	2.3	11.2	2	5.0	1.9	10.8
Alsager	15	184.4	134.1	247.1	7	81.9	50.9	124.8	4	42.5	21.3	75.9	1	17.7	5.0	45.0	0	0.0		
Crewe	117	286.5	258.2	317.1	51	123.8	105.5	144.5	24	57.2	45.2	71.6	14	32.6	23.8	43.7	3	9.3	4.6	16.8
Middlewich	19	259.7	198.8	333.6	8	100.3	64.8	148.8	4	55.7	30.6	93.8	3	43.2	21.4	78.3	1	9.0	1.4	31.7
Nantwich	19	198.6	149.6	258.3	11	114.7	78.8	161.2	3	31.7	14.3	60.4	1	9.0	2.1	25.8	1	11.1	1.7	39.1
Sandbach	23	188.2	146.2	238.4	10	84.6	57.6	119.9	6	47.5	28.0	75.6	3	23.2	11.6	41.8	1	12.0	3.4	30.4
South Cheshire CCG Rural	45	162.5	136.2	192.4	21	71.6	55.6	91.0	8	27.7	18.1	40.8	3	9.5	4.5	17.6	2	7.8	3.3	15.7
Cheshire East	**457**	**197.7**	**187.6**	**208.3**	**220**	**93.2**	**86.4**	**100.4**	**92**	**37.5**	**33.3**	**42.1**	**43**	**17.0**	**14.3**	**20.2**	**19**	**9.0**	**6.9**	**11.6**