

Premature Mortality in Wigan Borough

The 'Start Well', 'Live Well', and 'Age Well' strategies of the Council aim to see continuous improvement in health and wellbeing for people across Wigan Borough. This paper examines a small part of the picture, that of premature deaths. In achieving this, the paper also aims to provide a direction for developing integrated health and social care intelligence.

Premature death is arbitrarily defined as people dying before the age of 75. The figures on page 2 and 3 provide a visualisation of the average number of deaths under 75 each year in Wigan Borough during 2010 to 2012 inclusive. Males and females are examined separately as the risk and timing of disease differs in each gender. The area of each circle provides a visual representation of the number of deaths due to each condition or group of conditions, ultimately combining to the total number of deaths. The colour of each circle indicates how the number of deaths compares to what would be expected if Wigan Borough was similar to England. The result is an intuitive picture of the nature of premature death in Wigan Borough that is not clouded by the technical detail used to create that picture. The resulting key issues that are identified are:

For males:

- Coronary heart disease
- Lung cancer
- Chronic liver disease
- Suicide and injury undetermined
- Accidents
- Pneumonia

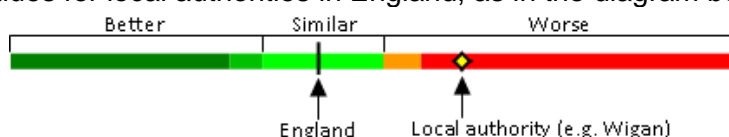
For females:

- Coronary heart disease
- Lung cancer
- Chronic liver disease
- Pneumonia
- Accidents

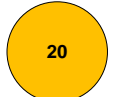
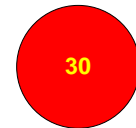
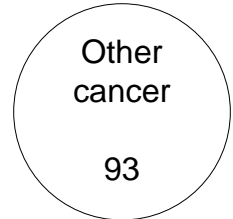
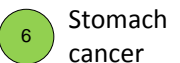
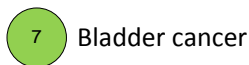
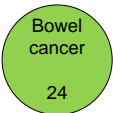
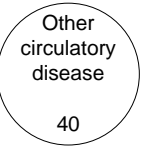
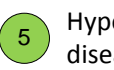
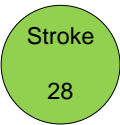
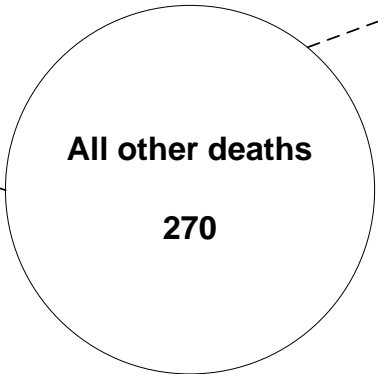
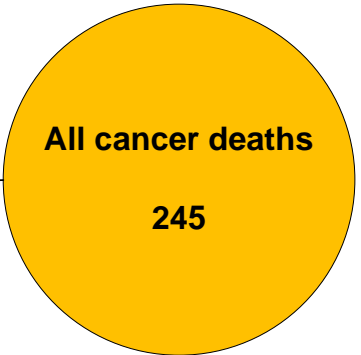
Clearly, further information needed to answer the following questions that provide additional understanding of the nature and magnitude of the issues concerned. For example, how does Wigan Borough compare with:

- England as a whole?
- The whole range of local authorities in England from best to worst?
- Its geographical neighbours within Greater Manchester?
- Its statistical peers (i.e. areas with similar population features)?

To answer these questions one has to move from the number of deaths to death rates (specifically, age standardised mortality rates that allow comparison between populations with different age structures). However, rates are far less intuitive than numbers. Again a visual representation is helpful to aid understanding. The example given on page 4 is for coronary heart disease. Specific local authorities (yellow diamond) are plotted against the entire range of values for local authorities in England, as in the diagram below.



Average number of deaths per year in males aged under 75 in Wigan Borough (2010 – 2012)



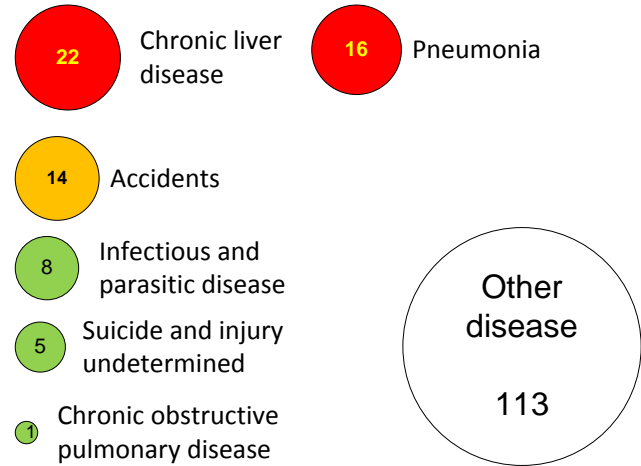
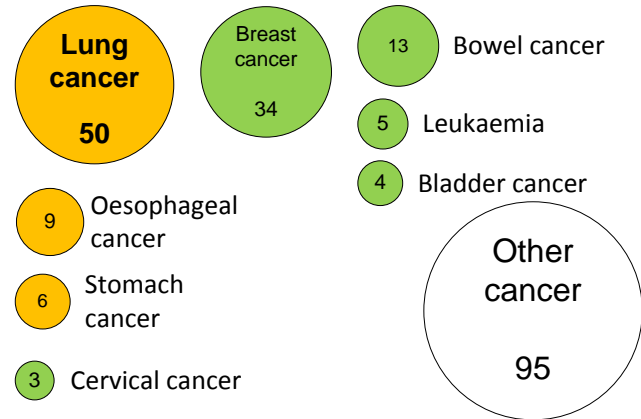
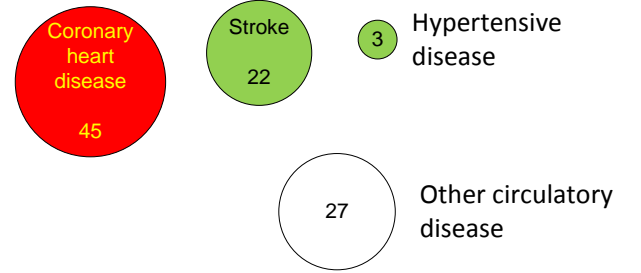
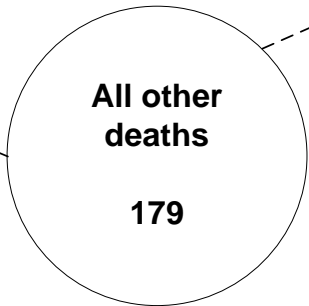
Key

- Worse than England (Extreme outlier)
- Worse than England (Outlier)
- Similar to England
- Not ascertained

The area of each circle is proportional to the number of deaths

Source: Health and Social Care Information Centre

Average number of deaths per year in females aged under 75 in Wigan Borough (2010 – 2012)



Key

- Worse than England (Extreme outlier)
- Worse than England (Outlier)
- Similar to England
- Not ascertained

The area of each circle is proportional to the number of deaths

Source: Health and Social Care Information Centre

Indicator	Period	Age Group	Units
Mortality from coronary heart disease (ICD10 I20-I25)	2010 - 2012	Under 75	Mortality Rate per 100,000 per year

Males

				Range Chart		
				Best	England	Worst
Local Authority	Rank	Mortality Rate per 100,000 per year		20.13	50.66	91.39
Greater Manchester	Stockport	1	46.70			
	Trafford	2	52.11			
	Wigan	3	64.49			
	Bury	4	64.96			
	Bolton	5	65.00			
	Oldham	6	69.60			
	Rochdale	7	72.78			
	Salford	8	80.16			
	Tameside	9	82.15			
	Manchester	10	91.39			

				Range Chart		
				Best	England	Worst
Local Authority	Rank	Mortality Rate per 100,000 per year		20.13	50.66	91.39
Peers	Rotherham	1	56.93			
	Wakefield	2	61.84			
	Wigan	3	64.49			
	Barnsley	4	65.11			





Females

				Range Chart		
				Best	England	Worst
Local Authority	Rank	Mortality Rate per 100,000 per year		3.82	15.08	33.09
Greater Manchester	Trafford	1	14.11			
	Stockport	2	16.34			
	Bury	3	17.84			
	Bolton	4	23.03			
	Wigan	5	23.24			
	Salford	6	23.93			
	Rochdale	7	24.11			
	Oldham	8	24.95			
	Manchester	9	28.79			
	Tameside	10	31.62			

				Range Chart		
				Best	England	Worst
Local Authority	Rank	Mortality Rate per 100,000 per year		3.82	15.08	33.09
Peers	Wakefield	1	19.00			
	Rotherham	2	21.34			
	Barnsley	3	22.88			
	Wigan	4	23.24			

Source: Health and Social Care Information Centre

The above provides a 'snap shot' of premature death in Wigan Borough. However, it says nothing about the trend in the number of and rate of premature deaths within the Borough. The table below shows the change in both the number of deaths per year and the mortality rate due to coronary heart disease for people aged below 75 in Wigan Borough.

Condition	Gender	Change in number of deaths per year (2009 → 2012)		Change in annual mortality rate (2009 → 2012)	
Coronary heart disease (ICD10 I20-I25)	Male	12 (8%) fewer		13% Reduction	
	Female	No change		4% Reduction	

The population of Wigan Borough has increased between 2009 and 2012. Therefore, although there has been a 13% reduction in the mortality rate for males under 75 due to coronary heart disease, the increase in the underlying population has resulted in a smaller (8%) reduction in the actual number of deaths per year. In the case of females under 75, the increase in the population has resulted in no change in the number of deaths per year, despite a small reduction (4%) in the mortality rate.