

THE SEGMENT TOOL

SEGMENTING LIFE EXPECTANCY GAPS BY CAUSE OF DEATH

Updated January 2015

Key results for Middlesbrough (E06000002)

Introduction

This tool has been developed by Public Health England's (PHE) Knowledge and Intelligence Teams (London and East Midlands) and provides information on the causes of death that are driving inequalities in life expectancy at local area level. Targeting the causes of death which contribute most to the life expectancy gap should have the biggest impact on reducing inequalities.

The tool provides data tables and charts showing the breakdown of the life expectancy gap in 2010-12 for two comparisons:

1. The gap between the Local Authority as a whole and England as a whole. This option is only available if the selected area has a lower life expectancy than England.
2. The gap between the most deprived quintile of the selected Local Authority and the least deprived quintile of the Local Authority. This option is available for all areas.

This document presents key results for Middlesbrough. The tool, along with a user guide and technical document, can be downloaded from http://www.lho.org.uk/LHO_Topics/Analytic_Tools/Segment/TheSegmentTool.aspx

Interpreting the charts

Two types of chart are included below.

The scarf charts show, for each broad cause of death, the percentage contribution that it makes to the overall life expectancy gap between the areas selected. This could be between the local authority as a whole and England, or between the most deprived quintile of the local authority and the least deprived quintile of the local authority, depending on which comparison has been selected. If a cause shows a contribution of 0, this means that the cause of death does not make any contribution to the life expectancy gap.

The bar charts show, for a more detailed breakdown of causes of death, the years of life expectancy that would be gained or lost in the selected area, if it had the same mortality rates as the comparator area.

The tables show the percentage contributions and years of life gained for each cause of death. The number of deaths occurring in the area in 2010-12 are shown, and alongside, the number of excess deaths. Excess deaths are the number of 'extra' deaths that occur in the selected area because it has a higher mortality rate for that cause of death than the comparator area. If these deaths were prevented, then the contribution of that cause of death to the overall life expectancy gap would be eliminated. For some causes of death, there are no excess deaths in the selected area, and therefore no impact is made to the life expectancy gap. If this is the case the table shows a value of "..".

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Contextual information for Middlesbrough

Information on inequalities in life expectancy between Middlesbrough and England

	Male	Female
Life expectancy at birth in Middlesbrough, 2010-2012	76.3	80.2
Life expectancy at birth in England, 2010-2012	79.2	83.0
Absolute gap in life expectancy between Middlesbrough and England in years*	-2.9	-2.8

*A value below 0 indicates a lower life expectancy in the selected area compared to England.

Information on inequalities in life expectancy within Middlesbrough

	Male	Female
Slope index of inequality** in Middlesbrough, 2010-2012	15.9	10.8
Life expectancy at birth in the most deprived quintile of Middlesbrough, 2010-2012	70.6	76.6
Life expectancy at birth in the least deprived quintile of Middlesbrough, 2010-2012	83.3	85.7

** Range of life expectancy in years within the area from most to least deprived.

+ Slope index of inequality is not available because numbers are too small for robust calculation

Sources:

Life expectancy - Office for National Statistics (ONS), life expectancy at birth for local areas in England and Wales

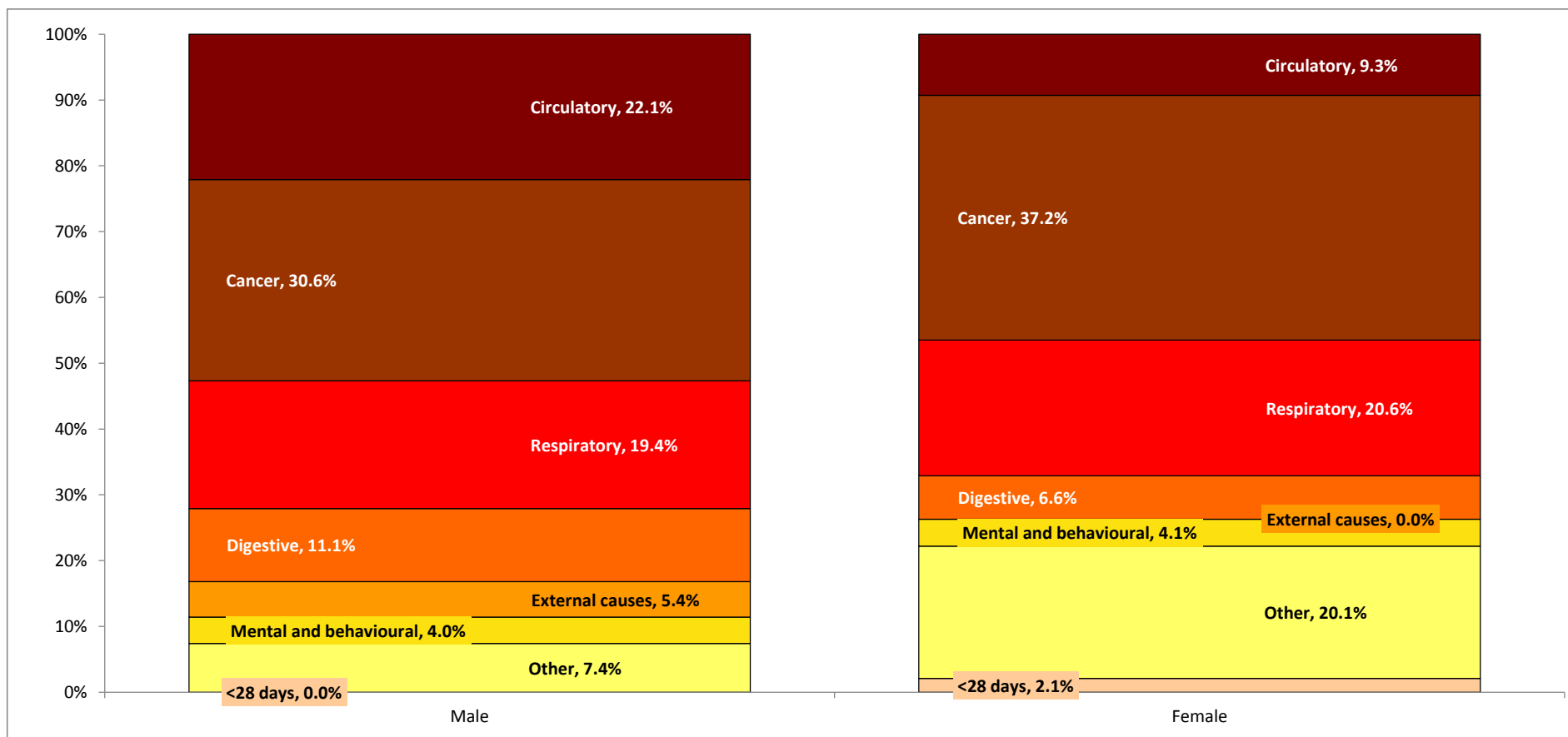
Slope index of inequality - Public Health England (PHE), Public Health Outcome Framework data tool

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Between area inequalities: Life expectancy gap between Middlesbrough as a whole and England

Chart 1: Scarf chart showing the breakdown of the life expectancy gap between Middlesbrough as a whole and England as a whole, by broad cause of death, 2010-2012



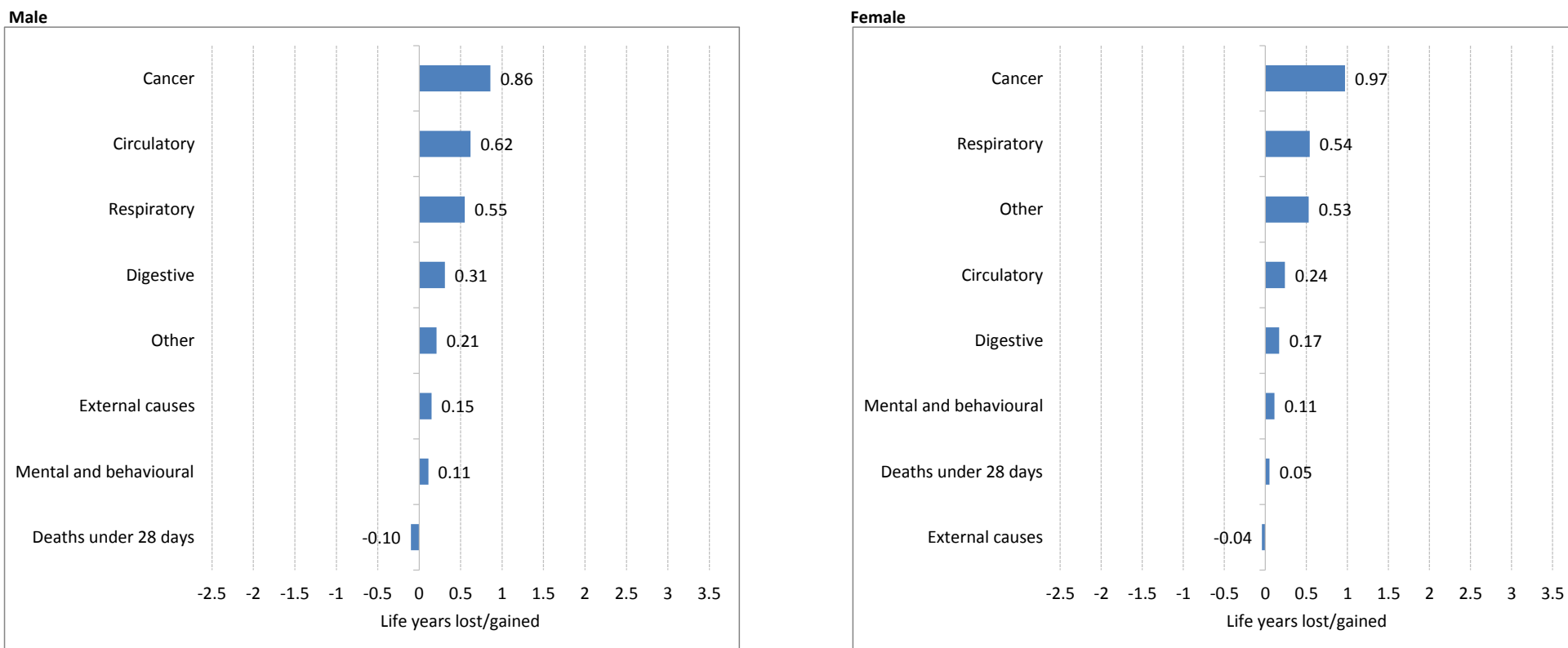
Footnote: Circulatory diseases includes coronary heart disease and stroke. Digestive diseases includes alcohol-related conditions such as chronic liver disease and cirrhosis. External causes include deaths from injury, poisoning and suicide. Mental and behavioural includes dementia and Alzheimer's disease.

Analysis by Public Health England Knowledge and Intelligence Teams (London and East Midlands) based on ONS death registration data, and mid year population estimates

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Chart 2: Bar chart showing life expectancy years gained or lost if Middlesbrough as a whole had the same mortality rates as England as a whole, by broad cause of death, 2010-2012



Footnote: Circulatory diseases includes coronary heart disease and stroke. Digestive diseases includes alcohol-related conditions such as chronic liver disease and cirrhosis. External causes include deaths from injury, poisoning and suicide. Mental and behavioural includes dementia and Alzheimer's disease.

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Table 1: Breakdown of the life expectancy gap between Middlesbrough as a whole and England as a whole, by broad cause of death, 2010-2012

Broad cause of death	Male				Female			
	Number of deaths in local authority	Number of excess deaths in local authority	Number of years of life gained/lost*	Contribution to the gap (%)	Number of deaths in local authority	Number of excess deaths in local authority	Number of years of life gained/lost*	Contribution to the gap (%)
Circulatory	563	104	0.62	22.1	513	45	0.24	9.3
Cancer	621	129	0.86	30.6	607	156	0.97	37.2
Respiratory	303	94	0.55	19.4	326	89	0.54	20.6
Digestive	116	37	0.31	11.1	118	32	0.17	6.6
External causes	79	2	0.15	5.4	40	-7	-0.04	..
Mental and behavioural	106	24	0.11	4.0	201	29	0.11	4.1
Other	189	39	0.21	7.4	316	105	0.53	20.1
Deaths under 28 days	6	-4	-0.10	..	10	2	0.05	2.1
Total	1,982			100	2,130			100

* A positive figure indicates that life expectancy years would be gained if the local authority had the same mortality rate as England as a whole (ie the mortality rate in the local authority for the cause is higher than England as a whole). A negative figure indicates that life expectancy years would be lost if the local authority had the same mortality rate as England as a whole.

.. The calculated contribution to the gap is negative

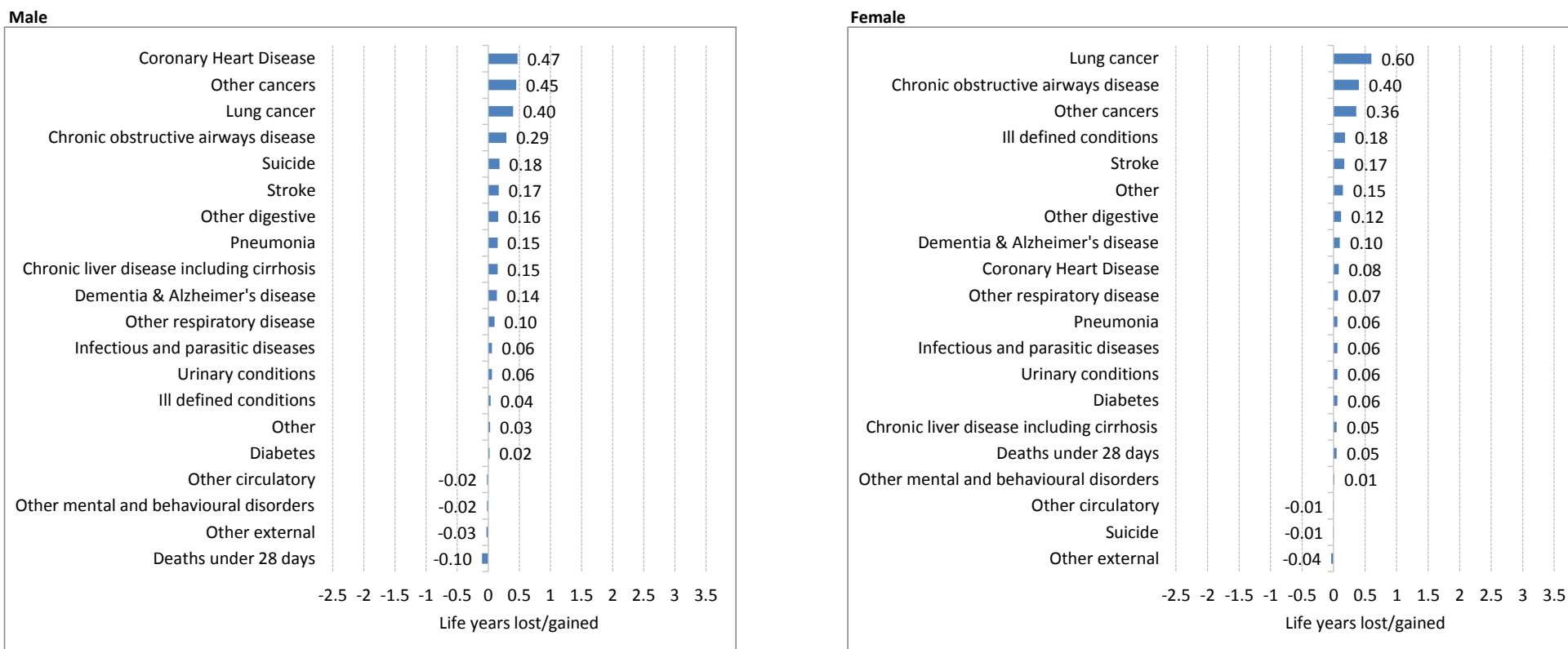
++ The figures have not been calculated as life expectancy is higher than England

Analysis by Public Health England Knowledge and Intelligence Teams (London and East Midlands) based on ONS death registration data, and mid year population estimates

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Chart 3: Bar chart showing life expectancy years gained or lost if Middlesbrough as a whole had the same mortality rates as England as a whole, by detailed cause of death, 2010-2012



Footnote: See table below for details of cause groupings. Details of causes of death included in the 'other' category can be found in the Technical Document.

Analysis by Public Health England Knowledge and Intelligence Teams (London and East Midlands) based on ONS death registration data, and mid year population estimates

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Table 2: Table showing life expectancy years gained or lost if Middlesbrough as a whole had the same mortality rates as England as a whole, by detailed cause of death, 2010-2012

Broad cause of death	Detailed cause of death	Male			Female		
		Number of deaths in local authority	Number of excess deaths in local authority	Number of years of life gained/lost*	Number of deaths in local authority	Number of excess deaths in local authority	Number of years of life gained/lost*
Circulatory	Coronary Heart Disease	314	63	0.47	185	6	0.08
	Stroke	127	34	0.17	185	40	0.17
	Other circulatory	123	7	-0.02	144	-2	-0.01
Cancer	Lung cancer	177	65	0.40	184	93	0.60
	Other cancers	444	65	0.45	423	64	0.36
Respiratory	Pneumonia	97	27	0.15	114	17	0.06
	Chronic obstructive airways disease	138	54	0.29	149	69	0.40
	Other respiratory disease	68	13	0.10	63	3	0.07
Digestive	Chronic liver disease including cirrhosis	43	16	0.15	19	3	0.05
	Other digestive	73	22	0.16	98	29	0.12
External	Suicide	35	10	0.18	8	0	-0.01
	Other external	44	-8	-0.03	32	-7	-0.04
Mental and behavioural	Dementia & Alzheimer's disease	105	26	0.14	195	25	0.10
	Other mental and behavioural disorders	2	-1	-0.02	6	4	0.01
Other	Infectious and parasitic diseases	26	11	0.06	33	14	0.06
	Urinary conditions	34	11	0.06	51	15	0.06
	Ill defined conditions	29	12	0.04	99	50	0.18
	Diabetes	15	0	0.02	26	9	0.06
	Other	84	5	0.03	106	16	0.15
	Deaths under 28 days	6	-4	-0.10	10	2	0.05
Total		1,985			2,129		

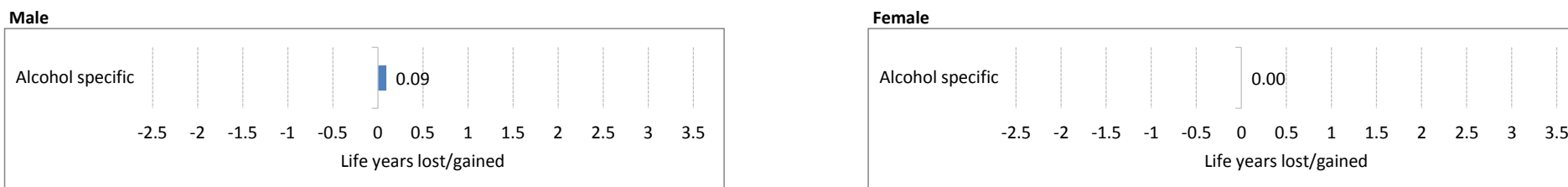
* A positive figure indicates that life expectancy years would be gained if the local authority had the same mortality rate as England as a whole (ie the mortality rate in the local authority for the cause is higher than England as a whole). A negative figure indicates that life expectancy years would be lost if the local authority had the same mortality rate as England as a whole.

Analysis by Public Health England Knowledge and Intelligence Teams (London and East Midlands) based on ONS death registration data, and mid year population estimates

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Chart 4: Bar chart showing life expectancy years gained or lost if Middlesbrough as a whole had the same mortality rates as England as a whole, alcohol specific deaths, 2010-2012



Footnote: Alcohol specific includes causes of death that are wholly attributable to alcohol

Table 3: Table showing life expectancy years gained or lost if Middlesbrough as a whole had the same mortality rates as England as a whole, alcohol specific deaths and all other causes of death, 2010-2012

	Male			Female		
Cause of death	Number of deaths in local authority	Number of excess deaths in local authority	Number of years of life gained/lost*	Number of deaths in local authority	Number of excess deaths in local authority	Number of years of life gained/lost*
Alcohol specific	36	10	0.09	11	-2	0.00
All other causes of death	1,941	409	2.82	2,115	450	2.82
Total	1,977			2,126		

* A positive figure indicates that life expectancy years would be gained if the local authority had the same mortality rate as England as a whole (ie the mortality rate in the local authority for the cause is higher than England as a whole). A negative figure indicates that life expectancy years would be lost if the local authority had the same mortality rate as England as a whole

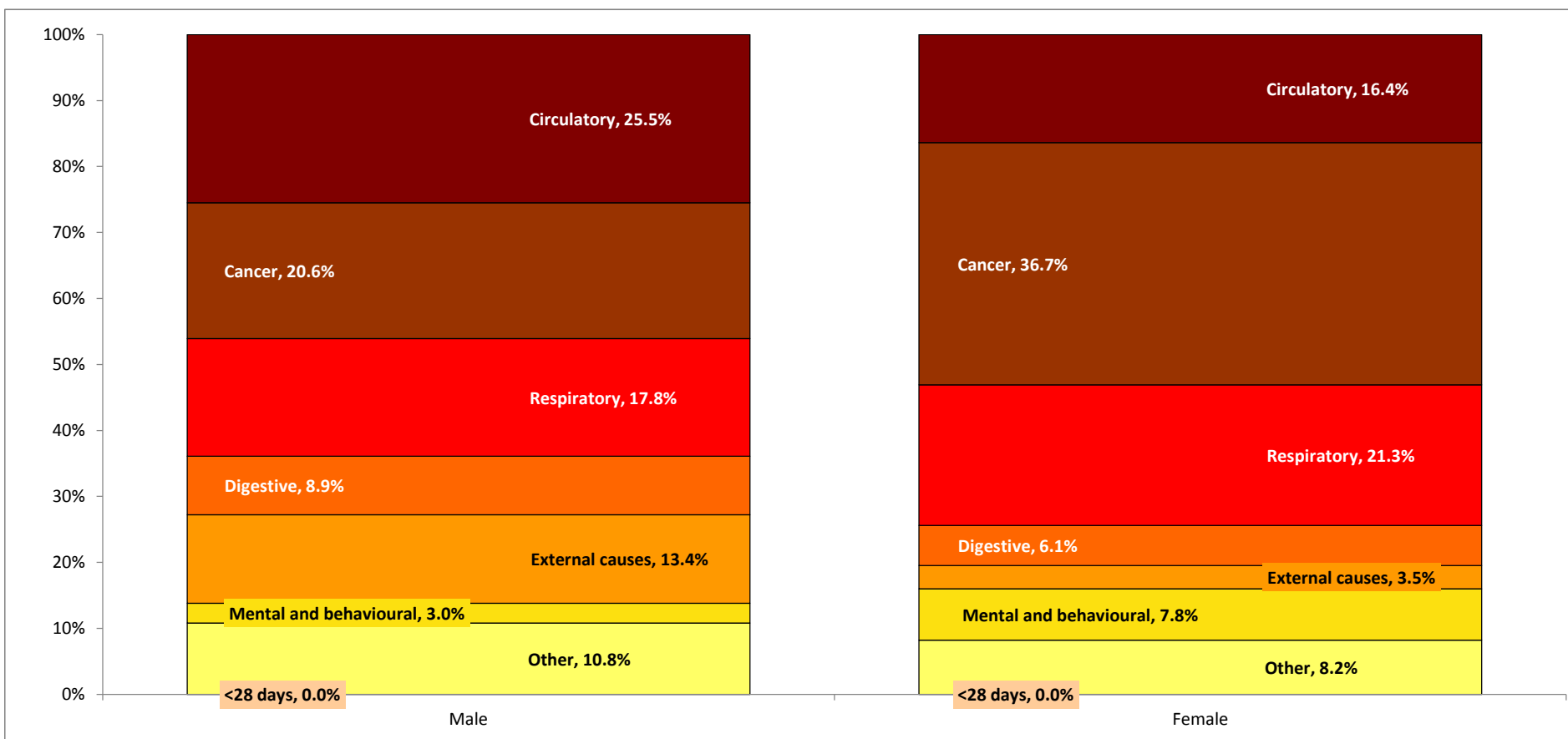
Analysis by Public Health England Knowledge and Intelligence Teams (London and East Midlands) based on ONS death registration data, and mid year population estimates

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Within area inequalities: Life expectancy gap between the most deprived quintile and least deprived quintile of Middlesbrough

Chart 5: Scarf chart showing the breakdown of the life expectancy gap between Middlesbrough most deprived quintile and Middlesbrough least deprived quintile, by broad cause of death, 2010-2012



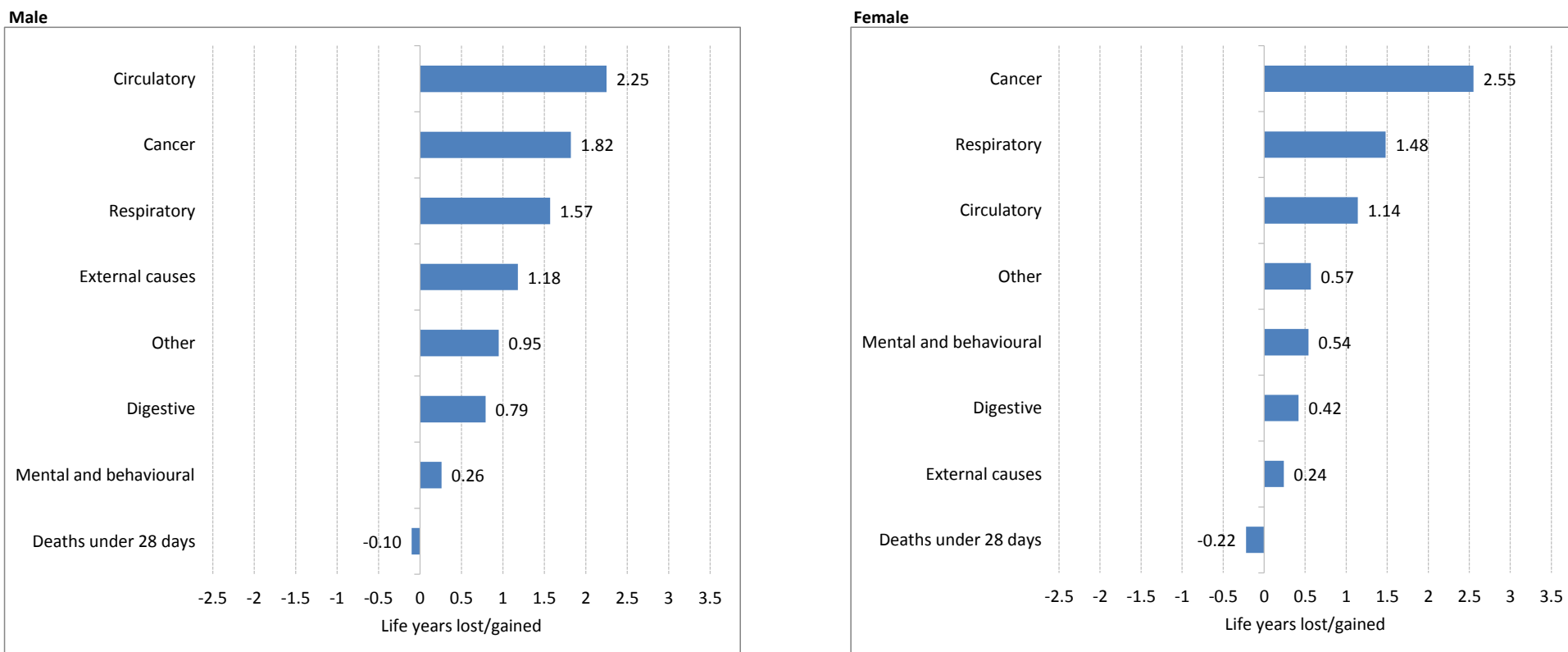
Footnote: Circulatory diseases includes coronary heart disease and stroke. Digestive diseases includes alcohol-related conditions such as chronic liver disease and cirrhosis. External causes include deaths from injury, poisoning and suicide. Mental and behavioural includes dementia and Alzheimer's disease.

Analysis by Public Health England Knowledge and Intelligence Teams (London and East Midlands) based on ONS death registration data, and mid year population estimates, and DCLG Index of Multiple Deprivation, 2010

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Chart 6: Bar chart showing life expectancy years gained or lost if Middlesbrough most deprived quintile had the same mortality rates as Middlesbrough least deprived quintile, by broad cause of death, 2010-2012



Footnote: Circulatory diseases includes coronary heart disease and stroke. Digestive diseases includes alcohol-related conditions such as chronic liver disease and cirrhosis. External causes include deaths from injury, poisoning and suicide. Mental and behavioural includes dementia and Alzheimer's disease. Analysis by Public Health England Knowledge and Intelligence Teams (London and East Midlands) based on ONS death registration data, and mid year population estimates, and DCLG Index of Multiple Deprivation, 2010

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Table 4: Breakdown of the life expectancy gap between Middlesbrough most deprived quintile and Middlesbrough least deprived quintile, by broad cause of death, 2010-2012

	Male				Female			
	Number of deaths in most deprived quintile	Number of excess deaths in most deprived quintile	Number of years of life gained/lost*	Contribution to the gap (%)	Number of deaths in most deprived quintile	Number of excess deaths in most deprived quintile	Number of years of life gained/lost*	Contribution to the gap (%)
Broad cause of death								
Circulatory	148	88	2.25	25.5	108	46	1.14	16.4
Cancer	152	77	1.82	20.6	146	76	2.55	36.7
Respiratory	96	76	1.57	17.8	82	57	1.48	21.3
Digestive	38	29	0.79	8.9	26	12	0.42	6.1
External causes	26	22	1.18	13.4	9	7	0.24	3.5
Mental and behavioural	29	23	0.26	3.0	53	43	0.54	7.8
Other	50	38	0.95	10.8	63	20	0.57	8.2
Deaths under 28 days	1	-1	-0.10	..	2	-2	-0.22	..
Total	539			100	489			100

* A positive figure indicates that life expectancy years would be gained if the most deprived quintile of the local authority had the same mortality rate as the least deprived quintile (ie the mortality rate in the most deprived quintile for the cause is higher than that of the least deprived quintile). A negative figure indicates that life expectancy years would be lost if the most deprived quintile in the local authority had the same mortality rate as the least deprived quintile.

.. The calculated contribution to the gap is negative

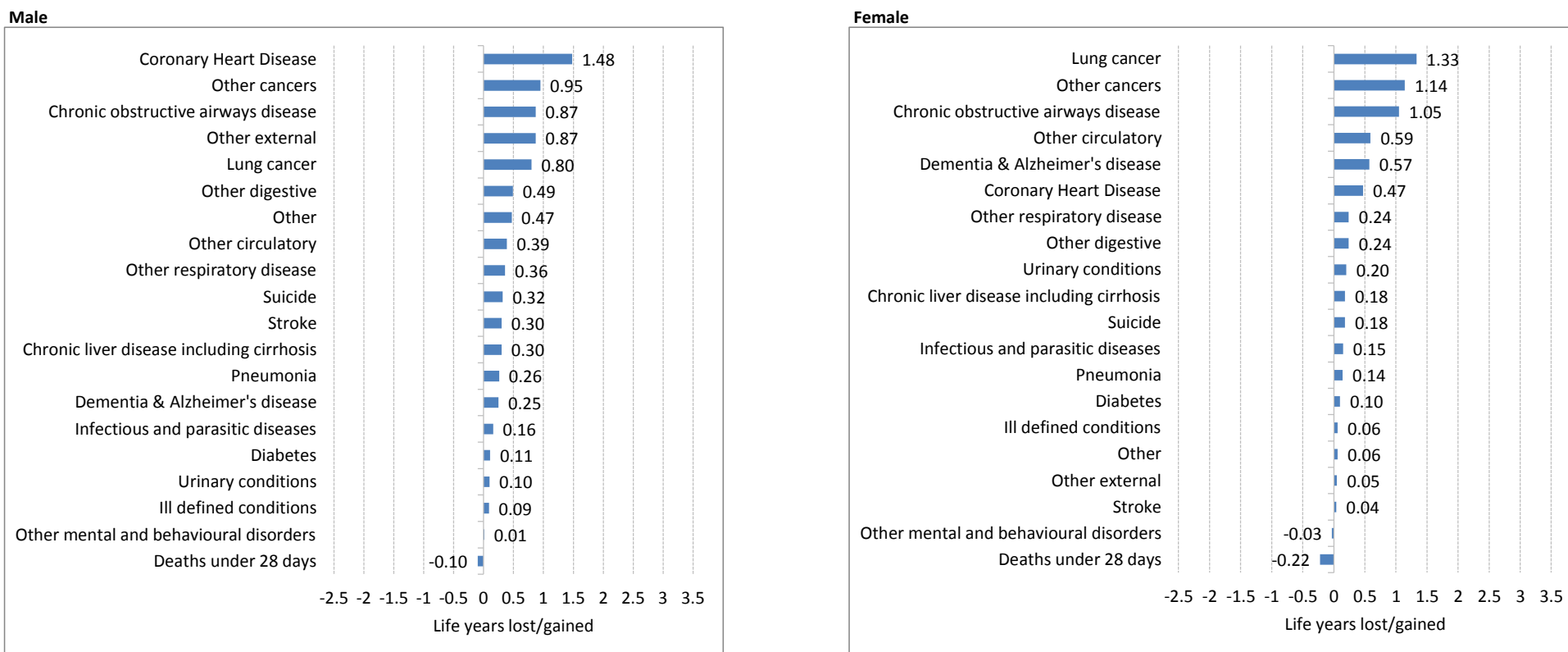
The figures have not been calculated as life expectancy in the most deprived quintile is higher than life expectancy in the least deprived quintile

Analysis by Public Health England Knowledge and Intelligence Teams (London and East Midlands) based on ONS death registration data, and mid year population estimates, and DCLG Index of Multiple Deprivation, 2010

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Chart 7: Bar chart showing life expectancy years gained or lost if Middlesbrough most deprived quintile had the same mortality rates as Middlesbrough least deprived quintile, by detailed cause of death, 2010-2012



Footnote: See table below for details of cause groupings. Details of causes of death included in the 'other' category can be found in the Technical Document. Analysis by Public Health England Knowledge and Intelligence Teams (London and East Midlands) based on ONS death registration data, and mid year population estimates, and DCLG Index of Multiple Deprivation, 2010

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Table 5: Table showing life expectancy years gained or lost if Middlesbrough most deprived quintile had the same mortality rates as Middlesbrough least deprived quintile, by detailed cause of death, 2010-2012

Broad cause of death	Detailed cause of death	Male			Female		
		Number of deaths in most deprived quintile	Number of excess deaths in most deprived quintile	Number of years of life gained/lost*	Number of deaths in most deprived quintile	Number of excess deaths in most deprived quintile	Number of years of life gained/lost*
Circulatory	Coronary Heart Disease	88	52	1.48	40	19	0.47
	Stroke	28	16	0.30	33	5	0.04
	Other circulatory	32	21	0.39	35	22	0.59
Cancer	Lung cancer	54	37	0.80	57	42	1.33
	Other cancers	98	40	0.95	89	34	1.14
Respiratory	Pneumonia	23	14	0.26	19	8	0.14
	Chronic obstructive airways disease	51	43	0.87	49	42	1.05
	Other respiratory disease	22	20	0.36	14	6	0.24
Digestive	Chronic liver disease including cirrhosis	12	8	0.30	5	3	0.18
	Other digestive	26	21	0.49	21	8	0.24
External	Suicide	8	5	0.32	4	3	0.18
	Other external	18	17	0.87	5	4	0.05
Mental and behavioural	Dementia & Alzheimer's disease	29	23	0.25	53	43	0.57
	Other mental and behavioural disorders	0	0	0.01	1	0	-0.03
Other	Infectious and parasitic diseases	8	6	0.16	10	6	0.15
	Urinary conditions	10	8	0.10	19	12	0.20
	Ill defined conditions	6	5	0.09	14	1	0.06
	Diabetes	5	4	0.11	7	4	0.10
	Other	20	15	0.47	14	-2	0.06
< 28 days	Deaths under 28 days	1	-1	-0.10	2	-2	-0.22
Total		539			489		

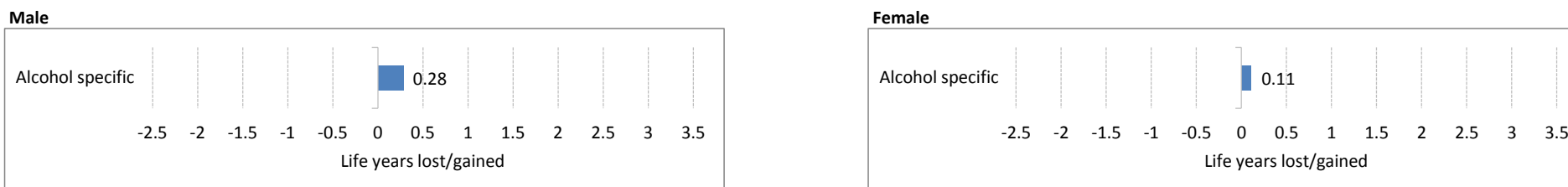
* A positive figure indicates that life expectancy years would be gained if the most deprived quintile of the local authority had the same mortality rate as the least deprived quintile (ie the mortality rate in the most deprived quintile for the cause is higher than that of the least deprived quintile). A negative figure indicates that life expectancy years would be lost if the most deprived quintile in the local authority had the same mortality rate as the least deprived quintile.

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Chart 8: Bar chart showing life expectancy years gained or lost if Middlesbrough most deprived quintile had the same mortality rates as Middlesbrough least deprived quintile, alcohol specific deaths, 2010-2012



Footnote: Alcohol specific includes causes of death that are wholly attributable to alcohol

Table 6: Table showing life expectancy years gained or lost if Middlesbrough most deprived quintile had the same mortality rates as Middlesbrough least deprived quintile, alcohol specific deaths and all other causes of death, 2010-2012

Broad cause of death	Male			Female		
	Number of deaths in most deprived quintile	Number of excess deaths in most deprived quintile	Number of years of life gained/lost*	Number of deaths in most deprived quintile	Number of excess deaths in most deprived quintile	Number of years of life gained/lost*
Alcohol specific	10	9	0.28	3	2	0.11
All other causes of death	526	341	12.23	484	253	8.95
Total	536			487		

* A positive figure indicates that life expectancy years would be gained if the most deprived quintile of the local authority had the same mortality rate as the least deprived quintile (ie the mortality rate in the most deprived quintile for the cause is higher than that of the least deprived quintile). A negative figure indicates that life expectancy years would be lost if the most deprived quintile in the local authority had the same mortality rate as the least deprived quintile.

Analysis by Public Health England Knowledge and Intelligence Teams (London and East Midlands) based on ONS death registration data, and mid year population estimates, and DCLG Index of Multiple Deprivation, 2010