

THE SEGMENT TOOL

SEGMENTING LIFE EXPECTANCY GAPS BY CAUSE OF DEATH

Updated May 2016



Key results for East Midlands

Introduction

The Segment Tool has been developed by Public Health England's (PHE) Epidemiology and Surveillance team 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.

This document presents key results for East Midlands and provides data tables and charts showing the breakdown of the life expectancy gap in 2012-14 for two comparisons:

1. The gap between the region as a whole and England as a whole.
2. The gap between the most deprived quintile of the region and the least deprived quintile of the region.

The tool, along with a user guide and technical document, can be downloaded from <http://fingertips.phe.org.uk/profile/segment>

Due to changes made in this version of the Segment Tool, the results presented here are not directly comparable with previous versions.

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 region as a whole and England, or between the most deprived quintile of the region and the least deprived quintile of the region, 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 2012-14 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 East Midlands

Information on inequalities in life expectancy between East Midlands and England

	Male	Female
Life expectancy at birth in East Midlands, 2012-2014	79.4	83.0
Life expectancy at birth in England, 2012-2014	79.6	83.2
Absolute gap in life expectancy between East Midlands and England in years*	-0.2	-0.2

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

Information on inequalities in life expectancy within East Midlands

	Male	Female
Life expectancy at birth in the most deprived quintile of East Midlands, 2012-2014	75.3	79.9
Life expectancy at birth in the least deprived quintile of East Midlands, 2012-2014	82.4	85.7
Absolute gap in life expectancy between most deprived and least deprived areas within East Midlands*	-7.1	-5.8

*A value below 0 indicates a lower life expectancy in the most deprived quintile compared with the least deprived quintile.

Sources:

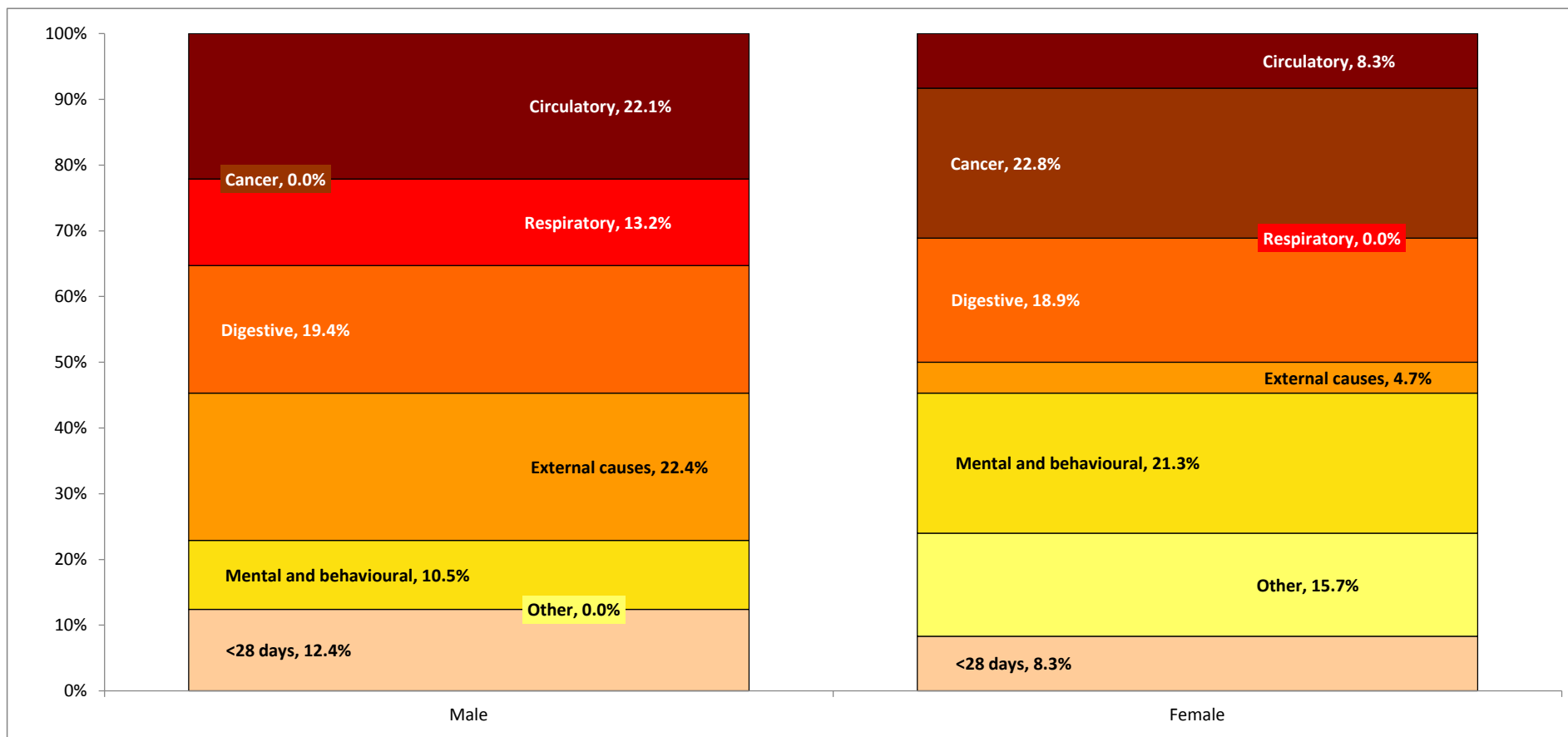
- Life expectancies for regions - Office for National Statistics (ONS), life expectancy at birth for local areas in England and Wales
- Life Expectancies for deprivation quintiles within each local authority - Analysis by Public Health England Epidemiology and Surveillance team based on ONS death registration data, and mid year population estimates, and DCLG Index of Multiple Deprivation, 2015

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

Chart 1: Scarf chart showing the breakdown of the life expectancy gap between East Midlands as a whole and England as a whole, by broad cause of death, 2012-2014



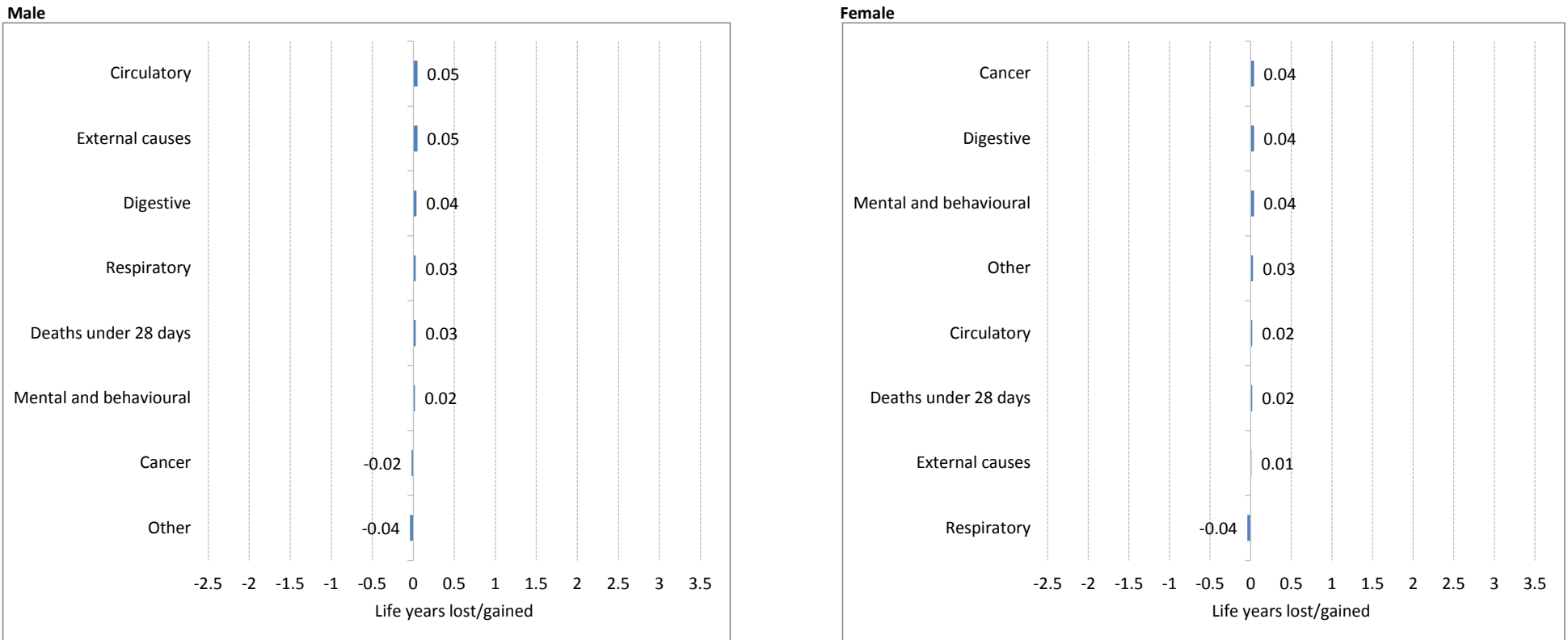
Footnote: Circulatory diseases includes coronary heart disease and stroke. Respiratory diseases includes flu, pneumonia and chronic obstructive airways disease. Digestive diseases includes alcohol-related conditions such as chronic liver disease and cirrhosis. External causes include deaths from injury,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

Analysis by Public Health England’s (PHE) Epidemiology and Surveillance team 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 East Midlands as a whole had the same mortality rates as England as a whole, by broad cause of death, 2012-2014



Footnote: Circulatory diseases includes coronary heart disease and stroke. Respiratory diseases includes flu, pneumonia and chronic obstructive airways disease. 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 East Midlands as a whole and England as a whole, by broad cause of death, 2012-2014

Broad cause of death	Male				Female			
	Number of deaths in region	Number of excess deaths in region	Number of years of life gained/lost*	Contribution to the gap (%)	Number of deaths in region	Number of excess deaths in region	Number of years of life gained/lost*	Contribution to the gap (%)
Circulatory	17,445	267	0.05	22.1	16,986	66	0.02	8.3
Cancer	19,076	28	-0.02	..	16,720	174	0.04	22.8
Respiratory	8,489	251	0.03	13.2	8,599	-215	-0.04	..
Digestive	3,127	184	0.04	19.4	3,259	214	0.04	18.9
External causes	2,922	100	0.05	22.4	1,776	10	0.01	4.7
Mental and behavioural	4,318	180	0.02	10.5	8,443	259	0.04	21.3
Other	5,951	-66	-0.04	..	8,171	286	0.03	15.7
Deaths under 28 days	276	28	0.03	12.4	212	15	0.02	8.3
Total	61,604			100	64,166			100

Counts of deaths have been adjusted take account of changes in ICD-10 coding made in 2014. This means totals may differ between tables. Further details can be found in the technical document.

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

.. The calculated contribution to the gap is negative

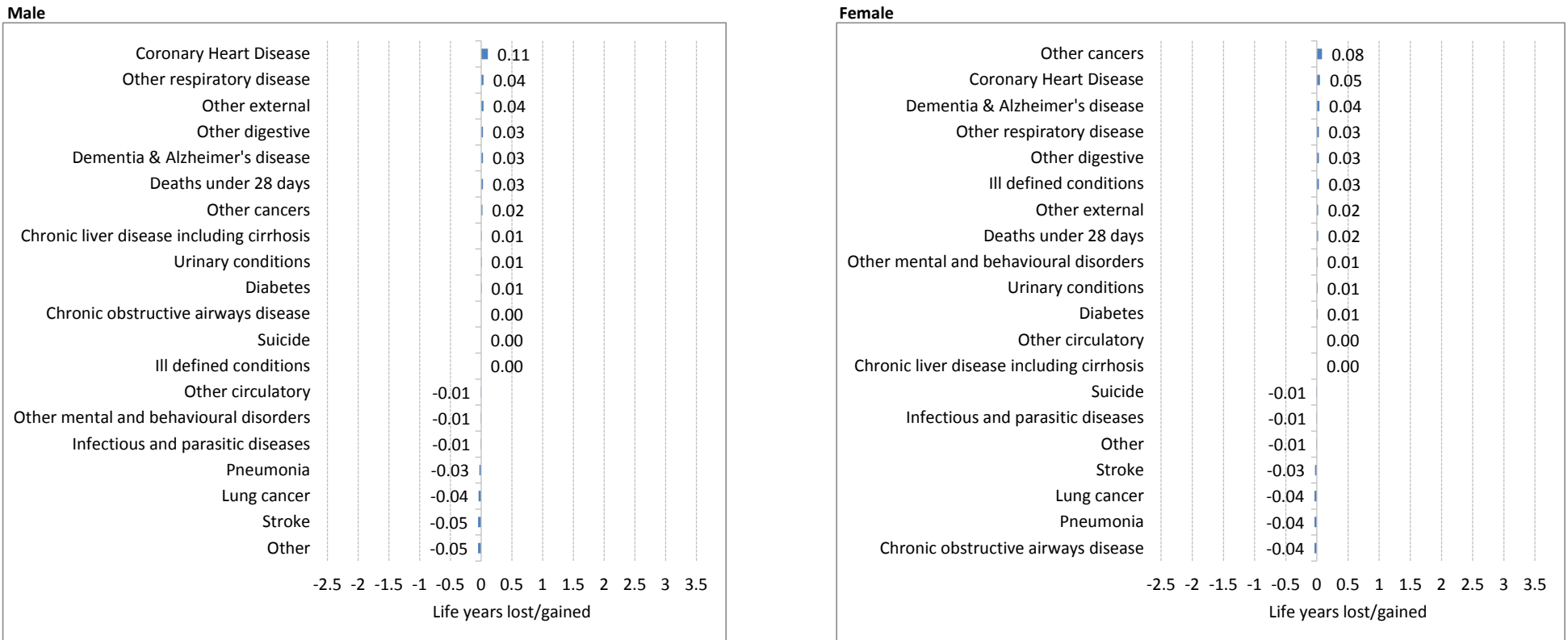
++ The figures have not been calculated as life expectancy is higher than England

Analysis by Public Health England's (PHE) Epidemiology and Surveillance team 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 East Midlands as a whole had the same mortality rates as England as a whole, by detailed cause of death, 2012-2014



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's (PHE) Epidemiology and Surveillance team 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 East Midlands as a whole had the same mortality rates as England as a whole, by detailed cause of death, 2012-2014

Broad cause of death	Detailed cause of death	Male			Female		
		Number of deaths in region	Number of excess deaths in region	Number of years of life gained/lost*	Number of deaths in region	Number of excess deaths in region	Number of years of life gained/lost*
Circulatory	Coronary Heart Disease	9,797	608	0.11	6,523	325	0.05
	Stroke	3,233	-287	-0.05	4,893	-222	-0.03
	Other circulatory	4,410	-60	-0.01	5,594	-43	0.00
Cancer	Lung cancer	4,097	-165	-0.04	3,178	-222	-0.04
	Other cancers	14,979	193	0.02	13,542	396	0.08
Respiratory	Pneumonia	2,752	-181	-0.03	3,451	-279	-0.04
	Chronic obstructive airways disease	3,466	32	0.00	2,911	-261	-0.04
	Other respiratory disease	2,145	319	0.04	2,104	245	0.03
Digestive	Chronic liver disease including cirrhosis	993	9	0.01	548	3	0.00
	Other digestive	2,108	173	0.03	2,711	211	0.03
External	Suicide	936	3	0.00	251	-27	-0.01
	Other external	1,986	96	0.04	1,536	40	0.02
Mental and behavioural	Dementia & Alzheimer's disease	4,211	203	0.03	8,341	250	0.04
	Other mental and behavioural disorders	108	-23	-0.01	100	9	0.01
Other	Infectious and parasitic diseases	544	-49	-0.01	654	-33	-0.01
	Urinary conditions	949	88	0.01	1,286	71	0.01
	Ill defined conditions	766	45	0.00	2,276	290	0.03
	Diabetes	707	77	0.01	744	92	0.01
	Other	2,978	-228	-0.05	3,172	-133	-0.01
< 28 days	Deaths under 28 days	276	28	0.03	212	15	0.02
Total		61,440			64,027		

Counts of deaths have been adjusted take account of changes in ICD-10 coding made in 2014. This means totals may differ between tables. Further details can be found in the technical document.

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

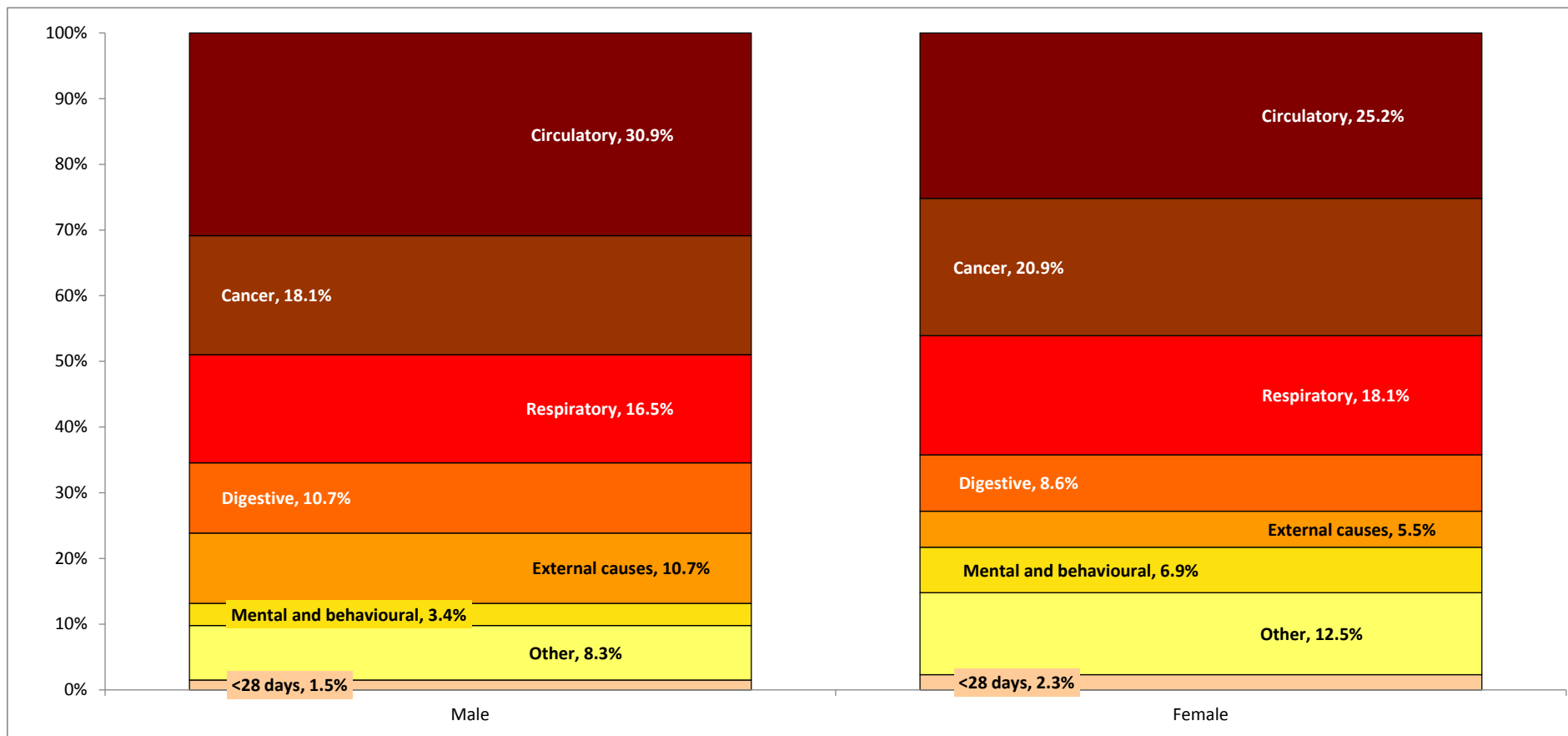
Analysis by Public Health England's (PHE) Epidemiology and Surveillance team based on ONS death registration data, and mid year population estimates.

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

Chart 4: Scarf chart showing the breakdown of the life expectancy gap between East Midlands most deprived quintile and East Midlands least deprived quintile, by broad cause of death, 2012-2014



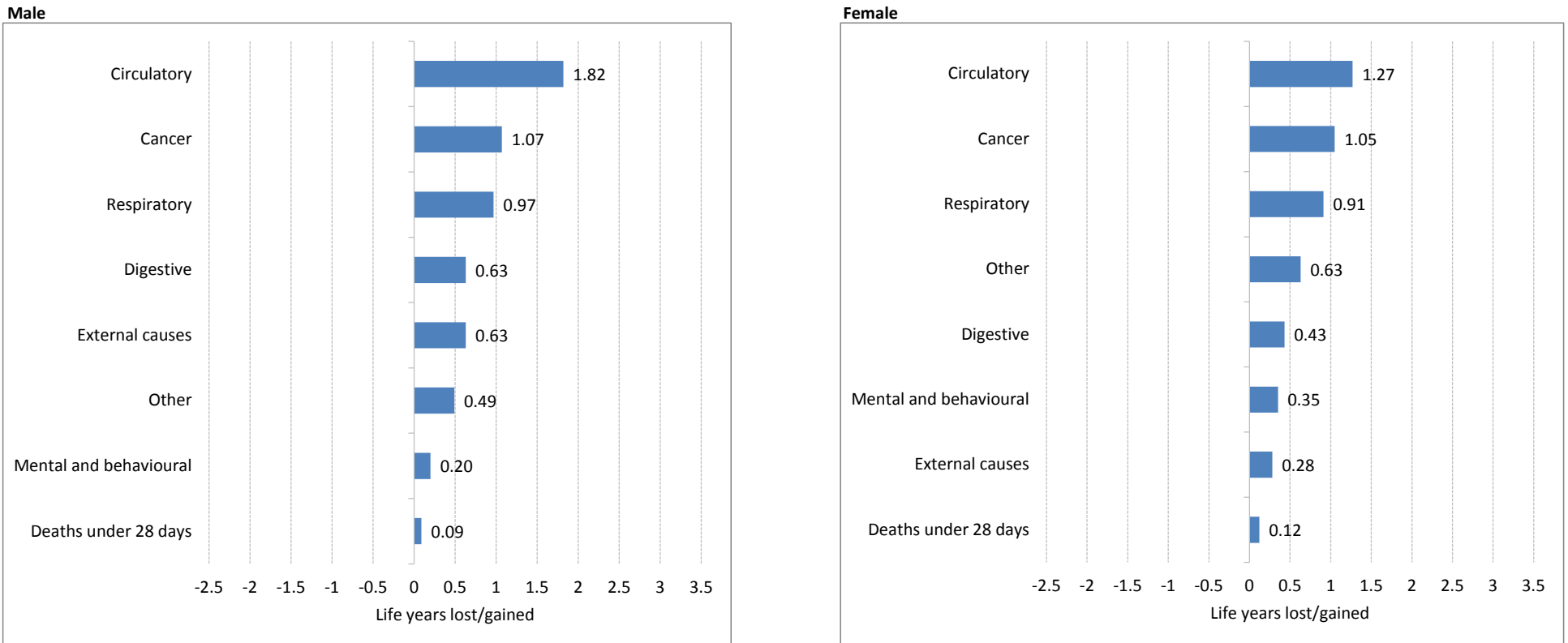
Footnote: Circulatory diseases includes coronary heart disease and stroke. Respiratory diseases includes flu, pneumonia and chronic obstructive airways disease. Digestive diseases includes alcohol-related conditions such as chronic liver disease and cirrhosis. External causes include deaths from injury,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

Analysis by Public Health England’s (PHE) Epidemiology and Surveillance team based on ONS death registration data, and mid year population estimates, and DCLG Index of Multiple Deprivation, 2015

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Chart 5: Bar chart showing life expectancy years gained or lost if East Midlands most deprived quintile had the same mortality rates as East Midlands least deprived quintile, by broad cause of death, 2012-2014



Footnote: Circulatory diseases includes coronary heart disease and stroke. Respiratory diseases includes flu, pneumonia and chronic obstructive airways disease. 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 3: Breakdown of the life expectancy gap between East Midlands most deprived quintile and East Midlands least deprived quintile, by broad cause of death, 2012-2014

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*	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 (%)
Circulatory	3,608	1,680	1.82	30.9	3,324	1,100	1.27	25.2
Cancer	3,488	1,069	1.07	18.1	3,183	831	1.05	20.9
Respiratory	1,912	1,083	0.97	16.5	1,888	890	0.91	18.1
Digestive	803	480	0.63	10.7	745	339	0.43	8.6
External causes	745	361	0.63	10.7	400	151	0.28	5.5
Mental and behavioural	811	284	0.20	3.4	1,610	499	0.35	6.9
Other	1,183	420	0.49	8.3	1,553	465	0.63	12.5
Deaths under 28 days	88	28	0.09	1.5	82	33	0.12	2.3
Total	12,638			100	12,785			100

Counts of deaths have been adjusted take account of changes in ICD-10 coding made in 2014. This means totals may differ between tables. Further details can be found in the technical document.

* A positive figure indicates that life expectancy years would be gained if the most deprived quintile of the region 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 region had the same mortality rate as the least deprived quintile.

.. The calculated contribution to the gap is negative

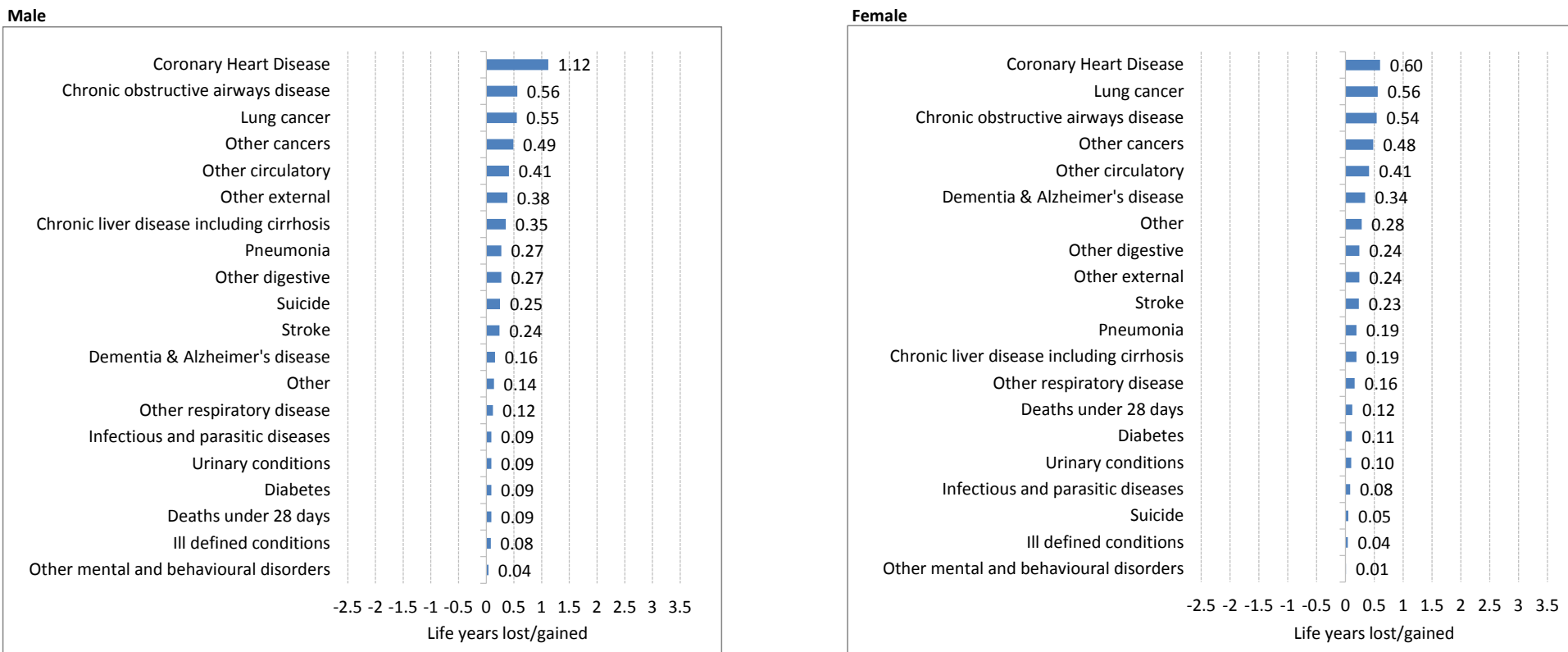
The figures have not been calculated as life expectancy in the most deprived quintile is higher than life expectancy in the least deprived quintile

Analysis by Public Health England's (PHE) Epidemiology and Surveillance team based on ONS death registration data, and mid year population estimates, and DCLG Index of Multiple Deprivation, 2015

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Chart 6: Bar chart showing life expectancy years gained or lost if East Midlands most deprived quintile had the same mortality rates as East Midlands least deprived quintile, by detailed cause of death, 2012-2014



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's (PHE) Epidemiology and Surveillance team based on ONS death registration data, and mid year population estimates, and DCLG Index of Multiple Deprivation, 2015

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Table 4: Table showing life expectancy years gained or lost if East Midlands most deprived quintile had the same mortality rates as East Midlands least deprived quintile, by detailed cause of death, 2012-2014

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	2,091	1,039	1.12	1,377	531	0.60
	Stroke	632	266	0.24	881	219	0.23
	Other circulatory	885	376	0.41	1,072	355	0.41
Cancer	Lung cancer	979	583	0.55	798	473	0.56
	Other cancers	2,509	486	0.49	2,385	358	0.48
Respiratory	Pneumonia	598	310	0.27	648	208	0.19
	Chronic obstructive airways disease	916	637	0.56	792	510	0.54
	Other respiratory disease	388	146	0.12	422	163	0.16
Digestive	Chronic liver disease including cirrhosis	324	239	0.35	157	110	0.19
	Other digestive	471	236	0.27	588	229	0.24
External	Suicide	253	133	0.25	62	18	0.05
	Other external	492	228	0.38	341	135	0.24
Mental and behavioural	Dementia & Alzheimer's disease	774	259	0.16	1,593	497	0.34
	Other mental and behavioural disorders	37	25	0.04	17	2	0.01
Other	Infectious and parasitic diseases	138	81	0.09	141	56	0.08
	Urinary conditions	204	99	0.09	258	121	0.10
	Ill defined conditions	152	59	0.08	353	18	0.04
	Diabetes	170	98	0.09	190	107	0.11
	Other	519	86	0.14	603	159	0.28
< 28 days	Deaths under 28 days	88	28	0.09	82	33	0.12
Total		12,620			12,759		

Counts of deaths have been adjusted take account of changes in ICD-10 coding made in 2014. This means totals may differ between tables. Further details can be found in the technical document.

* A positive figure indicates that life expectancy years would be gained if the most deprived quintile of the region 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 region had the same mortality rate as the least deprived quintile.

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