

THE SEGMENT TOOL

SEGMENTING LIFE EXPECTANCY GAPS BY CAUSE OF DEATH

Updated May 2016



Key results for East of England

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 of England 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 of England

Information on inequalities in life expectancy between East of England and England

	Male	Female
Life expectancy at birth in East of England, 2012-2014	80.4	83.8
Life expectancy at birth in England, 2012-2014	79.6	83.2
Absolute gap in life expectancy between East of England and England in years*	0.8	0.6

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

Information on inequalities in life expectancy within East of England

	Male	Female
Life expectancy at birth in the most deprived quintile of East of England, 2012-2014	76.9	81.4
Life expectancy at birth in the least deprived quintile of East of England, 2012-2014	83.1	86
Absolute gap in life expectancy between most deprived and least deprived areas within East of England*	-6.2	-4.6

*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 of England as a whole and England

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

****This chart is not available as life expectancy is higher in East of England than in England as a whole****



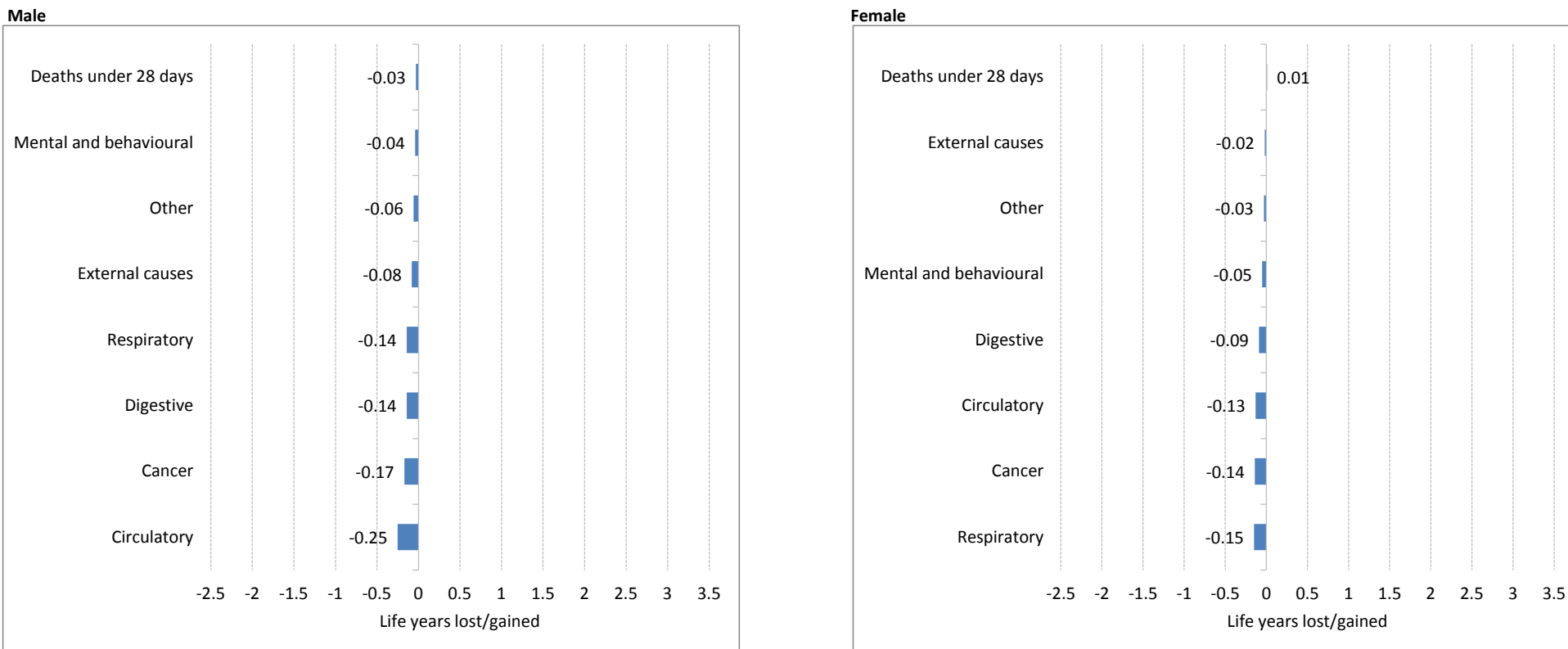
Footnote: Circulatory diseases includes coronary heart disease and stroke. Respiratory diseases includes flu, pneumonia and chronic obstructive airways disease. Digestive diseases includes alcohol-related conditions such as chronic liver disease and cirrhosis. External causes include deaths from injury, 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 of England 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 of England 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	21,661	-1,667	-0.25	++	22,352	-877	-0.13	++
Cancer	24,224	-1,216	-0.17	++	21,289	-865	-0.14	++
Respiratory	10,403	-909	-0.14	++	11,067	-1,014	-0.15	++
Digestive	3,183	-739	-0.14	++	3,612	-514	-0.09	++
External causes	3,350	-363	-0.08	++	2,259	-118	-0.02	++
Mental and behavioural	5,482	-327	-0.04	++	10,956	-408	-0.05	++
Other	7,894	-299	-0.06	++	10,789	-7	-0.03	++
Deaths under 28 days	287	-48	-0.03	++	275	11	0.01	++
Total	76,484			++	82,597			++

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

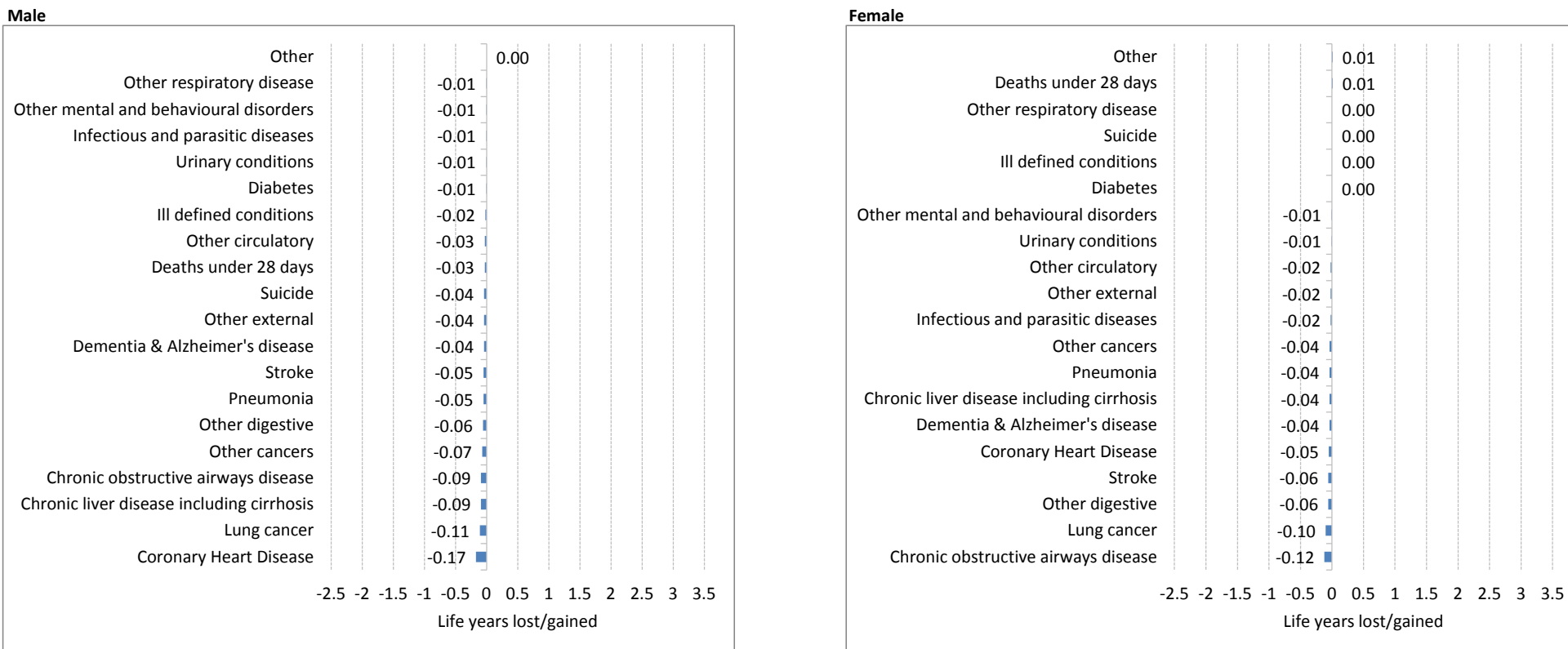
++ The figures have not been calculated as life expectancy is higher than England

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 of England 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 of England 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	11,330	-1,070	-0.17	8,221	-267	-0.05
	Stroke	4,416	-422	-0.05	6,581	-458	-0.06
	Other circulatory	5,908	-183	-0.03	7,582	-159	-0.02
Cancer	Lung cancer	4,915	-736	-0.11	3,901	-632	-0.10
	Other cancers	19,309	-481	-0.07	17,388	-232	-0.04
Respiratory	Pneumonia	3,750	-330	-0.05	4,843	-315	-0.04
	Chronic obstructive airways disease	4,096	-571	-0.09	3,477	-823	-0.12
	Other respiratory disease	2,451	-51	-0.01	2,630	79	0.00
Digestive	Chronic liver disease including cirrhosis	911	-356	-0.09	583	-129	-0.04
	Other digestive	2,249	-375	-0.06	3,028	-385	-0.06
External	Suicide	1,073	-129	-0.04	343	-19	0.00
	Other external	2,277	-233	-0.04	1,926	-100	-0.02
Mental and behavioural	Dementia & Alzheimer's disease	5,345	-295	-0.04	10,852	-389	-0.04
	Other mental and behavioural disorders	139	-32	-0.01	102	-20	-0.01
Other	Infectious and parasitic diseases	696	-105	-0.01	779	-157	-0.02
	Urinary conditions	1,097	-99	-0.01	1,592	-82	-0.01
	Ill defined conditions	885	-119	-0.02	2,773	5	0.00
	Diabetes	833	-24	-0.01	944	52	0.00
	Other	4,374	49	0.00	4,648	178	0.01
< 28 days	Deaths under 28 days	287	-48	-0.03	275	11	0.01
Total		76,340			82,469		

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.

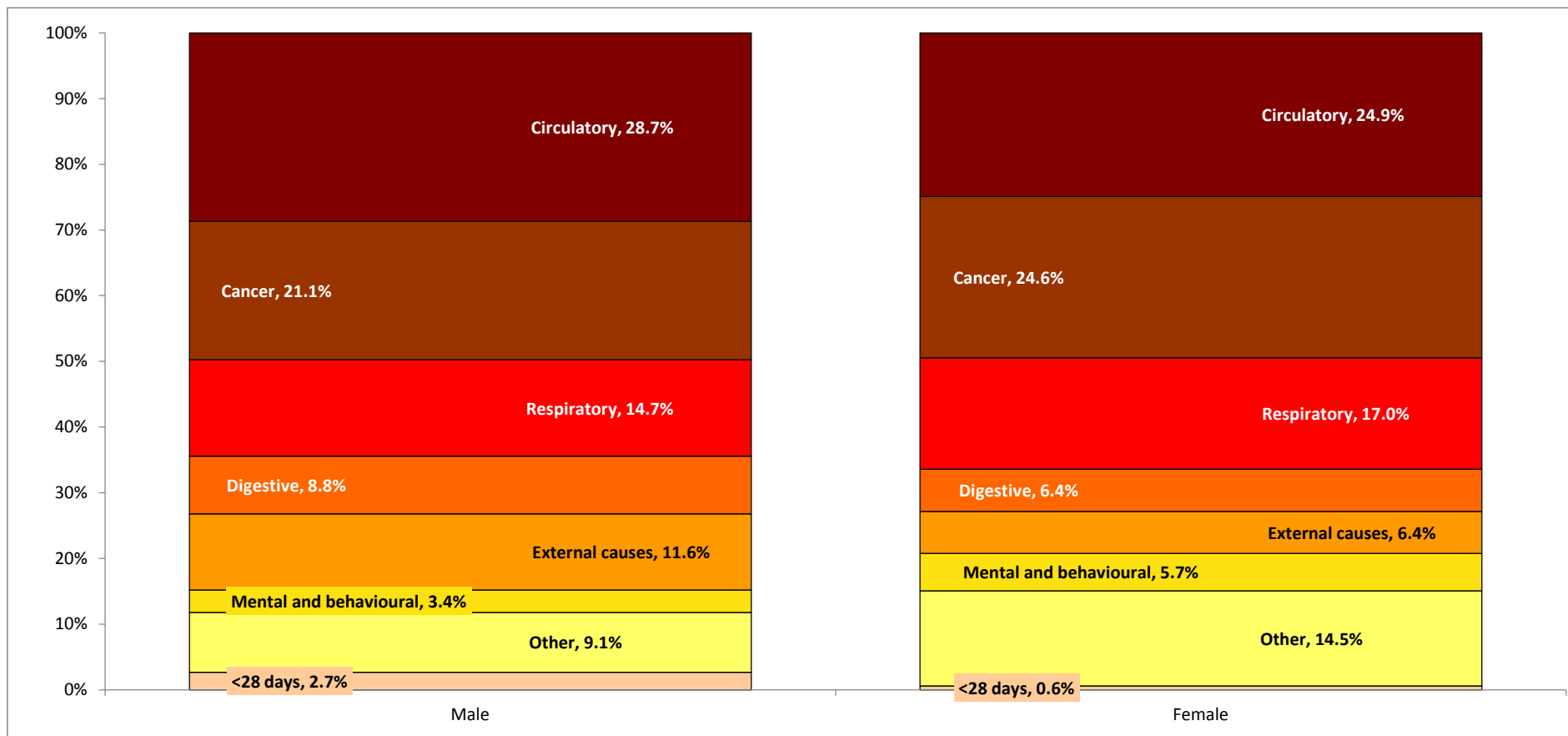
Analysis by Public Health England's (PHE) Epidemiology and Surveillance team based on ONS death registration data, and mid year population estimates.

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

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



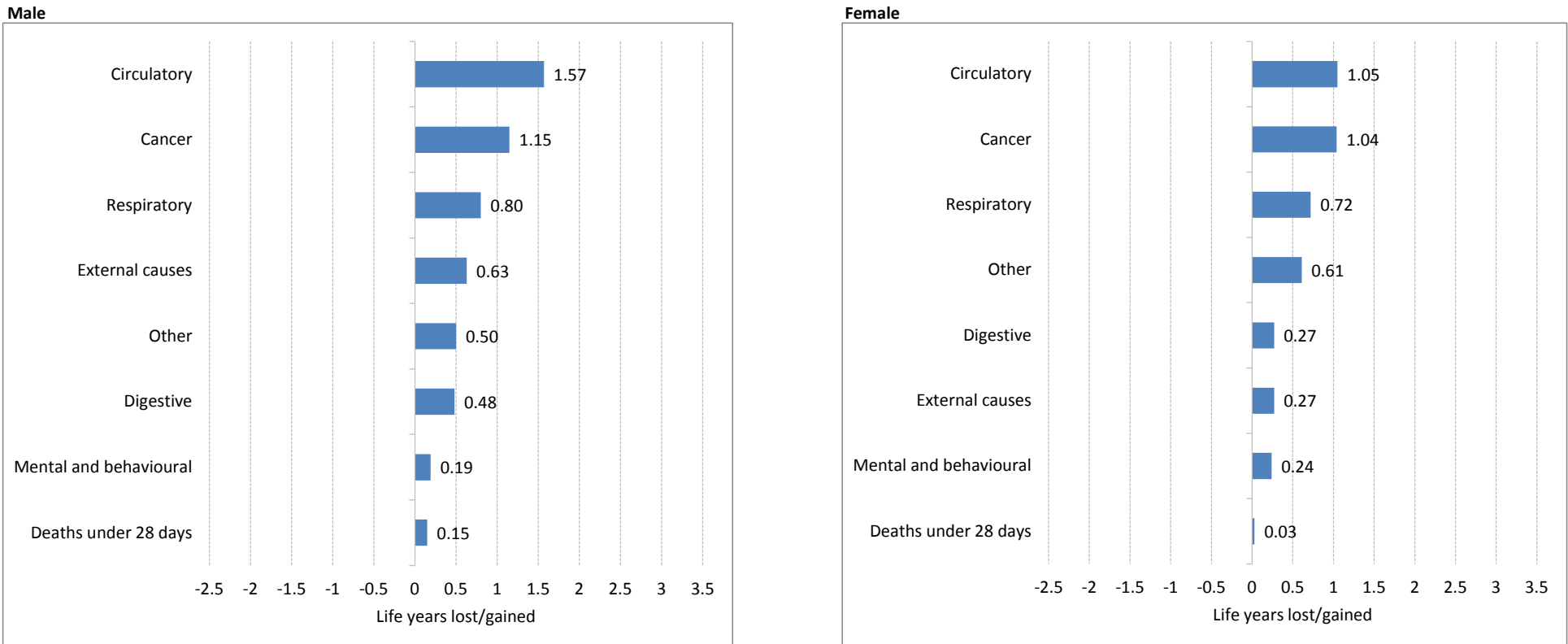
Footnote: Circulatory diseases includes coronary heart disease and stroke. Respiratory diseases includes flu, pneumonia and chronic obstructive airways disease. Digestive diseases includes alcohol-related conditions such as chronic liver disease and cirrhosis. External causes include deaths from injury, 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 of England most deprived quintile had the same mortality rates as East of England 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 of England most deprived quintile and East of England 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	4,655	1,825	1.57	28.7	4,704	1,279	1.05	24.9
Cancer	4,799	1,317	1.15	21.1	4,317	1,082	1.04	24.6
Respiratory	2,382	1,073	0.80	14.7	2,521	965	0.72	17.0
Digestive	873	481	0.48	8.8	798	251	0.27	6.4
External causes	903	447	0.63	11.6	528	185	0.27	6.4
Mental and behavioural	1,010	295	0.19	3.4	2,051	426	0.24	5.7
Other	1,577	488	0.50	9.1	2,243	591	0.61	14.5
Deaths under 28 days	101	55	0.15	2.7	79	9	0.03	0.6
Total	16,300			100	17,241			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

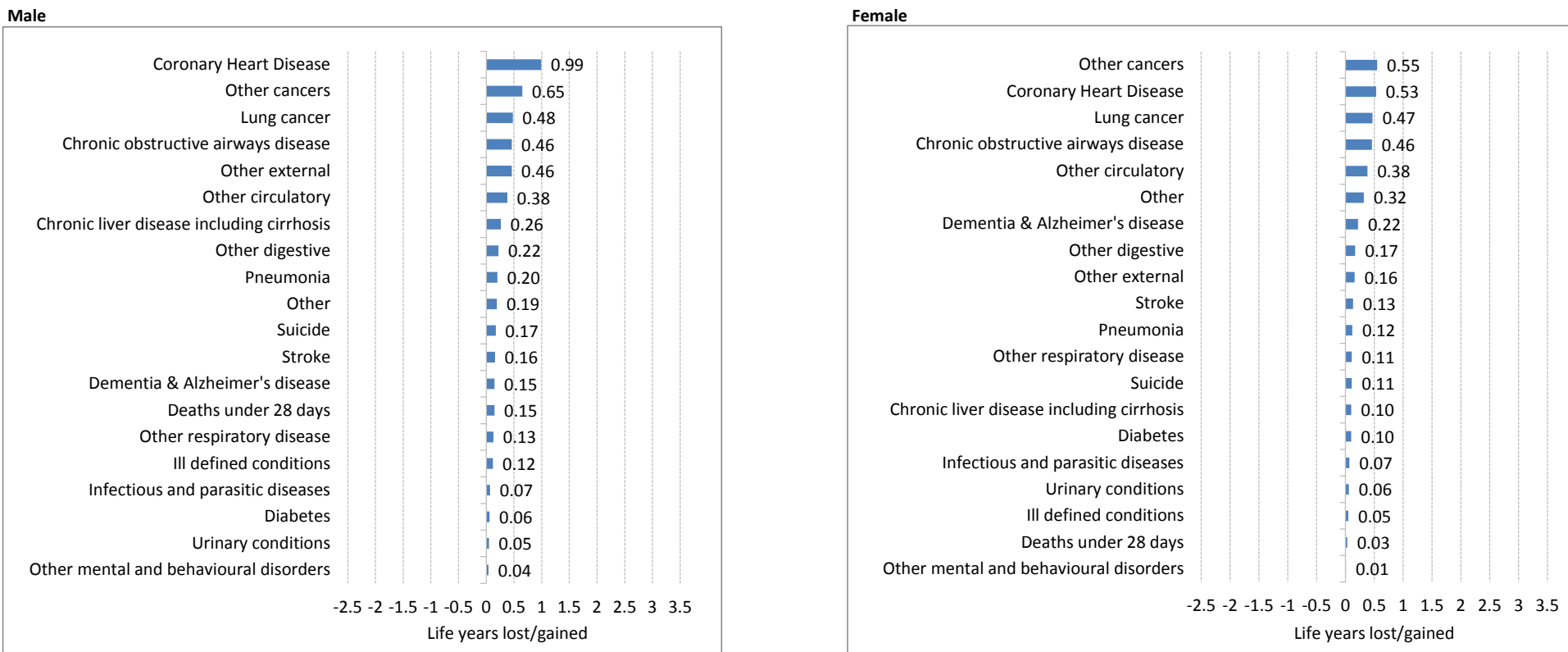
The figures have not been calculated as life expectancy in the most deprived quintile is higher than life expectancy in the least deprived quintile

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 of England most deprived quintile had the same mortality rates as East of England 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 of England most deprived quintile had the same mortality rates as East of England 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	2,583	1,143	0.99	1,836	676	0.53
	Stroke	853	231	0.16	1,230	141	0.13
	Other circulatory	1,218	450	0.38	1,645	463	0.38
Cancer	Lung cancer	1,177	603	0.48	999	547	0.47
	Other cancers	3,622	714	0.65	3,318	535	0.55
Respiratory	Pneumonia	776	245	0.20	976	168	0.12
	Chronic obstructive airways disease	1,090	667	0.46	974	603	0.46
	Other respiratory disease	499	158	0.13	544	176	0.11
Digestive	Chronic liver disease including cirrhosis	313	222	0.26	154	77	0.10
	Other digestive	553	255	0.22	644	174	0.17
External	Suicide	290	122	0.17	111	67	0.11
	Other external	613	325	0.46	420	121	0.16
Mental and behavioural	Dementia & Alzheimer's disease	970	263	0.15	2,025	417	0.22
	Other mental and behavioural disorders	41	32	0.04	25	8	0.01
Other	Infectious and parasitic diseases	153	68	0.07	196	82	0.07
	Urinary conditions	227	74	0.05	346	85	0.06
	Ill defined conditions	197	100	0.12	458	28	0.05
	Diabetes	173	73	0.06	251	139	0.10
	Other	824	171	0.19	981	256	0.32
< 28 days	Deaths under 28 days	101	55	0.15	79	9	0.03
Total		16,273			17,212		

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.

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