

THE SEGMENT TOOL

SEGMENTING LIFE EXPECTANCY GAPS BY CAUSE OF DEATH

Updated May 2016



Key results for Yorkshire and the Humber

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 Yorkshire and the Humber 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 Yorkshire and the Humber

Information on inequalities in life expectancy between Yorkshire and the Humber and England

	Male	Female
Life expectancy at birth in Yorkshire and the Humber, 2012-2014	78.7	82.4
Life expectancy at birth in England, 2012-2014	79.6	83.2
Absolute gap in life expectancy between Yorkshire and the Humber and England in years*	-0.9	-0.8

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

Information on inequalities in life expectancy within Yorkshire and the Humber

	Male	Female
Life expectancy at birth in the most deprived quintile of Yorkshire and the Humber, 2012-2014	74.3	78.9
Life expectancy at birth in the least deprived quintile of Yorkshire and the Humber, 2012-2014	82.2	85.4
Absolute gap in life expectancy between most deprived and least deprived areas within Yorkshire and the Humber*	-7.9	-6.5

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

Sources:

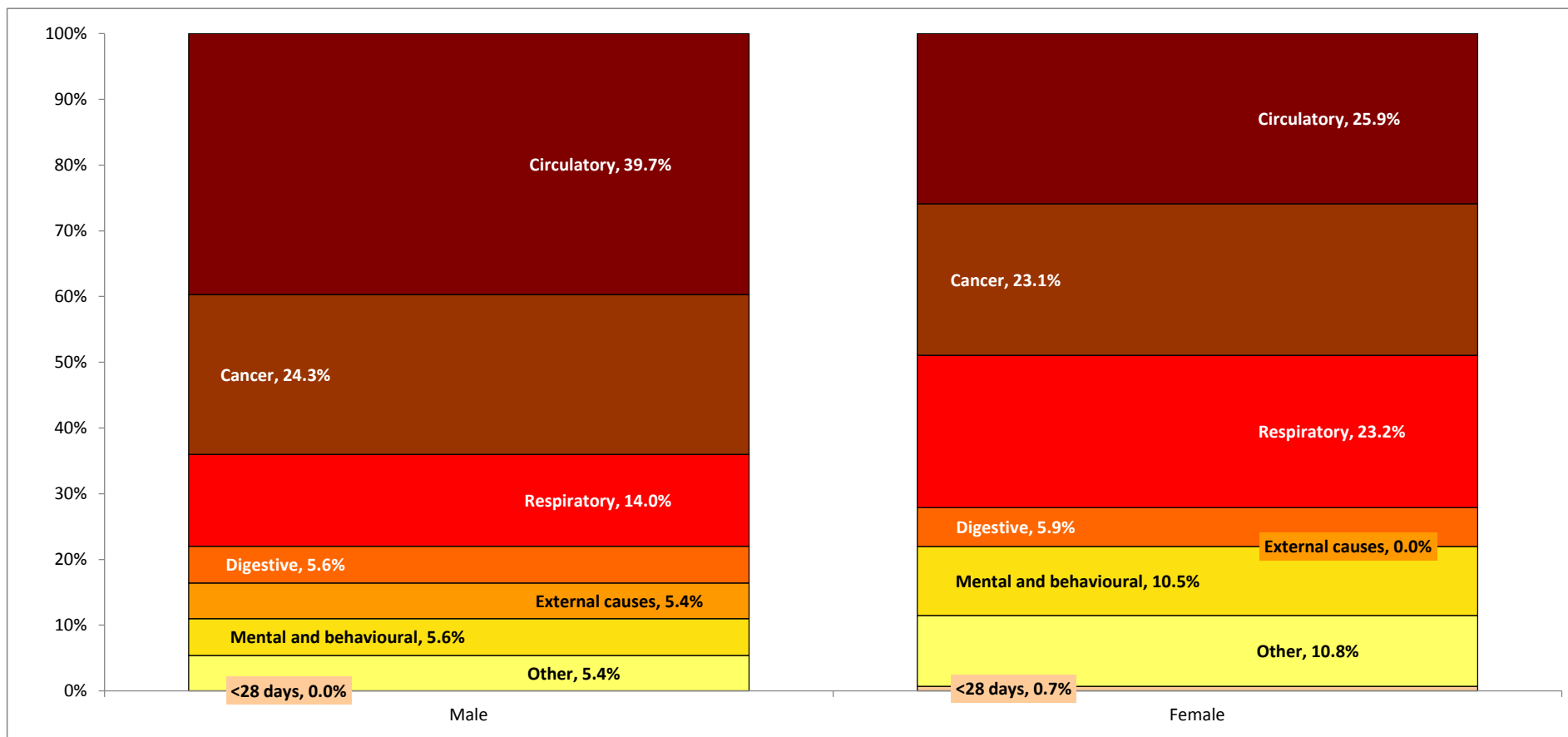
- Life expectancies for regions - Office for National Statistics (ONS), life expectancy at birth for local areas in England and Wales
- Life Expectancies for deprivation quintiles within each local authority - Analysis by Public Health England Epidemiology and Surveillance team based on ONS death registration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

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Between area inequalities: Life expectancy gap between Yorkshire and the Humber as a whole and England

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



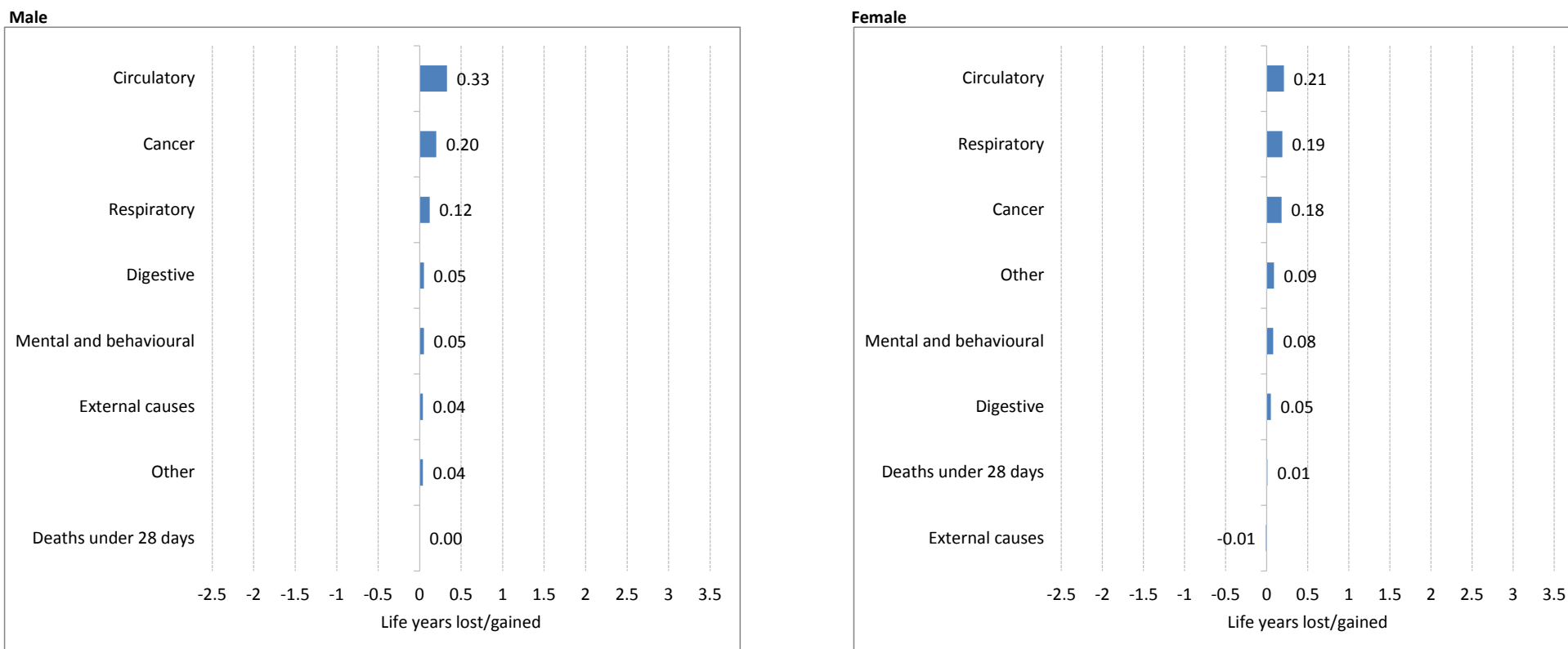
Footnote: Circulatory diseases includes coronary heart disease and stroke. Respiratory diseases includes flu, pneumonia and chronic obstructive airways disease. Digestive diseases includes alcohol-related conditions such as chronic liver disease and cirrhosis. External causes include deaths from injury, 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 Yorkshire and the Humber 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.

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 1: Breakdown of the life expectancy gap between Yorkshire and the Humber 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	21,117	2,157	0.33	39.7	20,751	1,535	0.21	25.9
Cancer	22,311	1,258	0.20	24.3	19,878	1,030	0.18	23.1
Respiratory	9,865	794	0.12	14.0	11,200	1,191	0.19	23.2
Digestive	3,451	182	0.05	5.6	3,739	277	0.05	5.9
External causes	3,171	-45	0.04	5.4	1,761	-255	-0.01	..
Mental and behavioural	4,879	336	0.05	5.6	9,949	691	0.08	10.5
Other	6,938	267	0.04	5.4	9,575	628	0.09	10.8
Deaths under 28 days	300	-2	0.00	..	245	6	0.01	0.7
Total	72,032			100	77,097			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

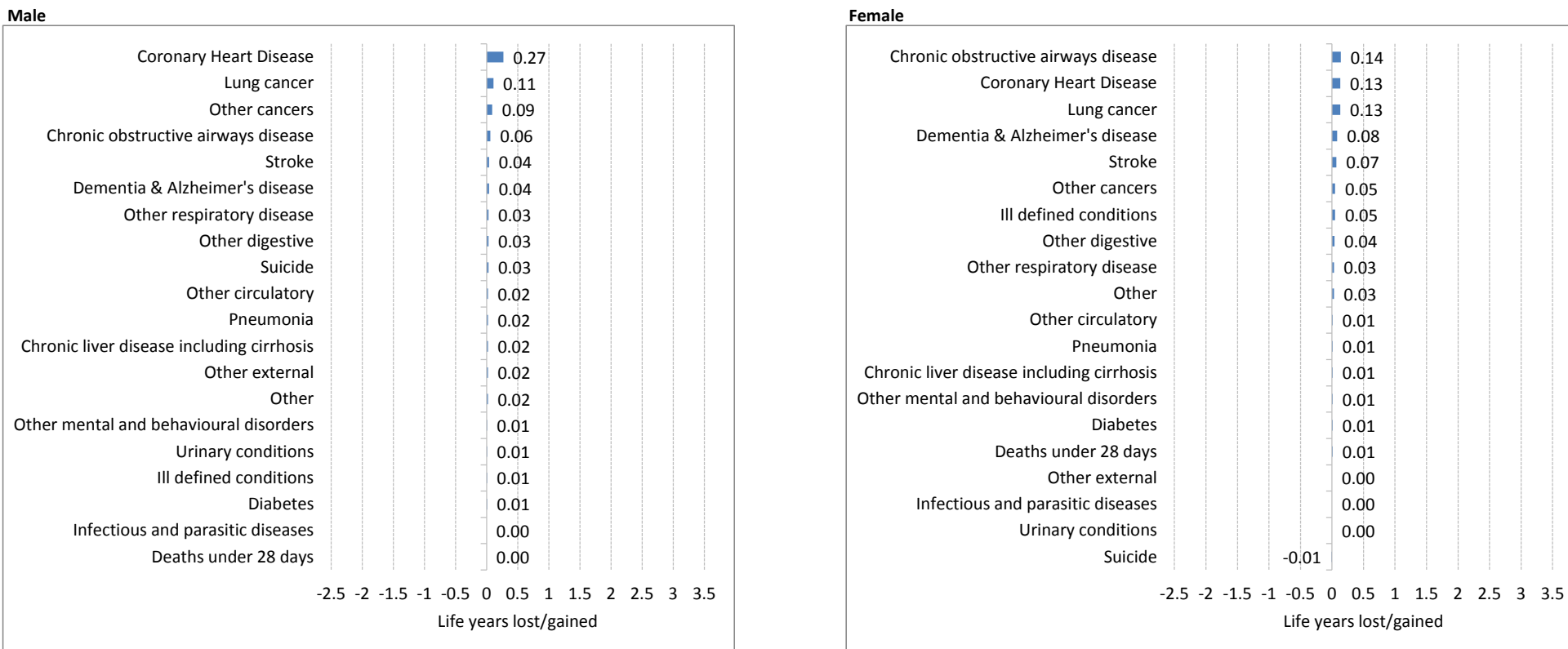
++ The figures have not been calculated as life expectancy is higher than England

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 Yorkshire and the Humber 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 Yorkshire and the Humber 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	11,867	1,721	0.27	8,008	963	0.13
	Stroke	4,205	325	0.04	6,396	590	0.07
	Other circulatory	5,051	117	0.02	6,381	-18	0.01
Cancer	Lung cancer	5,441	733	0.11	4,694	820	0.13
	Other cancers	16,870	525	0.09	15,184	210	0.05
Respiratory	Pneumonia	3,339	115	0.02	4,227	9	0.01
	Chronic obstructive airways disease	4,217	434	0.06	4,540	920	0.14
	Other respiratory disease	2,240	227	0.03	2,349	238	0.03
Digestive	Chronic liver disease including cirrhosis	1,145	41	0.02	621	3	0.01
	Other digestive	2,278	140	0.03	3,118	274	0.04
External	Suicide	1,143	69	0.03	292	-28	-0.01
	Other external	2,028	-114	0.02	1,481	-225	0.00
Mental and behavioural	Dementia & Alzheimer's disease	4,716	319	0.04	9,824	671	0.08
	Other mental and behavioural disorders	164	17	0.01	123	20	0.01
Other	Infectious and parasitic diseases	640	-18	0.00	735	-47	0.00
	Urinary conditions	986	40	0.01	1,359	-18	0.00
	Ill defined conditions	925	127	0.01	2,701	473	0.05
	Diabetes	718	21	0.01	802	60	0.01
	Other	3,664	100	0.02	3,938	167	0.03
< 28 days	Deaths under 28 days	300	-2	0.00	245	6	0.01
Total		71,936			77,017		

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.

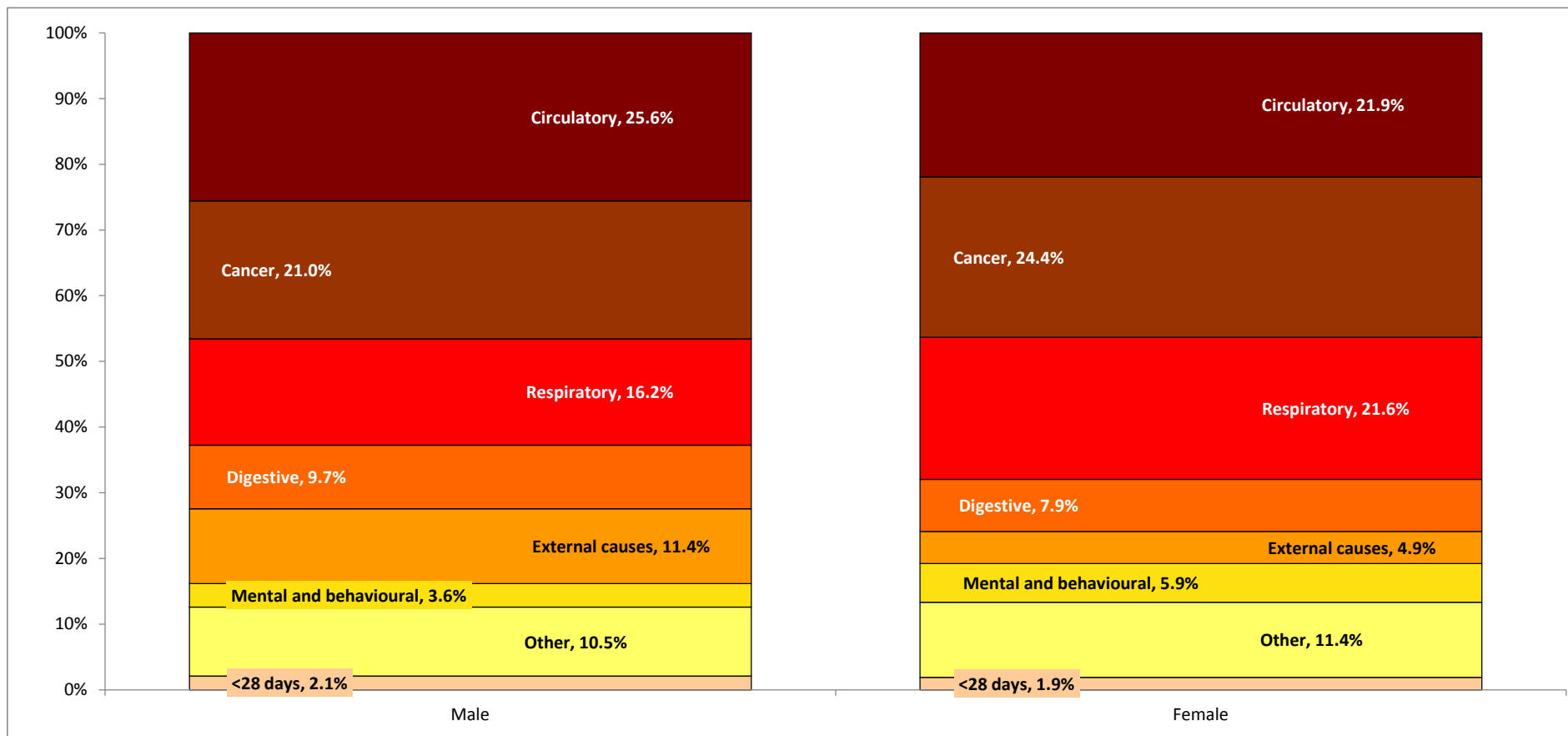
Analysis by Public Health England's (PHE) Epidemiology and Surveillance team based on ONS death registration data, and mid year population estimates.

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

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



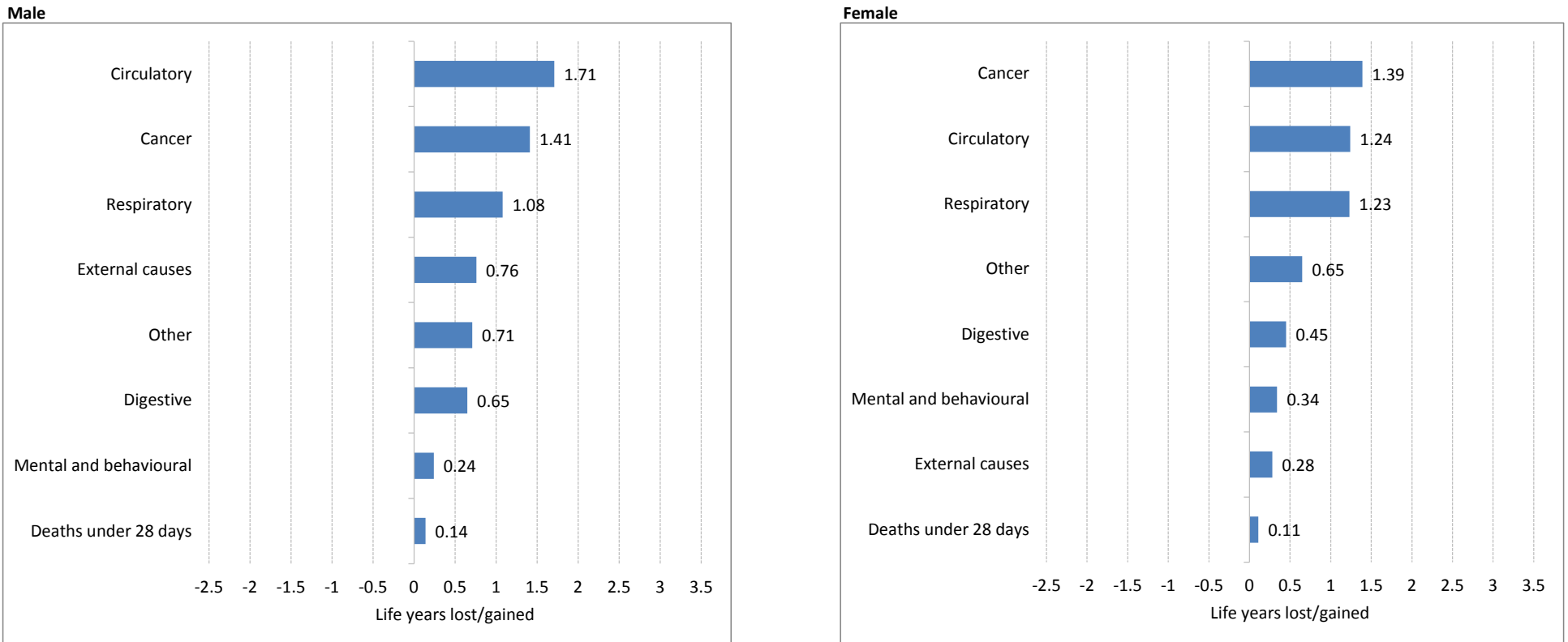
Footnote: Circulatory diseases includes coronary heart disease and stroke. Respiratory diseases includes flu, pneumonia and chronic obstructive airways disease. Digestive diseases includes alcohol-related conditions such as chronic liver disease and cirrhosis. External causes include deaths from injury, 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 Yorkshire and the Humber most deprived quintile had the same mortality rates as Yorkshire and the Humber 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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Table 3: Breakdown of the life expectancy gap between Yorkshire and the Humber most deprived quintile and Yorkshire and the Humber 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	4,198	1,768	1.71	25.6	3,982	1,247	1.24	21.9
Cancer	4,281	1,550	1.41	21.0	3,830	1,283	1.39	24.4
Respiratory	2,293	1,353	1.08	16.2	2,584	1,398	1.23	21.6
Digestive	912	586	0.65	9.7	818	416	0.45	7.9
External causes	882	498	0.76	11.4	395	161	0.28	4.9
Mental and behavioural	934	369	0.24	3.6	1,803	566	0.34	5.9
Other	1,455	624	0.71	10.5	1,799	556	0.65	11.4
Deaths under 28 days	113	53	0.14	2.1	84	39	0.11	1.9
Total	15,068			100	15,294			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

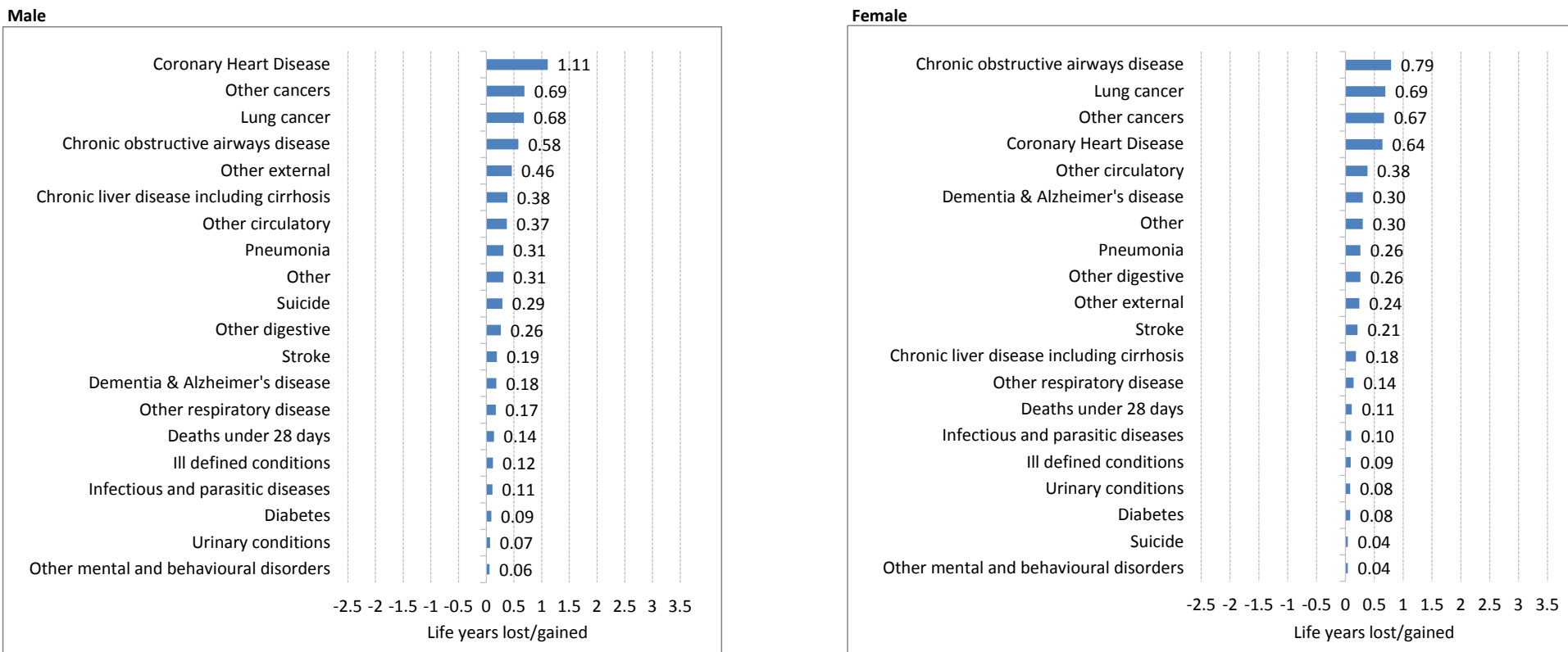
The figures have not been calculated as life expectancy in the most deprived quintile is higher than life expectancy in the least deprived quintile

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 Yorkshire and the Humber most deprived quintile had the same mortality rates as Yorkshire and the Humber 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 Yorkshire and the Humber most deprived quintile had the same mortality rates as Yorkshire and the Humber 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	2,501	1,192	1.11	1,675	715	0.64
	Stroke	724	196	0.19	1,064	122	0.21
	Other circulatory	974	379	0.37	1,250	412	0.38
Cancer	Lung cancer	1,287	805	0.68	1,157	707	0.69
	Other cancers	2,994	745	0.69	2,673	576	0.67
Respiratory	Pneumonia	709	373	0.31	856	342	0.26
	Chronic obstructive airways disease	1,093	753	0.58	1,270	919	0.79
	Other respiratory disease	478	226	0.17	451	147	0.14
Digestive	Chronic liver disease including cirrhosis	390	305	0.38	185	130	0.18
	Other digestive	513	274	0.26	633	286	0.26
External	Suicide	321	184	0.29	57	22	0.04
	Other external	561	313	0.46	343	144	0.24
Mental and behavioural	Dementia & Alzheimer's disease	866	320	0.18	1,761	540	0.30
	Other mental and behavioural disorders	68	50	0.06	41	25	0.04
Other	Infectious and parasitic diseases	169	99	0.11	163	83	0.10
	Urinary conditions	209	96	0.07	275	98	0.08
	Ill defined conditions	204	104	0.12	462	113	0.09
	Diabetes	165	88	0.09	170	81	0.08
	Other	706	236	0.31	724	182	0.30
< 28 days	Deaths under 28 days	113	53	0.14	84	39	0.11
Total		15,046			15,293		

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