

# THE SEGMENT TOOL

## SEGMENTING LIFE EXPECTANCY GAPS BY CAUSE OF DEATH

Updated May 2016



### Key results for Wirral (E08000015)

#### Introduction

This 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.

The tool provides data tables and charts showing the breakdown of the life expectancy gap in 2012-14 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 only available where the most deprived quintile has a lower life expectancy than the least deprived quintile.

This document presents key results for Wirral. 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 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 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 "..".

# THE SEGMENT TOOL

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### Contextual information for Wirral

#### Information on inequalities in life expectancy between Wirral and England

	Male	Female
Life expectancy at birth in Wirral, 2012-2014	78.0	82.2
Life expectancy at birth in England, 2012-2014	79.6	83.2
Absolute gap in life expectancy between Wirral and England in years*	-1.6	-1.0

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

#### Information on inequalities in life expectancy within Wirral

	Male	Female
Life expectancy at birth in the most deprived quintile of Wirral, 2012-2014	71.8	77.2
Life expectancy at birth in the least deprived quintile of Wirral, 2012-2014	82.3	86.1
Absolute gap in life expectancy between most deprived and least deprived areas within Wirral	-10.5	-8.9

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

#### Sources:

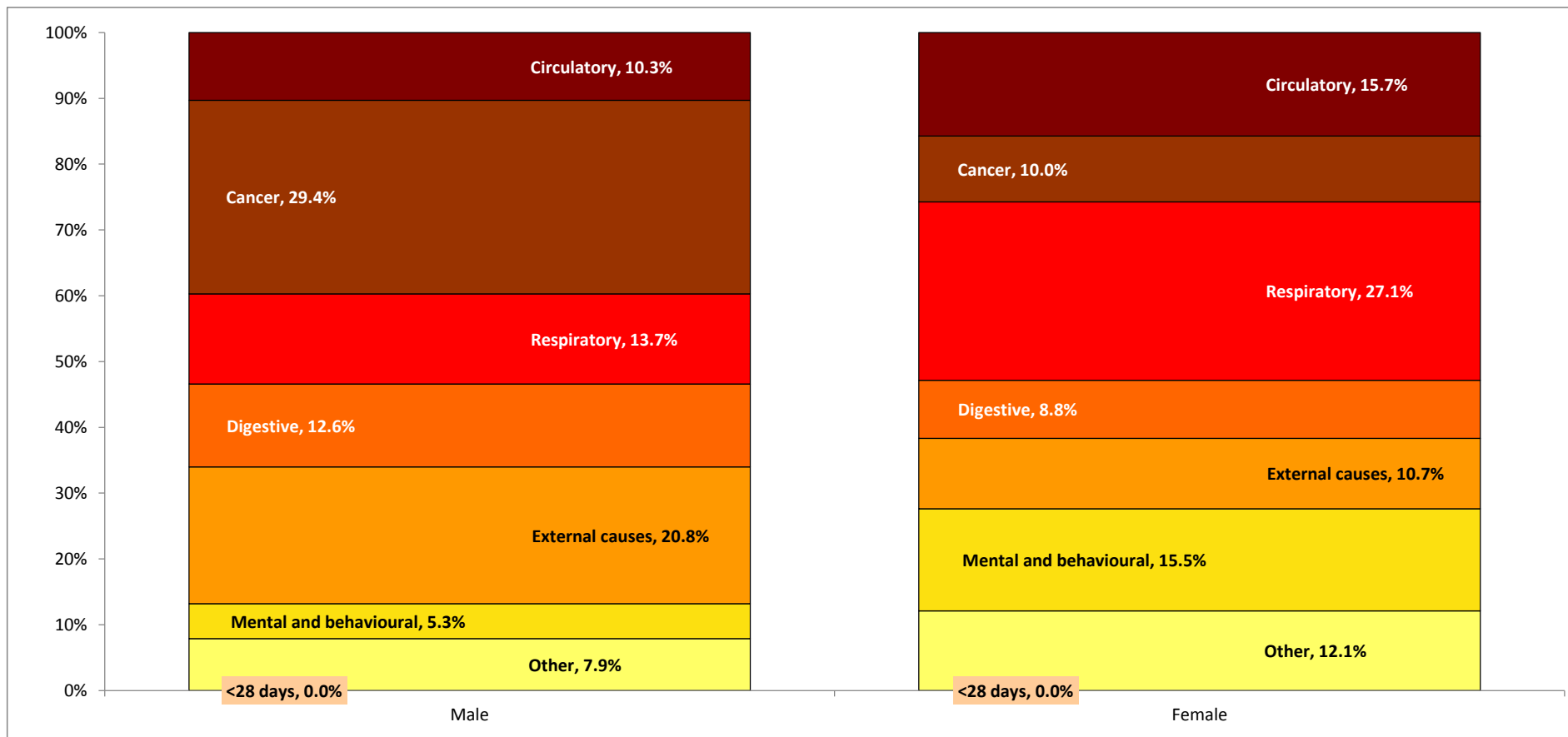
- Life expectancies for local authorities - Office for National Statistics (ONS), life expectancy at birth for local areas in England and Wales
- Life Expectancies for deprivation quintiles within each local authority - Analysis by Public Health England Epidemiology and Surveillance team based on ONS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

# THE SEGMENT TOOL

## SEGMENTING LIFE EXPECTANCY GAPS BY CAUSE OF DEATH

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

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



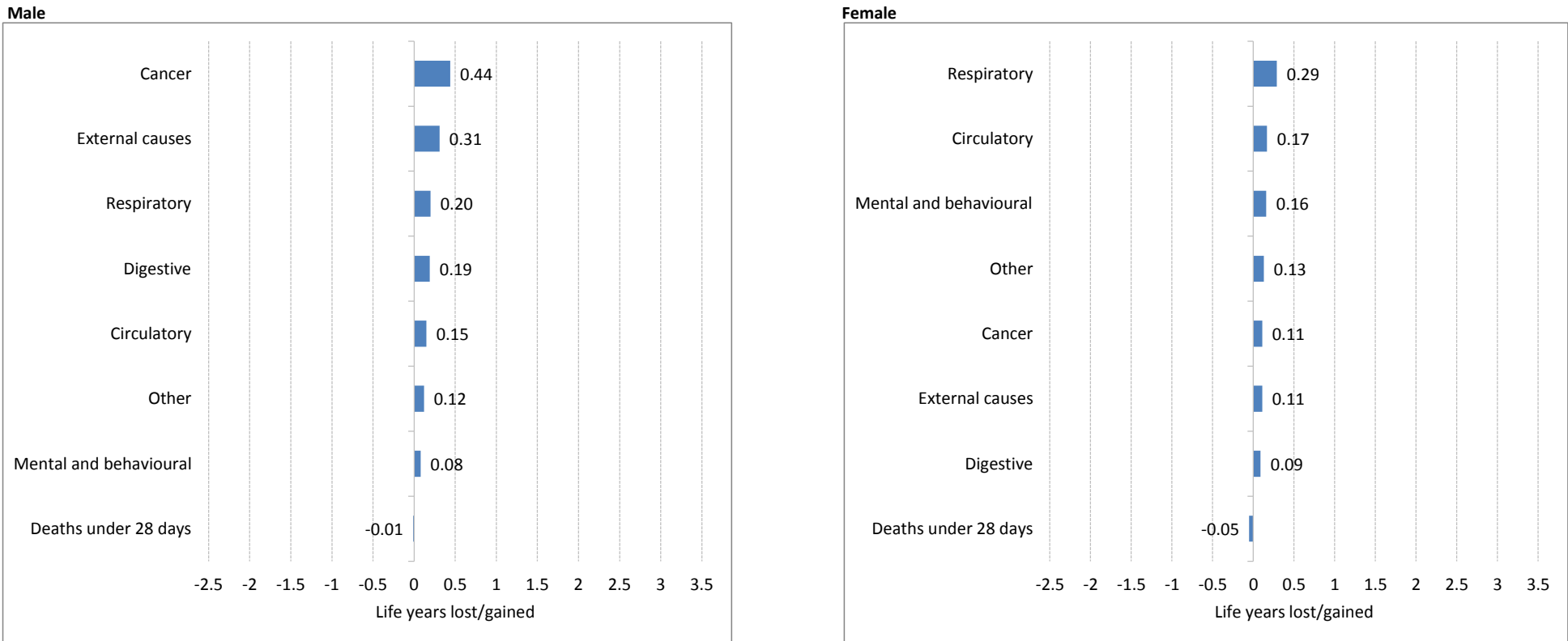
Footnote: Circulatory diseases includes coronary heart disease and stroke. Respiratory diseases includes flu, pneumonia and chronic obstructive airways disease. Digestive diseases includes alcohol-related conditions such as chronic liver disease and cirrhosis. External causes include deaths from injury,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

Analysis by Public Health England Epidemiology and Surveillance team based on ONS death registration data, and mid year population estimates

# THE SEGMENT TOOL

## SEGMENTING LIFE EXPECTANCY GAPS BY CAUSE OF DEATH

Chart 2: Bar chart showing life expectancy years gained or lost if Wirral 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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## SEGMENTING LIFE EXPECTANCY GAPS BY CAUSE OF DEATH

Table 1: Breakdown of the life expectancy gap between Wirral 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 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	1,342	41	0.15	10.3	1,468	69	0.17	15.7
Cancer	1,632	201	0.44	29.4	1,390	66	0.11	10.0
Respiratory	719	90	0.20	13.7	859	131	0.29	27.1
Digestive	259	41	0.19	12.6	254	7	0.09	8.8
External causes	258	61	0.31	20.8	178	39	0.11	10.7
Mental and behavioural	375	55	0.08	5.3	790	105	0.16	15.5
Other	495	42	0.12	7.9	679	34	0.13	12.1
Deaths under 28 days	17	-1	-0.01	..	10	-3	-0.05	..
Total	5,098			100	5,628			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 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

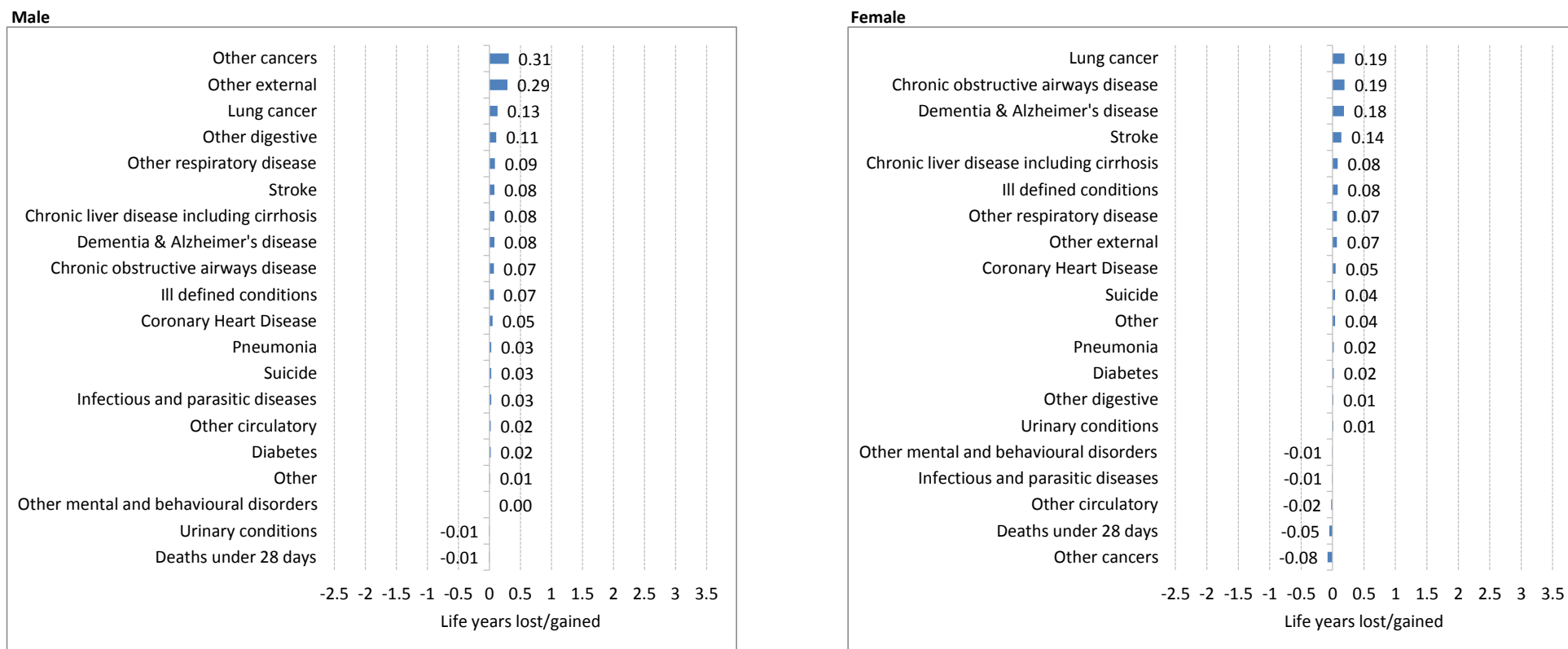
++ The figures have not been calculated as life expectancy is higher than England

Analysis by Public Health England Epidemiology and Surveillance team based on ONS death registration data, and mid year population estimates

# THE SEGMENT TOOL

## SEGMENTING LIFE EXPECTANCY GAPS BY CAUSE OF DEATH

Chart 3: Bar chart showing life expectancy years gained or lost if Wirral 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 Epidemiology and Surveillance team based on ONS death registration data, and mid year population estimates

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## SEGMENTING LIFE EXPECTANCY GAPS BY CAUSE OF DEATH

**Table 2: Table showing life expectancy years gained or lost if Wirral 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 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	711	17	0.05	538	27	0.05
	Stroke	294	25	0.08	494	70	0.14
	Other circulatory	339	0	0.02	438	-28	-0.02
Cancer	Lung cancer	381	62	0.13	354	82	0.19
	Other cancers	1,251	140	0.31	1,036	-16	-0.08
Respiratory	Pneumonia	233	8	0.03	312	2	0.02
	Chronic obstructive airways disease	286	25	0.07	348	89	0.19
	Other respiratory disease	187	48	0.09	189	36	0.07
Digestive	Chronic liver disease including cirrhosis	78	8	0.08	61	20	0.08
	Other digestive	178	32	0.11	193	-13	0.01
External	Suicide	59	-4	0.03	24	4	0.04
	Other external	199	65	0.29	155	36	0.07
Mental and behavioural	Dementia & Alzheimer's disease	369	58	0.08	788	110	0.18
	Other mental and behavioural disorders	6	-3	0.00	2	-5	-0.01
Other	Infectious and parasitic diseases	46	2	0.03	37	-19	-0.01
	Urinary conditions	58	-9	-0.01	104	3	0.01
	Ill defined conditions	96	42	0.07	219	53	0.08
	Diabetes	58	11	0.02	63	9	0.02
	Other	236	-4	0.01	254	-12	0.04
< 28 days	Deaths under 28 days	17	-1	-0.01	10	-3	-0.05
Total		5,082			5,620		

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.

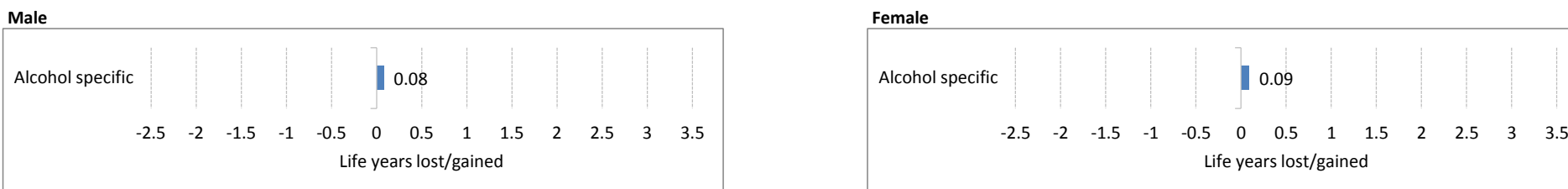
\* A positive figure indicates that life expectancy years would be gained if the local authority had the same mortality rate as England as a whole (ie the mortality rate in the local authority for the cause is higher than England as a whole). A negative figure indicates that life expectancy years would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

Analysis by Public Health England Epidemiology and Surveillance team based on ONS death registration data, and mid year population estimates

# THE SEGMENT TOOL

## SEGMENTING LIFE EXPECTANCY GAPS BY CAUSE OF DEATH

Chart 4: Bar chart showing life expectancy years gained or lost if Wirral as a whole had the same mortality rates as England as a whole, alcohol specific deaths, 2012-2014



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

Table 3: Table showing life expectancy years gained or lost if Wirral as a whole had the same mortality rates as England as a whole, alcohol specific deaths and all other causes of death, 2012-2014

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*
Alcohol specific	78	13	0.08	54	20	0.09
All other causes of death	5,020	515	1.44	5,570	426	0.94
<b>Total</b>	<b>5,098</b>			<b>5,624</b>		

\* 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 Epidemiology and Surveillance team based on ONS death registration data, and mid year population estimates

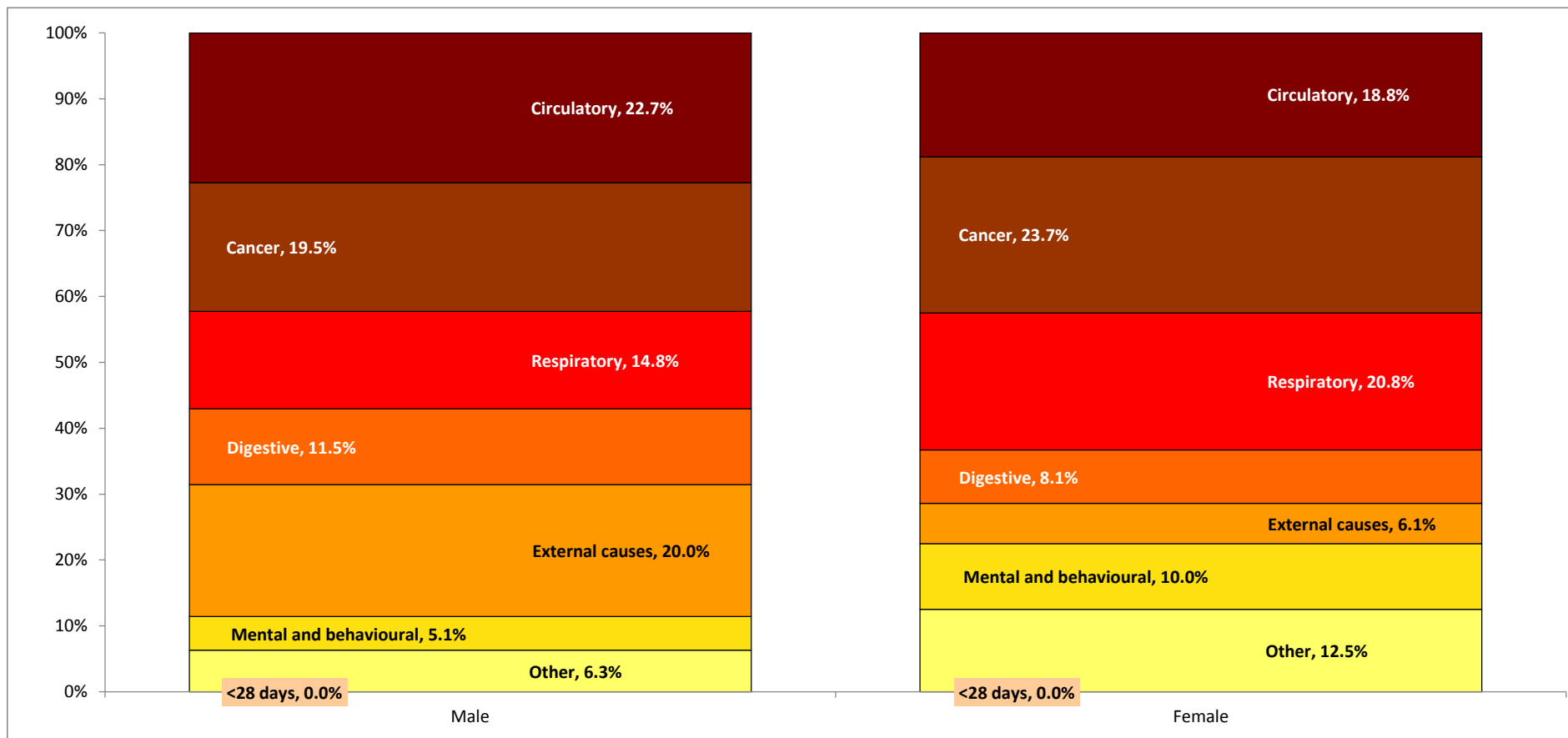


# THE SEGMENT TOOL

## SEGMENTING LIFE EXPECTANCY GAPS BY CAUSE OF DEATH

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

Chart 5: Scarf chart showing the breakdown of the life expectancy gap between Wirral most deprived quintile and Wirral least deprived quintile, by broad cause of death, 2012-2014



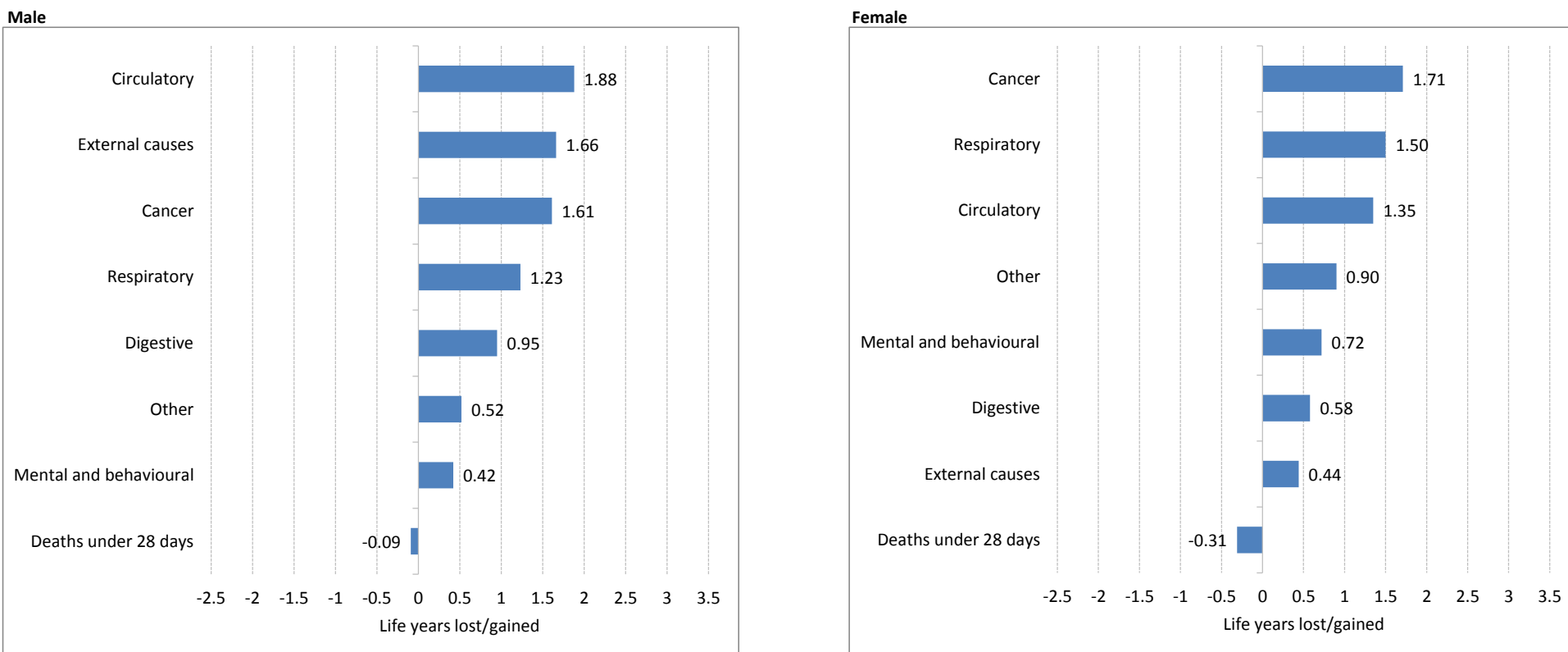
Footnote: Circulatory diseases includes coronary heart disease and stroke. Respiratory diseases includes flu, pneumonia and chronic obstructive airways disease. Digestive diseases includes alcohol-related conditions such as chronic liver disease and cirrhosis. External causes include deaths from injury,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

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

# THE SEGMENT TOOL

## SEGMENTING LIFE EXPECTANCY GAPS BY CAUSE OF DEATH

Chart 6: Bar chart showing life expectancy years gained or lost if Wirral most deprived quintile had the same mortality rates as Wirral 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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## SEGMENTING LIFE EXPECTANCY GAPS BY CAUSE OF DEATH

Table 4: Breakdown of the life expectancy gap between Wirral most deprived quintile and Wirral 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	298	160	1.88	22.7	245	95	1.35	18.8
Cancer	336	146	1.61	19.5	287	128	1.71	23.7
Respiratory	168	111	1.23	14.8	203	137	1.50	20.8
Digestive	75	55	0.95	11.5	58	33	0.58	8.1
External causes	95	69	1.66	20.0	34	16	0.44	6.1
Mental and behavioural	91	58	0.42	5.1	157	93	0.72	10.0
Other	105	50	0.52	6.3	137	75	0.90	12.5
Deaths under 28 days	5	-2	-0.09	..	1	-6	-0.31	..
Total	1,173			100	1,123			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 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

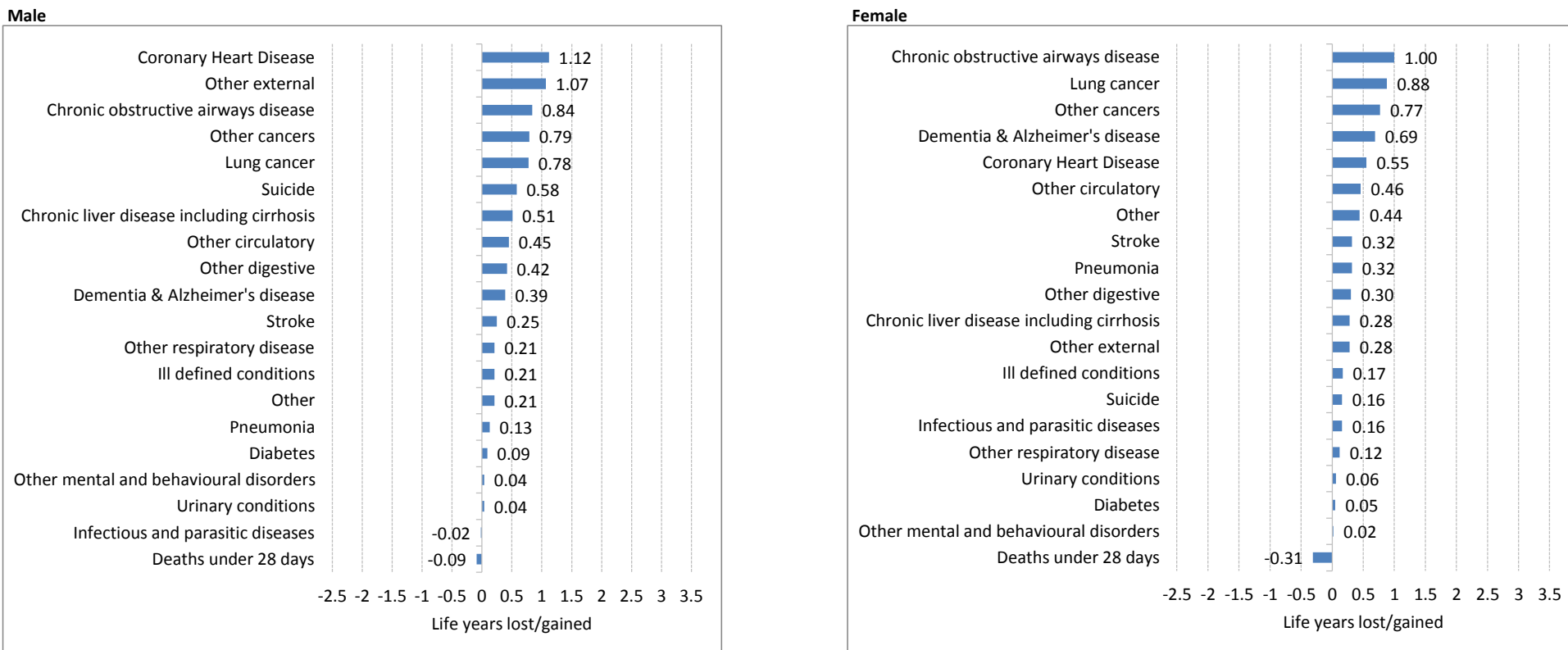
## The figures have not been calculated as life expectancy in the most deprived quintile is higher than life expectancy in the least deprived quintile

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

# THE SEGMENT TOOL

## SEGMENTING LIFE EXPECTANCY GAPS BY CAUSE OF DEATH

Chart 7: Bar chart showing life expectancy years gained or lost if Wirral most deprived quintile had the same mortality rates as Wirral 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 Epidemiology and Surveillance team based on ONS death registration data, and mid year population estimates, and DCLG Index of Multiple Deprivation, 2015

# THE SEGMENT TOOL

## SEGMENTING LIFE EXPECTANCY GAPS BY CAUSE OF DEATH

Table 5: Table showing life expectancy years gained or lost if Wirral most deprived quintile had the same mortality rates as Wirral 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	174	102	1.12	98	50	0.55
	Stroke	55	27	0.25	71	16	0.32
	Other circulatory	68	31	0.45	77	30	0.46
Cancer	Lung cancer	106	77	0.78	95	71	0.88
	Other cancers	230	69	0.79	192	56	0.77
Respiratory	Pneumonia	30	6	0.13	64	37	0.32
	Chronic obstructive airways disease	97	81	0.84	115	92	1.00
	Other respiratory disease	37	19	0.21	25	10	0.12
Digestive	Chronic liver disease including cirrhosis	33	29	0.51	18	14	0.28
	Other digestive	41	26	0.42	39	20	0.30
External	Suicide	26	21	0.58	7	6	0.16
	Other external	69	48	1.07	28	10	0.28
Mental and behavioural	Dementia & Alzheimer's disease	89	58	0.39	156	92	0.69
	Other mental and behavioural disorders	2	1	0.04	1	1	0.02
Other	Infectious and parasitic diseases	8	3	-0.02	13	11	0.16
	Urinary conditions	8	4	0.04	16	5	0.06
	Ill defined conditions	25	16	0.21	32	16	0.17
	Diabetes	13	10	0.09	17	12	0.05
	Other	51	18	0.21	58	31	0.44
< 28 days	Deaths under 28 days	5	-2	-0.09	1	-6	-0.31
Total		1,167			1,125		

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.

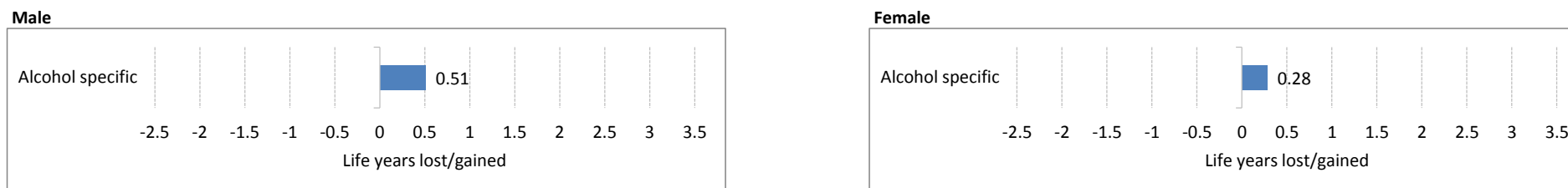
\* A positive figure indicates that life expectancy years would be gained if the most deprived quintile of the local authority had the same mortality rate as the least deprived quintile (ie the mortality rate in the most deprived quintile for the cause is higher than that of the least deprived quintile). 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 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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## SEGMENTING LIFE EXPECTANCY GAPS BY CAUSE OF DEATH

Chart 8: Bar chart showing life expectancy years gained or lost if Wirral most deprived quintile had the same mortality rates as Wirral least deprived quintile, alcohol specific deaths, 2012-2014



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

Table 6: Table showing life expectancy years gained or lost if Wirral most deprived quintile had the same mortality rates as Wirral least deprived quintile, alcohol specific deaths and all other causes 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*	Number of deaths in most deprived quintile	Number of excess deaths in most deprived quintile	Number of years of life gained/lost*
Alcohol specific	34	28	0.51	17	13	0.28
All other causes of death	1,138	619	9.79	1,106	559	8.59
<b>Total</b>	<b>1,172</b>			<b>1,123</b>		

\* 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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