

## LEICESTERSHIRE COUNTY & RUTLAND

### DIRECTORATE OF PUBLIC HEALTH

#### Premature Mortality Statistics- Cancer

#### 1 Key Findings

##### Premature Mortality from Cancers

- Leicestershire County Council (LCC) has significantly lower under-75 cancer mortality rates compared to England; 98.0 deaths per 100,000 population in 2009-11 compared to 106.7 deaths per 100,000.
- Compared to England, LCC has significantly lower preventable deaths from cancer with 53.8 per 100,000 population compared to 61.9 deaths per 100,000 for England.
- The cancers mortality rates for 2009-2011 accounted for 2301 deaths (on average 767 per year) due to cancer in under-75 years in LCC. Of the cancer deaths in LCC, 1264 (421 per year) were deemed preventable.
- LCC is similar to its peer local authorities on the cancer mortality, except for Surrey which has a lower cancer mortality rate. LCC is similar to all its peer local authorities for preventable cancer mortality. LCC is within the top 10-25% of local authorities for performance for both indicators.
- Rutland Unitary Authority (RUA) has a lower under-75 cancer mortality rate than England with 89.9 deaths per 100,000 population in 2009-11 compared to 106.7 deaths per 100,000, respectively.
- RUA has significantly lower preventable deaths from cancer than England at 46.9 per 100,000 population compared to 61.9 deaths per 100,000.
- The RUA cancers mortality rates for 2009-2011 accounted for 132 deaths (on average 44 per year) due to cancer in under-75 years. Of the cancer deaths in Rutland, 68 deaths (22 per year) were deemed preventable.
- RUA is similar to its peer local authorities on cancer mortality and preventable cancer mortality indicators. RUA is within the top 10% of local authorities for performance for both indicators.

##### Specific Cancers

- The age-standardised mortality rates for colorectal and lung cancers in under-75s is significantly lower for LCC compared to England and the East Midlands region.
- Under-75 breast and oesophageal cancers mortality in LCC is lower than England and the East Midlands, but this is not statistically significant.
- Rutland has significantly lower lung cancer mortality in the under-75s compared to England and the East Midlands.
- The mortality for breast, colorectal and oesophageal cancers are lower for RUA compared to England, the East Midlands and LCC, but these are not statistically significant.

##### Cancer Deaths at Home

- The rate of colorectal and lung cancer deaths at home is significantly higher for LCC compared to England and the East Midlands region.
- RUA has a significantly higher rate of colorectal cancer deaths at home compared to England and the East Midlands. This rate is higher compared to Leicestershire, but this is not statistically significant.

N.B. Preventable mortality is defined as deaths that are considered preventable if they could potentially have been avoided by public health actions.

## **2 Introduction**

Globally cancer is a leading cause of death, and the number of cancer deaths is expected to continue rising (WHO, 2013). Cancer is the generic term for a large group of diseases that feature the rapid creation of abnormal cells that grow beyond the typical boundaries. These diseases can affect any part of the body. In general, cancers can be reduced if detected and treated early. The types of cancer that cause the most deaths annually are lung, breast, colorectal, liver and stomach cancers (WHO, 2013). The main risk factors for the various types of cancers are tobacco use, lack of physical activity, alcohol use, low consumption of fruit and vegetables, and obesity. Despite screening programmes for some cancers and general awareness of signs and symptoms, cancer remains a cause of premature mortality<sup>1</sup>.

## **3 Premature mortality from cancer**

### **3.1.1 Regional comparison**

There are two cancer mortality indicators in the Public Health Outcome Framework (PHOF). These indicators are the under-75 mortality rate for all cancer deaths and the under-75 mortality rate for cancer considered preventable.

In 2009-2011 (Figure 1), Leicestershire County Council (LCC) had:

- Under-75 age standardised cancer mortality rates that were significantly lower than England; 98.0 deaths per 100,000 population compared to 106.7 deaths per 100,000, respectively.
- The under-75 mortality rate from cancers considered preventable are considerably lower than the rate for England. LCC had 53.8 preventable deaths per 100,000 population compared to 61.9 deaths per 100,000 for England.
- There were 2301 deaths due to cancers in the LCC population under-75 years of age, and 1264 of these deaths were deemed preventable.
- LCC has the second lowest rates in the East Midlands for both indicators.

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<sup>1</sup> Premature mortality is defined as deaths that are considered preventable if they could potentially have been avoided by public health actions. (ERPHO, 2012)).

**Figure 1: Public Health Outcome Framework Cancer Indicators**

Indicator	Time Period	England	Derby	Derbyshire CC	Leicester	Leicestershire CC	Lincolnshire CC	Northamptonshire CC	Nottingham	Nottinghamshire CC	Rutland
4.05i - Under 75 mortality rate from cancer (provisional)	2009 - 11	106.7	109.3	104.1	108.2	98.0	106.0	108.0	129.0	108.4	89.8
4.05ii - Under 75 mortality rate from cancer considered preventable (provisional)	2009 - 11	61.9	66.6	58.3	65.6	53.8	59.2	63.3	79.5	62.2	46.9

Red highlighting means worse than the England average.  
 Yellow highlighting means similar to the England average.  
 Green highlighting means better than the England average.  
 (Data source EMPHO, based ONS source data, 2012.)

In 2009-2011 (Figure 1), Rutland Unitary Authority (RUA) had:

- RUA had lower (but not statistically significant) under-75 age standardised cancer mortality rate than England with 89.8 deaths per 100,000 population compared to 106.7 deaths per 100,000.
- The under-75 mortality rate from cancers considered preventable is significantly lower than England with 46.9 deaths per 100,000 compared 61.9 deaths per 100,000 for England.
- There were 132 deaths (44 per year) due to cancers in the RUA population under-75 years of age, and 68 deaths (22 per year) were deemed to be preventable.
- For both indicators, RUA had the lowest rates in the East Midlands.

### 3.1.2 Comparison with peer local authorities

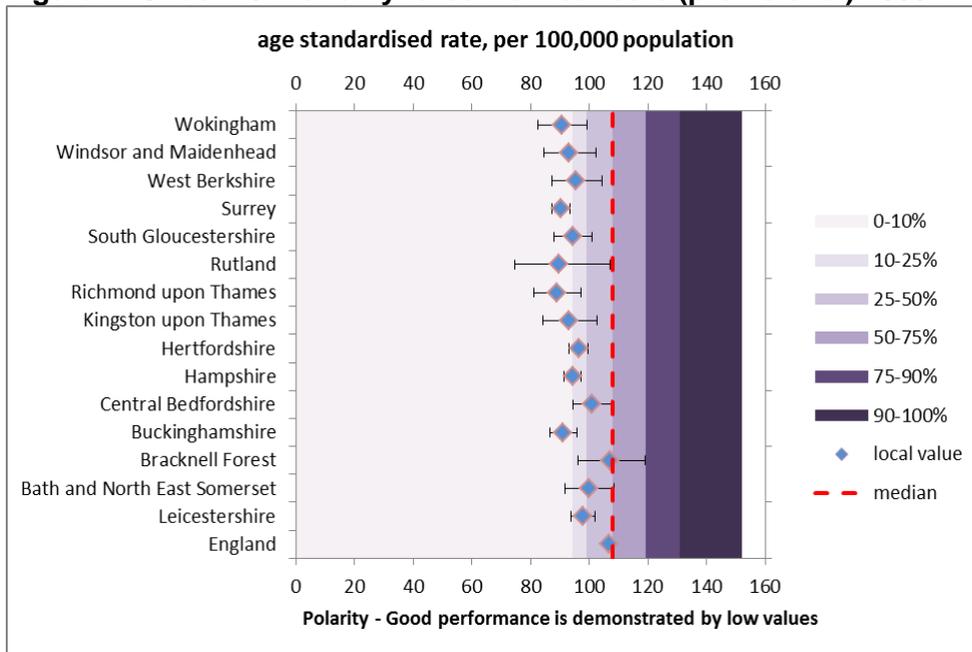
#### 3.1.2.1 Leicestershire

The mortality rates for LCC and its peer local authorities were compared<sup>2</sup> (Figures 2). For cancer mortality, LCC is within the 95% confidence limits of most of its peer local authorities (i.e. has similar mortality rates), except Surrey. Surrey has a significantly lower cancer mortality compared

<sup>2</sup> Peer Local authorities for LCC are Bath and North East Somerset, Bracknell Forest, Buckinghamshire, Central Bedfordshire, Hampshire, Hertfordshire, Kingston upon Thames, Richmond upon Thames, Rutland, South Gloucestershire, Surrey, West Berkshire, Windsor and Maidenhead, and Wokingham.

to Leicestershire. LCC is within the top 10-25% of all local authorities on cancer mortality performance (i.e. has low rates of cancer mortality).

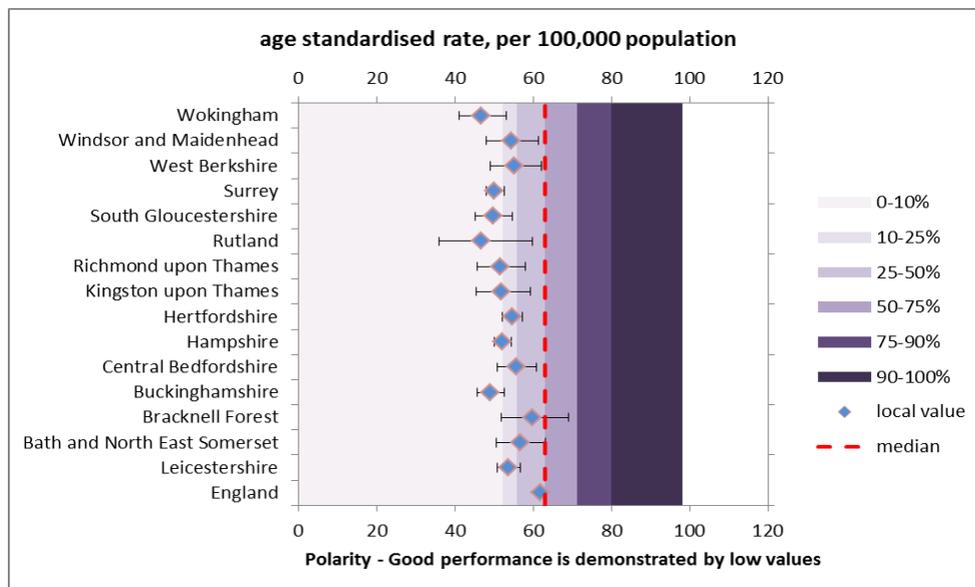
**Figure 2: Under 75 mortality rates from cancers (provisional) 2009-11**



Data source EMPHO, based ONS source data, 2012.

For preventable mortality from cancer in the under-75s (Figure 3), LCC is in general similar to its peer local authorities LCC and is within the top 10-25% of local authorities within England, indicating good performance in this area.

**Figure 3: Under 75 mortality rates from cancers considered preventable (provisional)**

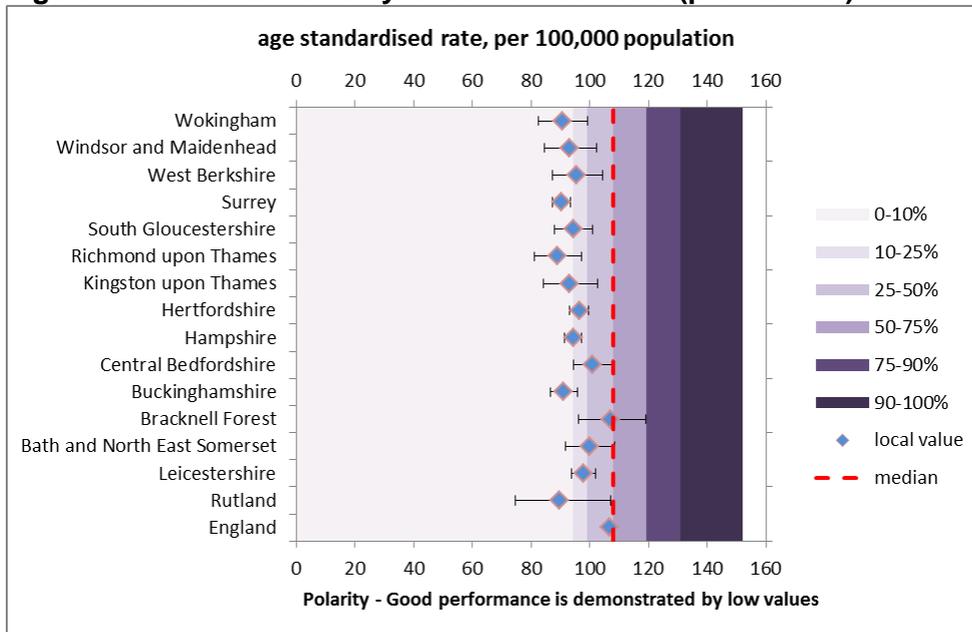


Data source EMPHO, based ONS source data 2012.

3.1.2.2 Rutland

When comparing RUA with other peer local authorities<sup>3</sup> (Figures 4), RUA has a similar under-75 cancer mortality rate to all its peer local authorities. RUA is within the top 10% of local authorities in England for cancer mortality performance (i.e. has low rates of cancer mortality).

**Figure 4: Under 75 mortality rates from cancers (provisional) 2009-11**

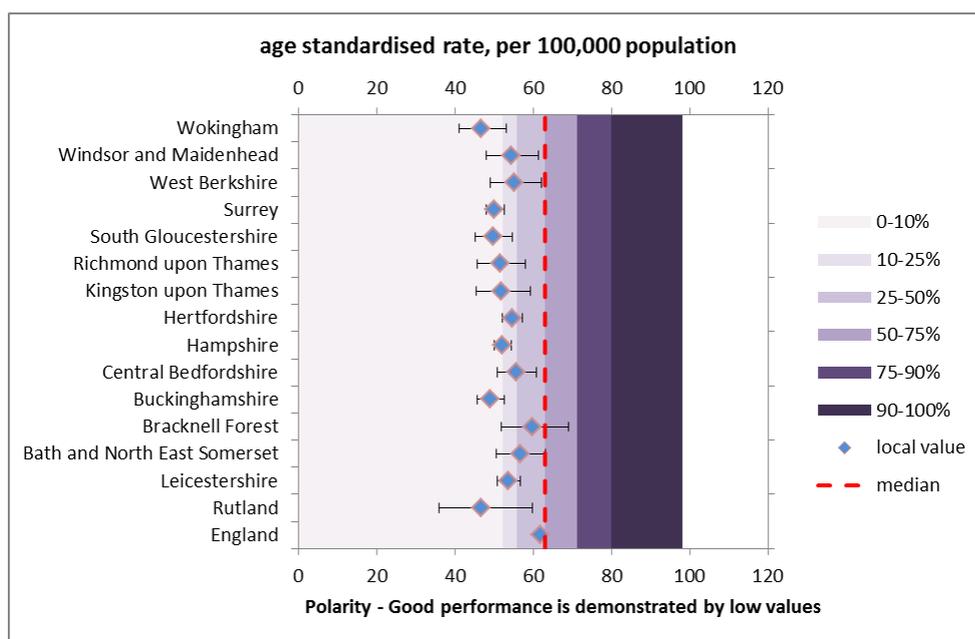


Data source EMPHO, based ONS source data, 2012.

For preventable mortality from cancer in the under-75s (Figure 5), RUA is in general similar to its peer local authorities. RUA is within the top 10% of local authorities within England, indicating good performance in this area.

<sup>3</sup> Peer Local authorities for RUA are Bath and North East Somerset, Bracknell Forest, Buckinghamshire, Central Bedfordshire, Hampshire, Hertfordshire, Kingston upon Thames, Leicestershire, Richmond upon Thames, South Gloucestershire, Surrey, West Berkshire, Windsor and Maidenhead, and Wokingham.

**Figure 5: Under 75 mortality rates from cancers considered preventable (provisional)**



Data source EMPHO, based ONS source data 2012.

### 3.2 Trend Data

#### 3.2.1 Leicestershire

From 2001-03, LCC has had a lower cancer mortality rate in the under-75s compared to England. Figure 6 shows the trend in cancer mortality in under-75s from 2001-3 onwards. The LCC trend had a peak in 2003-05, but has been generally decreasing since this time. The overall English cancer mortality rate has been consistently decreasing during the same time period.

The proposed cancer mortality aspirations are included for 2010-12 to 2013-15. The English projection for cancer mortality in the under-75s indicates the rate will reduce by 9% between 2008-10 and 2013-2015. The proposed LCC cancer mortality aspiration aims to decrease the local cancer mortality rate by 5% between 2008-10 and 2013-15.

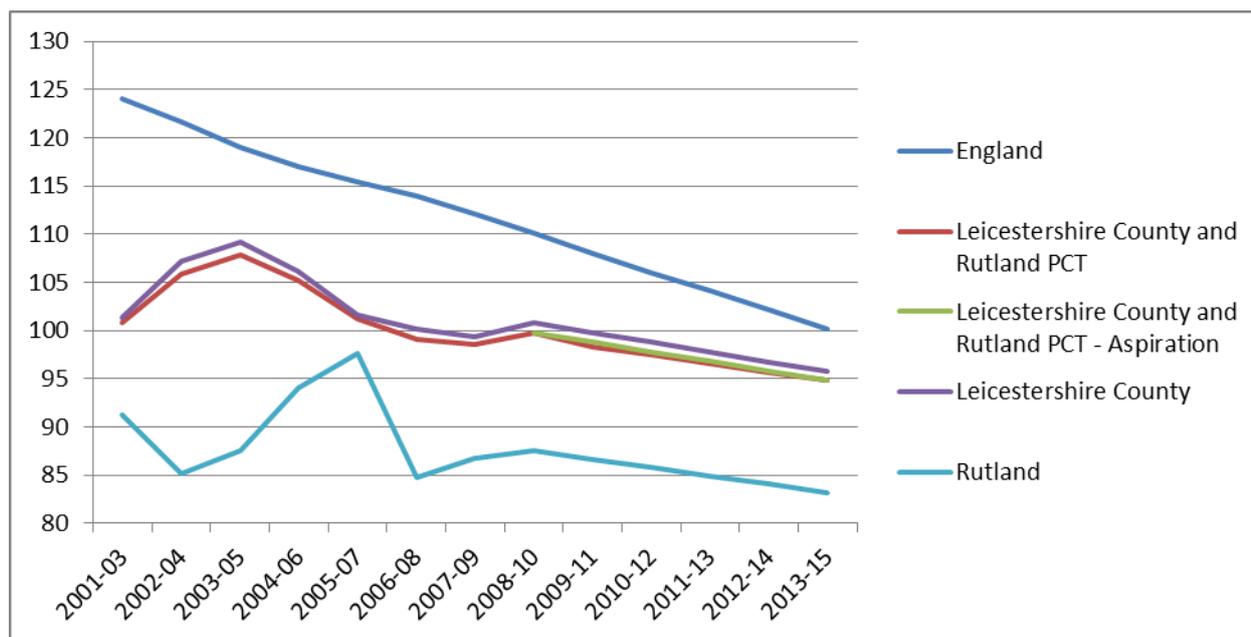
#### 3.2.2 Rutland

From 2001-03, RUA has also had a lower cancer mortality rate in the under-75s when compared to England (Figure 6). The RUA trend had a peak in 2005-07, but overall the RUA cancer mortality rate has been decreasing since this time. The England cancer mortality rate has been consistently decreasing during the same time period.

The proposed cancer mortality aspirations are included for 2010-12 to 2013-15. The proposed RUA cancer mortality aspiration aims to decrease the cancer mortality rate by 5% between 2008-

10 and 2013-15. The English trend for cancer mortality in the under-75s indicates the rate will reduce by 9% between 2008-10 and 2013-2015.

**Figure 6: Under-75 mortality rates from cancers from 2001 to 2015\***



\*Data from 2010-12 to 2013-15 are proposed aspirations

### 3.3 Specific Cancers

The Information Centre publishes mortality data for specific cancers (IC, 2012). This data is presented in Table 1 which shows that:

- LCC has significantly lower age standardised mortality rates in the under-75s for colorectal cancer and lung cancer than England and the East Midlands region.
- Under-75 breast cancer and oesophageal cancer mortality in LCC is lower than England and the East Midlands, but this is not statistically significant.
- Rutland has significantly lower lung cancer mortality for the under-75s than England and the East Midlands. The mortality for breast, colorectal and oesophageal cancers are lower for RUA compared to England, the East Midlands and LCC, but these are not statistically significant.

**Table 1: Directly standardised mortality rates of various cancers per 100,000 population.**

Cancer Area	Geographical Area	Number of deaths	Directly age standardised rate	95% Confidence Limits	
				Lower	Upper
Breast Cancer	England	16023	19.25	18.95	19.55
	East Midlands SHA	1389	18.74	17.74	19.73
	Leicestershire CC	194	17.40	14.92	19.88
	Rutland UA	9	14.19	4.69	23.70
Colorectal Cancer	England	17717	10.45	10.29	10.60
	East Midlands SHA	1622	10.60	10.08	11.12
	Leicestershire CC	202	8.70	7.49	9.90
	Rutland UA	13	9.84	4.35	15.34
Lung Cancer	England	43902	25.66	25.41	25.90
	East Midlands SHA	3891	25.08	24.29	25.88
	Leicestershire CC	454	19.52	17.71	21.33
	Rutland UA	23	14.32	8.42	20.23
Oesophageal Cancer	England	9586	5.69	5.58	5.81
	East Midlands SHA	906	5.98	5.59	6.37
	Leicestershire CC	125	5.48	4.51	6.45
	Rutland UA	5	3.45	0.34	6.55

Yellow highlighting indicates a statistically significant lower result from England and the East Midlands. (Data source Information Centre, 2012).

### 3.4 Cancer Deaths at Home

Information on cancer deaths at home is available from the Information Centre. Table 2 shows the indirectly age and sex standardised rates for cancer deaths at home in the under-75s.

- LCC has a significantly higher rates of colorectal and lung cancer deaths at home than England and the region.
- All other rates for LCC are higher than the East Midlands and England rates, but these are not statistically significant differences.
- RUA has a significantly higher rate of colorectal cancer deaths at home compared to England and the East Midlands. The rate is higher than Leicestershire, but this is not statistically significant.
- The RUA death at home rates for breast cancer, lung cancer, and oesophageal cancer are higher than the Leicestershirie, East Midlands and England rates, but these are not statistically significant differences.

**Table 2:** Indirectly age-standardised cancer deaths at home rates for individuals under-75.

Cancer Area	Geographical Area	Number of deaths at Home	Indirectly age standardised rate per 100 deaths	95% Confidence Limits	
				Lower	Upper
Breast Cancer	England	7267	24.69	24.20	25.19
	East Midlands SHA	670	25.77	24.12	27.49
	Leicestershire CC	111	29.86	25.42	34.71
	Rutland UA	7	33.21	16.65	56.24
Colorectal Cancer	England	11763	29.15	28.70	29.59
	East Midlands SHA	1134	30.94	29.47	32.45
	Leicestershire CC	166	33.52	29.50	37.79
	Rutland UA	17	53.01	35.94	69.73
Lung Cancer	England	24352	28.88	28.58	29.19
	East Midlands SHA	2234	30.65	29.60	31.71
	Leicestershire CC	314	34.40	31.39	37.55
	Rutland UA	15	31.20	19.79	45.36
Oesophageal Cancer	England	5624	30.31	29.65	30.97
	East Midlands SHA	543	31.26	29.12	33.48
	Leicestershire CC	84	34.97	29.20	41.22
	Rutland UA	5	48.46	21.76	75.17

*Pink highlight indicates a statistically significant higher result from England and the East Midlands. (Data source Information Centre, 2012).*

#### 4. Conclusion

LCC and RUA have lower rates of cancer mortality in the under-75 population compared to England and the East Midlands. Compared to similar local authorities' populations, LCC and RUA are similar to their peers. For specific cancers (breast, colorectal, lung and oesophageal), LCC and RUA have lower rates than England and the East Midlands region. Both counties also have higher numbers of cancer deaths at home compared to England and the East Midlands region. Despite the relatively low rates of cancer mortality in LCC and RUA, in 2009-2011 there were 1264 preventable cancer deaths in LCC and 68 preventable cancer deaths in RUA. Further work could be undertaken to ensure the uptake of all cancer screening programmes is maximised. Key cancer risks factors such as obesity, low consumption of fruit and vegetables, and tobacco use should continue to be targeted.

#### 5. References

ERPHO (Public Health Observatories) (2012) Public health outcomes framework data toolkit, **ERPHO**. [Available online at <http://www.phoutcomes.info/>] [Accessed on 02/04/2013].

Information Centre (IC) (2013) Indicator Portal, **Information centre**. [Available online at <http://nww.indicators.ic.nhs.uk/webview/>] [Accessed on 02/04/2013].

World Health Organisation (WHO) (2013) Cancer, **World Health Organisation**. [Available online at <http://www.who.int/mediacentre/factsheets/fs297/en/index.html>] [Accessed on 02/04/2013].

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