

Chapter 13

Mortality

Compendium of Health Related Statistics 2005

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13 Mortality

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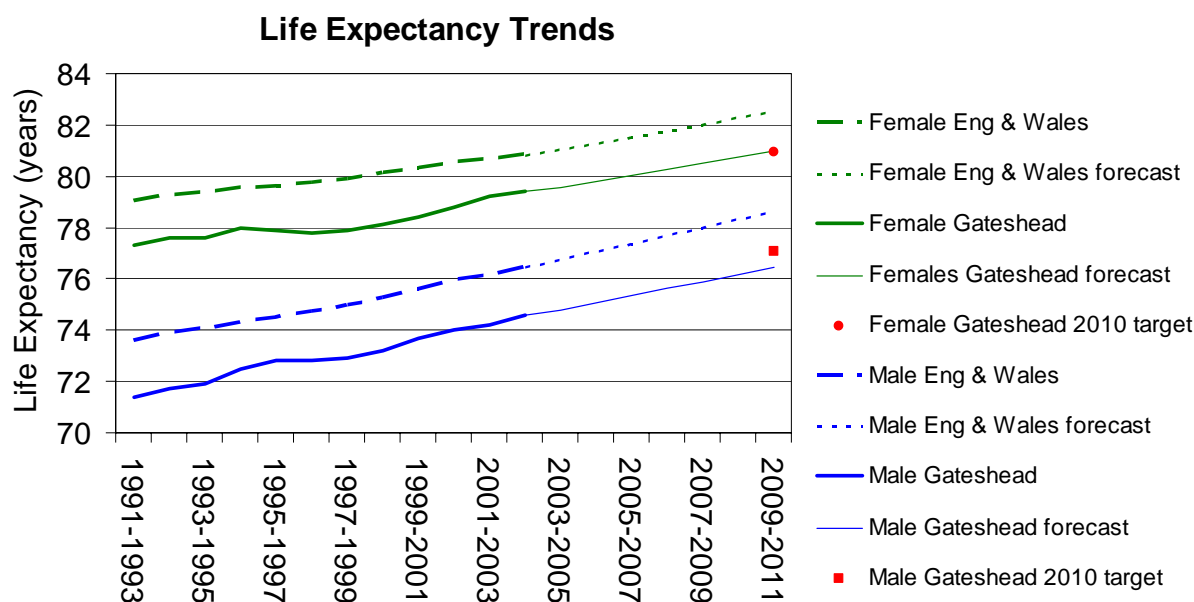


13 Mortality

Introduction

This chapter of the Compendium of Health Related Statistics summarises data on mortality due to all causes. This includes life expectancy and the all age, all cause age-standardised mortality rate.

Life expectancy is rising for both males and females in Gateshead. The most recent available data relates to the years 2002 to 2004. Average life expectancy at birth in this period in Gateshead was 74.6 years for men and 79.4 years for women¹. However, among males, life expectancy was two years lower than the comparative figure for England and Wales. For females the difference was 1.5 years. Among females, this gap has narrowed in recent years. The graph below shows trends in life expectancy for males and females within Gateshead and across England & Wales as a whole. It also forecasts how life expectancy might change in future years.



The Government has set a goal, between 1996 and 2010, to realise a 10% reduction in the gap between the fifth of local authority areas with the lowest life expectancy at birth and the population as a whole². Gateshead sits firmly within this fifth, currently being ranked 316th among 354 local authorities in terms of life expectancy for both males and females. If Gateshead is to fully contribute to this narrowing of the health inequalities gap it needs to see a rise in life expectancy by 2010 to 77.1 years among males and 81.0 years among females, as indicated in the graph above. The table below sets out the life expectancy figures for males and females that need to be realised between 2003 and 2010 in order that Gateshead remains on track to reach its 2010 targets.

¹ Life expectancy at birth, 2002-2004, Office for National Statistics

² "Tackling Health Inequalities: A Programme for Action", 2003, p7, Department of Health

	Life expectancy (years)							Target
	Actual	Trajectory						
	*2003	2004	2005	2006	2007	2008	2009	**2010
Male	74.6	75.0	75.3	75.7	76.0	76.4	76.7	77.1
Female	79.4	79.6	79.8	80.1	80.3	80.5	80.7	81.0

* actual data relates to the three year period 2002-2004

** performance in 2010 will be measured by the life expectancy rates for the period 2009-2011

In 1996 (the baseline year) the life expectancy gap between Gateshead and England & Wales was 1.7 years for both males and females. By 2003 these figures had risen to 1.9 years for males but fallen to 1.4 years for females. Projections to 2010 show that Gateshead is on track to meet the target for female life expectancy but will fall short of the male life expectancy target.

Although the above trends for Gateshead as a whole are encouraging, there remain wide variations within Gateshead in levels of life expectancy. Life expectancies for small populations of more than 5,000 are now becoming available. Within this chapter, life expectancies for males and females for pre-June 2004 Gateshead electoral wards are illustrated. This data shows that there is a variation of 9 years for males and 12 years for females between the electoral wards with the lowest and highest life expectancies. Recognition of these variations in health status allows interventions aimed at improving health to be targeted to reach those populations who are most in need.

About the data

As a measure of the health of the population, life expectancy at birth is a useful indicator. It is easily understood and is fairly robust, being based on all deaths. However, due to fluctuations from year to year at Local Authority level, the Office for National Statistics recommends using a three year pooled index. However, as life expectancy is based on deaths due to all causes, it is difficult to determine the underlying reasons for changes in the index.

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Acknowledgements

This chapter of the Gateshead Compendium of Health Related Statistics contains data from a range of partner agencies. Sources of data are detailed at the foot of each individual item. Thanks are extended to the following organisations for providing and allowing use of their information:

National Centre for Health Outcomes Development, London School of Hygiene and Tropical Medicine

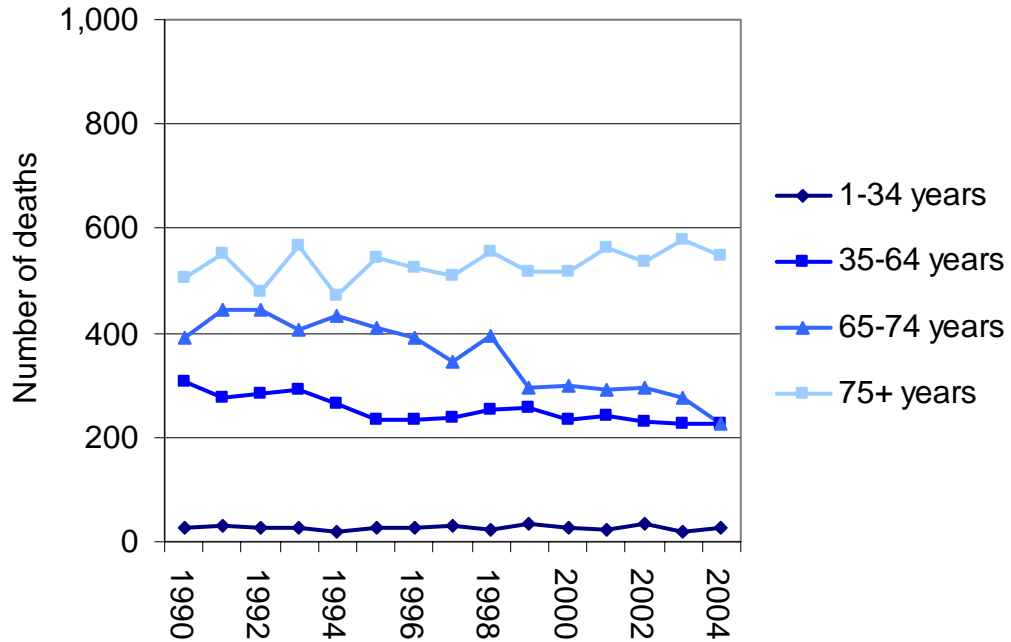
13.1 Number of deaths from all causes by age band in Gateshead

Males		Age at Death (years)				
		1+	1-34	35-64	65-74	75+
Gateshead	1990	1,231	27	307	390	507
	1991	1,304	29	277	445	553
	1992	1,234	25	283	446	480
	1993	1,294	27	293	406	568
	1994	1,190	20	265	434	471
	1995	1,213	28	233	409	543
	1996	1,179	27	234	392	526
	1997	1,122	31	237	343	511
	1998	1,227	24	251	396	556
	1999	1,102	33	256	296	517
	2000	1,081	28	235	300	518
	2001	1,123	24	241	293	565
	2002	1,098	35	230	296	537
	2003	1,102	20	227	275	580
	2004	1,024	27	225	226	546

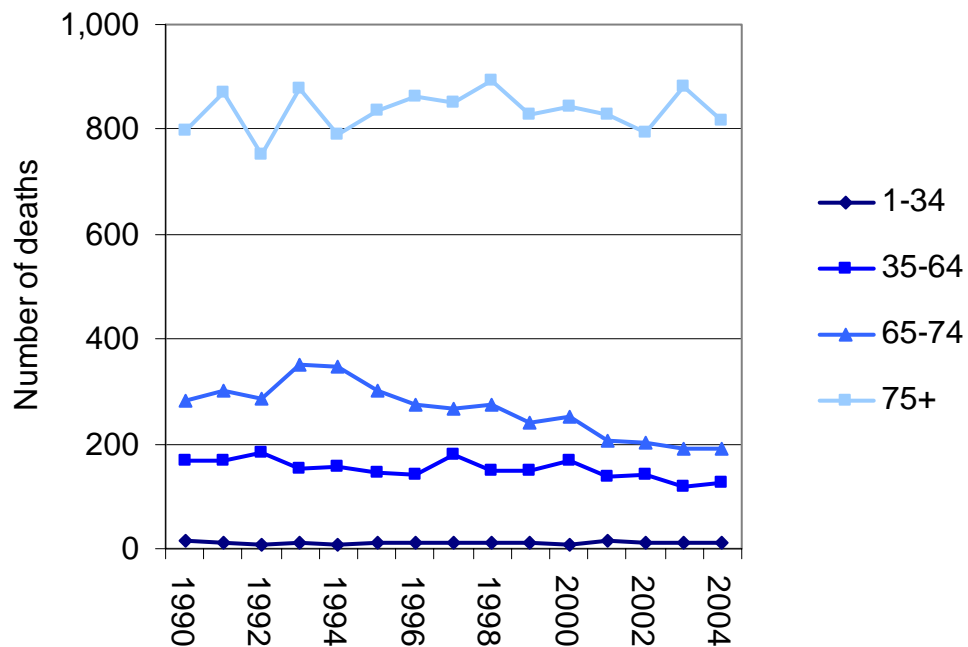
Females		Age at Death (years)				
		1+	1-34	35-64	65-74	75+
Gateshead	1990	1,266	15	169	284	798
	1991	1,355	13	169	303	870
	1992	1,231	8	185	287	751
	1993	1,397	12	153	353	879
	1994	1,300	6	158	347	789
	1995	1,298	12	146	303	837
	1996	1,294	12	143	275	864
	1997	1,309	12	181	266	850
	1998	1,328	11	150	273	894
	1999	1,230	12	148	242	828
	2000	1,267	6	168	251	842
	2001	1,188	16	136	208	828
	2002	1,143	10	140	201	792
	2003	1,208	13	120	192	883
	2004	1,148	13	127	191	817

13.1 Number of deaths from all causes by age band in Gateshead (cont.)

Male deaths in Gateshead



Female deaths in Gateshead

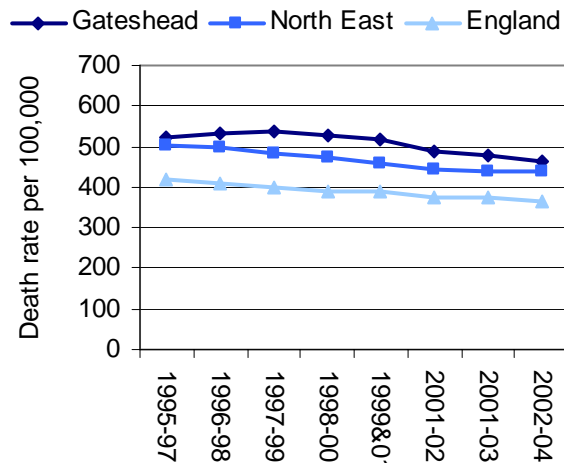


13.2 Age-specific death rates

Age specific death rates per 100,000 population, age at death 35-64 years

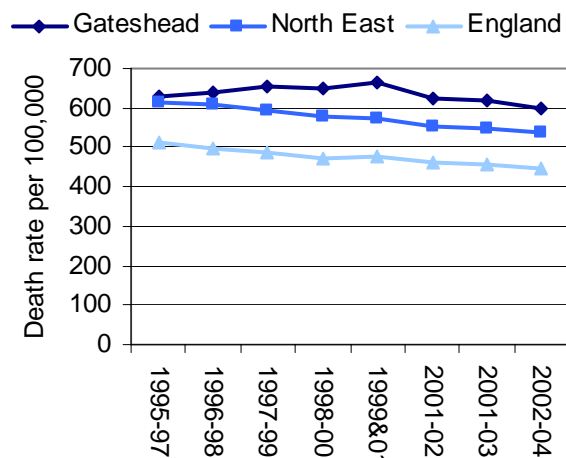
Persons 35-64 years

Year	Age-specific death rate per 100,000 population		
	Gateshead	North East	England
1995-97	523.7	500.5	417.3
1996-98	530.3	497.1	407.0
1997-99	537.8	484.2	397.3
1998-00	526.5	471.0	388.6
1999&01	515.6	460.9	387.5
2001-02	489.5	441.4	375.0
2001-03	476.9	439.8	373.2
2002-04	463.9	437.0	365.3



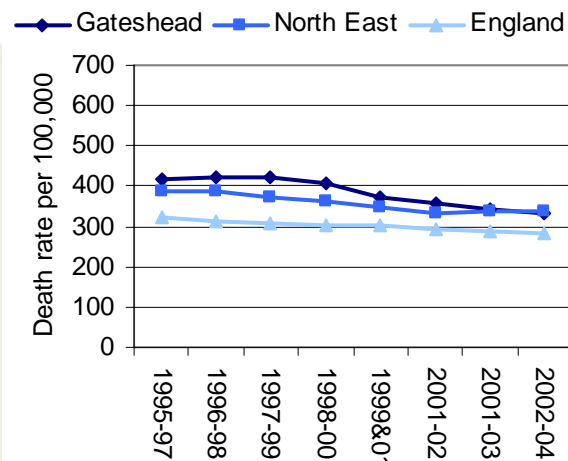
Males 35-64 years

Year	Age-specific death rate per 100,000 population		
	Gateshead	North East	England
1995-97	628.6	613.1	512.2
1996-98	640.2	610.4	498.8
1997-99	654.3	594.8	484.8
1998-00	647.0	579.2	472.8
1999&01	663.6	575.3	476.2
2001-02	625.7	551.3	460.1
2001-03	617.1	545.9	458.3
2002-04	600.9	538.8	448.7



Females 35-64 years

Year	Age-specific death rate per 100,000 population		
	Gateshead	North East	England
1995-97	419.0	389.0	322.3
1996-98	420.4	384.9	315.1
1997-99	421.3	374.8	309.6
1998-00	406.1	363.9	303.9
1999&01	371.1	349.3	300.5
2001-02	356.9	334.3	291.4
2001-03	340.5	336.5	289.6
2002-04	330.9	338.1	283.4

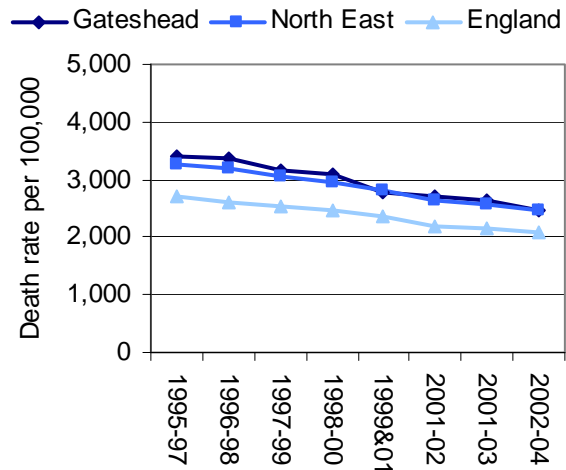


13.2 Age specific death rates (cont.)

Age specific death rates per 100,000 population, age at death 65-74 years

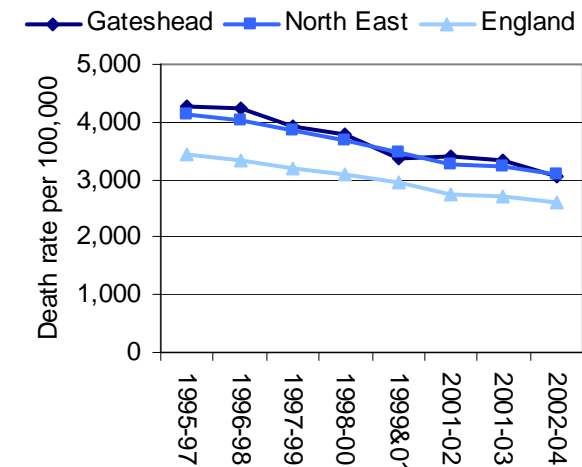
Persons 65-74 years

Year	Age-specific death rate per 100,000 population		
	Gateshead	North East	England
1995-97	3,398.3	3,251.7	2,693.4
1996-98	3,353.4	3,177.9	2,615.8
1997-99	3,159.2	3,066.3	2,541.0
1998-00	3,091.6	2,946.5	2,455.4
1999&01	2,770.7	2,813.2	2,348.4
2001-02	2,692.3	2,626.6	2,197.6
2001-03	2,629.3	2,580.7	2,167.6
2002-04	2,472.7	2,482.5	2,092.5



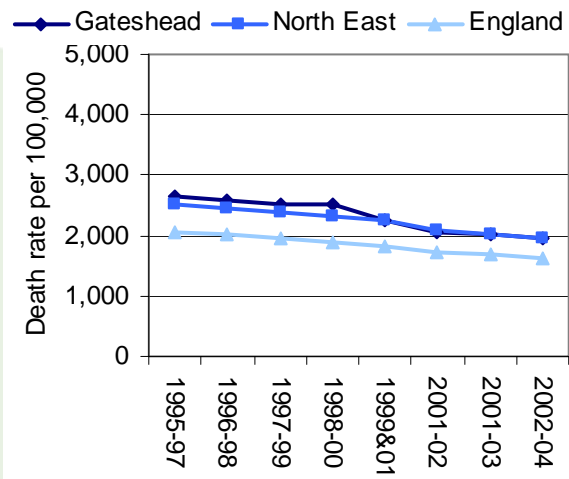
Males 65-74 years

Year	Age-specific death rate per 100,000 population		
	Gateshead	North East	England
1995-97	4,276.5	4,126.6	3,437.1
1996-98	4,250.8	4,030.4	3,319.9
1997-99	3,908.8	3,853.7	3,210.0
1998-00	3,775.5	3,695.4	3,097.6
1999&01	3,382.4	3,483.9	2,953.1
2001-02	3,408.8	3,265.6	2,749.0
2001-03	3,331.8	3,219.4	2,702.6
2002-04	3,062.0	3,083.4	2,600.2



Females 65-74 years

Year	Age-specific death rate per 100,000 population		
	Gateshead	North East	England
1995-97	2,658.4	2,519.3	2,063.3
1996-98	2,592.9	2,459.9	2,013.3
1997-99	2,519.1	2,399.2	1,963.1
1998-00	2,504.3	2,307.8	1,895.9
1999&01	2,241.0	2,238.8	1,819.1
2001-02	2,066.7	2,071.8	1,709.1
2001-03	2,017.7	2,024.8	1,692.0
2002-04	1,958.3	1,956.5	1,638.0

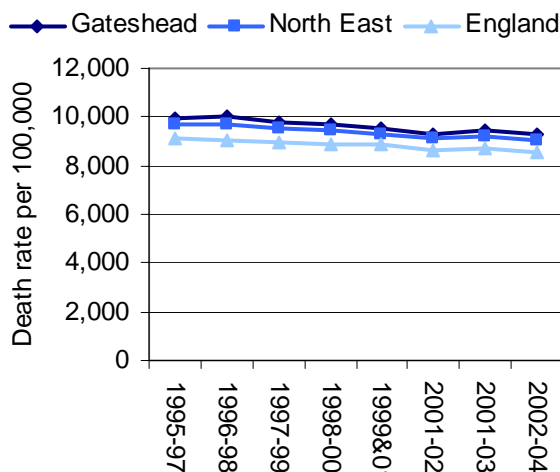


13.2 Age specific death rates (cont.)

Age specific death rates per 100,000 population, age at death 75+ years

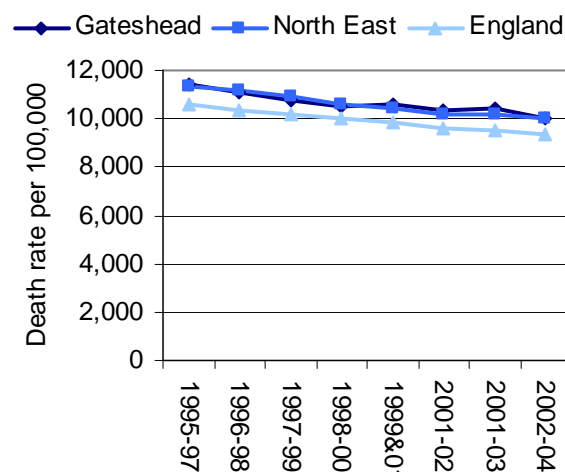
Persons 75+ years

Year	Age-specific death rate per 100,000 population		
	Gateshead	North East	England
1995-97	9,949	9,659	9,158
1996-98	10,012	9,662	9,045
1997-99	9,811	9,549	8,974
1998-00	9,713	9,418	8,844
1999&01	9,495	9,312	8,852
2001-02	9,266	9,120	8,668
2001-03	9,448	9,165	8,700
2002-04	9,292	9,074	8,568



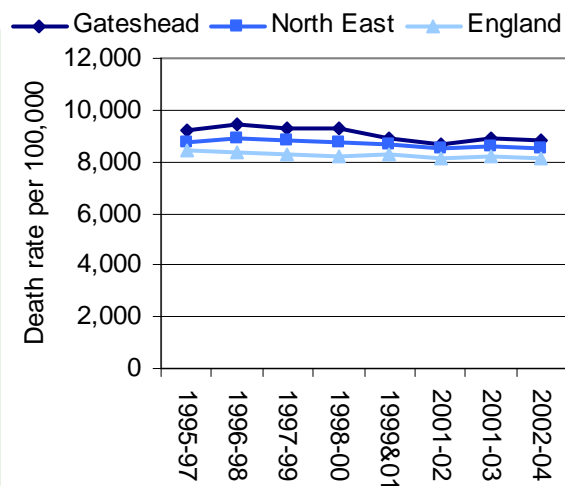
Males 75+ years

Year	Age-specific death rate per 100,000 population		
	Gateshead	North East	England
1995-97	11,385	11,363	10,570
1996-98	11,104	11,177	10,342
1997-99	10,719	10,884	10,173
1998-00	10,479	10,602	9,974
1999&01	10,597	10,438	9,850
2001-02	10,362	10,167	9,564
2001-03	10,402	10,158	9,525
2002-04	10,055	9,984	9,313

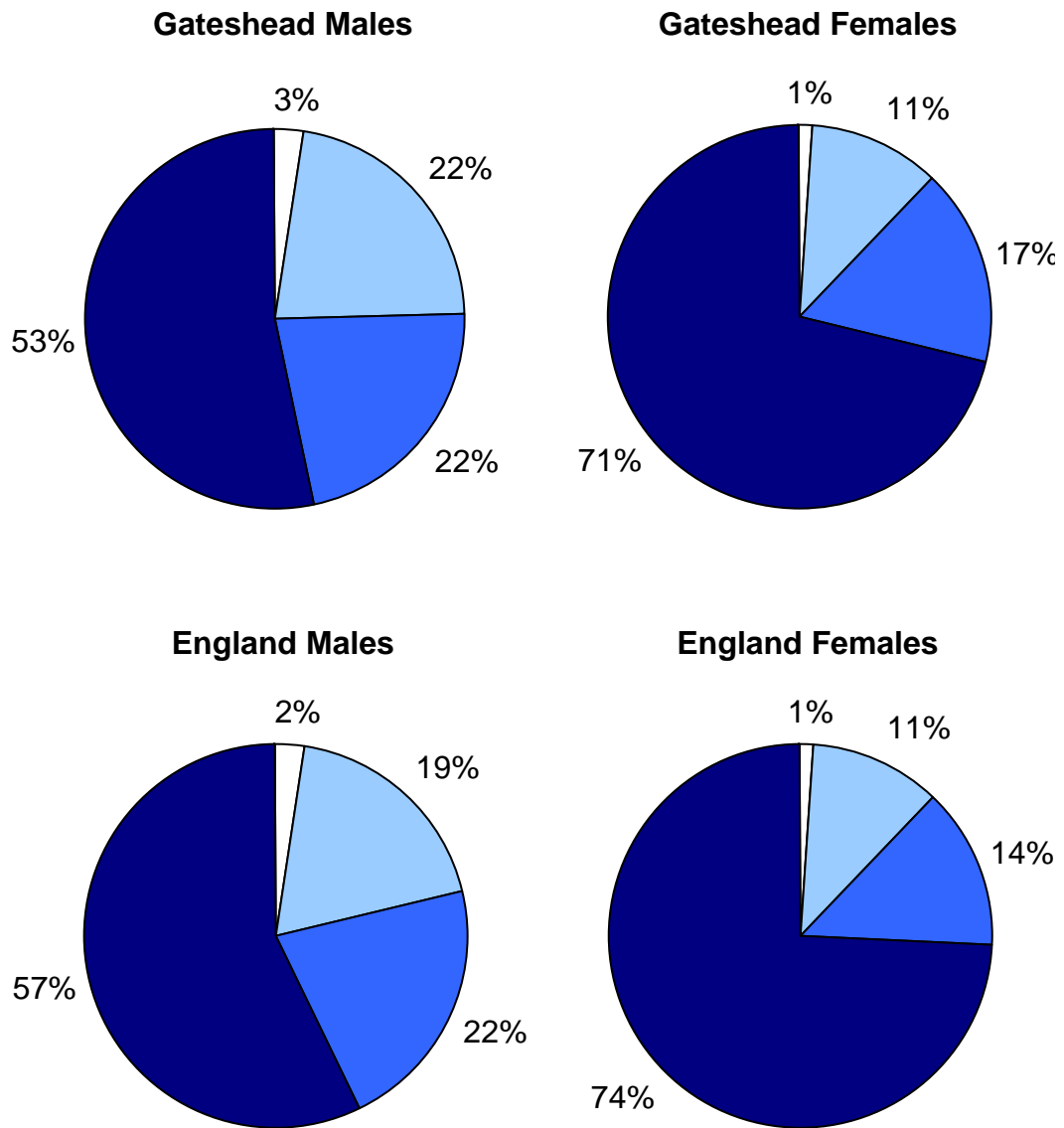


Females 75+ years

Year	Age-specific death rate per 100,000 population		
	Gateshead	North East	England
1995-97	9,229	8,784	8,401
1996-98	9,444	8,870	8,338
1997-99	9,324	8,837	8,311
1998-00	9,292	8,775	8,212
1999&01	8,891	8,682	8,279
2001-02	8,645	8,519	8,143
2001-03	8,899	8,590	8,212
2002-04	8,845	8,540	8,120



13.3 Proportion of deaths by age at death



Legend

1-34 years



35-64 years



65-74 years



75+ years

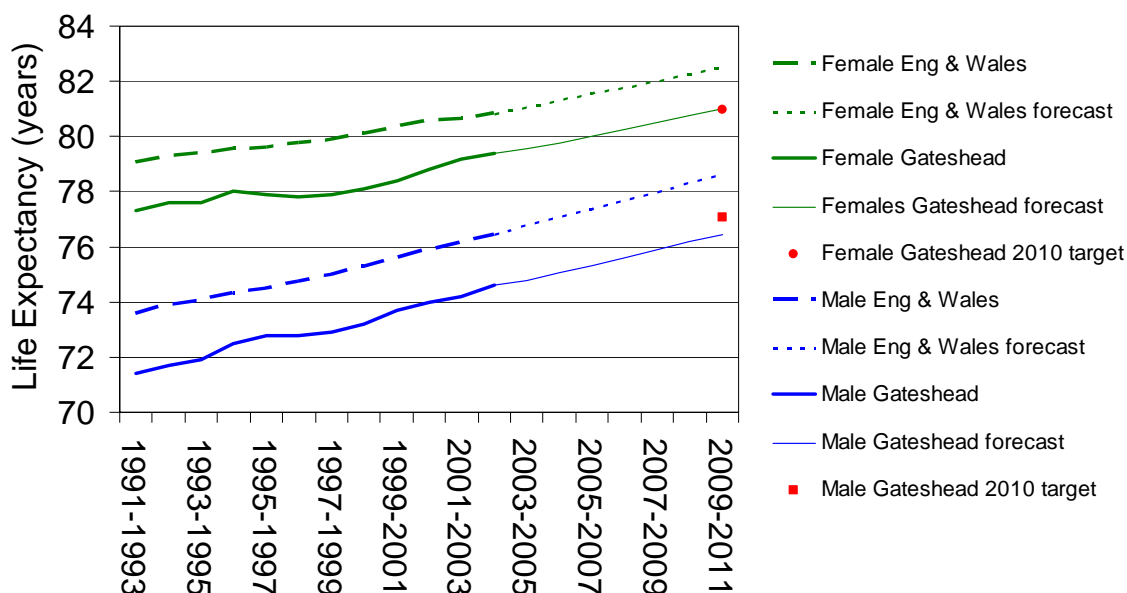


Source of data: Clinical Health Outcomes and Knowledge Base at www.nchod.nhs.uk

13.4 Life expectancy at birth for Gateshead and England

Target: starting with local authorities, by 2010 to reduce by at least 10 per cent the gap between the fifth of areas with the lowest life expectancy at birth and the population as a whole

Tackling Health Inequalities: A Programme for Action, Department of Health, 2003



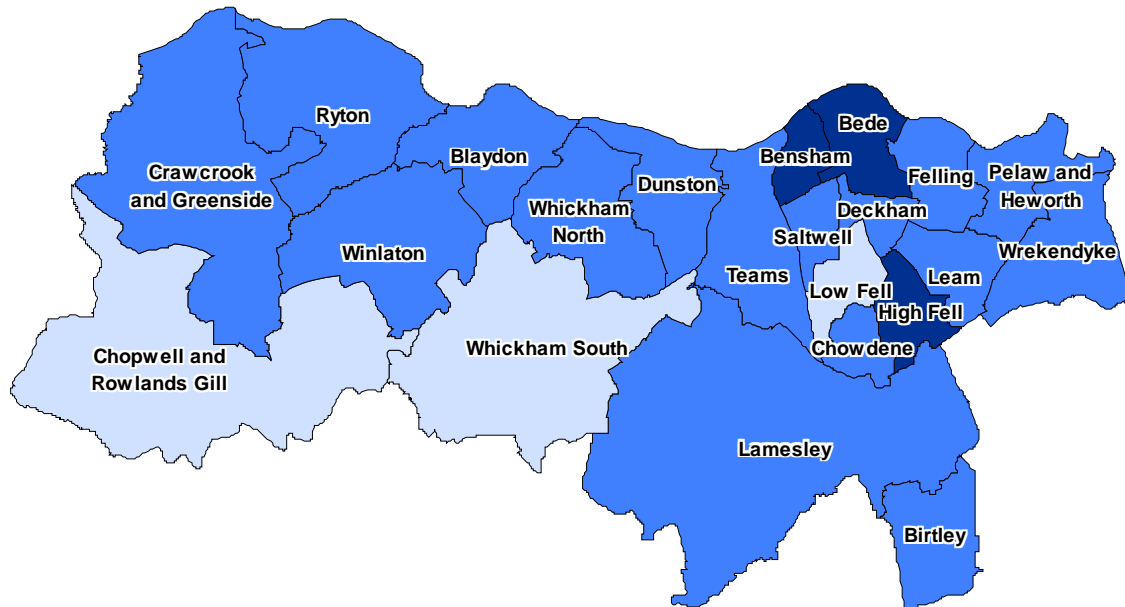
	Gateshead Male	Gateshead schedule to meet 2010 target	England & Wales Male	Gateshead Female	Gateshead schedule to meet 2010 target	England & Wales Female
1991-1993	71.4		73.6	77.3		79.1
1992-1994	71.7		73.9	77.6		79.3
1993-1995	71.9		74.1	77.6		79.4
1994-1996	72.5		74.3	78.0		79.6
1995-1997	72.8		74.5	77.9		79.6
1996-1998	72.8		74.7	77.8		79.8
1997-1999	72.9		75.0	77.9		79.9
1998-2000	73.2		75.3	78.1		80.1
1999-2001	73.7		75.6	78.4		80.3
2000-2002	74.0		75.9	78.8		80.6
2001-2003	74.2		76.1	79.2		80.7
2002-2004	74.6		76.5	79.4		80.8
2003-2005	74.8	75.0	76.8	79.5	79.6	81.0
2004-2006	75.1	75.3	77.1	79.8	79.8	81.3
2005-2007	75.3	75.7	77.4	80.0	80.1	81.5
2006-2008	75.6	76.0	77.7	80.3	80.3	81.8
2007-2009	75.9	76.4	78.0	80.5	80.5	82.0
2008-2010	76.2	76.7	78.3	80.8	80.7	82.3
2009-2011	76.5	77.1	78.6	81.0	81.0	82.5

Source: historical data, Office for National Statistics; forecasts (in italics), Gateshead PCT

Projections are calculated using linear regression based on data from 1995-1997 to 2002-2004

13.5 Life expectancy at birth for Gateshead wards

Male life expectancy at birth, 2002-2004, by pre-June 2004 Gateshead electoral ward.



**Male Life Expectancy at Birth 2002-2004
by pre-June 2004 Gateshead Ward**

- 69 years to <71 years (significantly lower than Gateshead at 95% confidence) (3)
- 71 years to <77 years (not significantly different to Gateshead) (16)
- 77 years to <79 years (significantly higher than Gateshead at 95% confidence) (3)

For data, see table overleaf.



13.5 Life expectancy at birth for Gateshead wards (cont.)

Male life expectancy at birth, 2002-2004, by pre-June 2004 Gateshead electoral ward.

Gateshead pre-June 2004 Ward	Male life expectancy 2002-04 (years)	H/L*
Bede	69.6	L
Bensham	69.7	L
High Fell	70.7	L
Felling	71.6	
Deckham	72.5	
Leam	72.7	
Birtley	73.4	
Saltwell	73.7	
Dunston	74.2	
Teams	74.3	
Pelaw and Heworth	74.4	
Wrekendyke	74.4	
Chowdene	74.8	
Lamesley	74.9	
Winlaton	75.5	
Blaydon	75.8	
Whickham North	76.1	
Crawcrook and Greenside	76.3	
Ryton	76.6	
Chopwell and Rowlands Gill	77.6	H
Low Fell	78.9	H
Whickham South	78.9	H
Gateshead PCT	74.6	
Newcastle PCT	74.4	
North Tyneside PCT	75.0	
Northumberland Care Trust	n/a**	
South Tyneside PCT	74.6	
Sunderland Teaching PCT	74.6	
NORTH EAST	75.0	
ENGLAND	76.6	

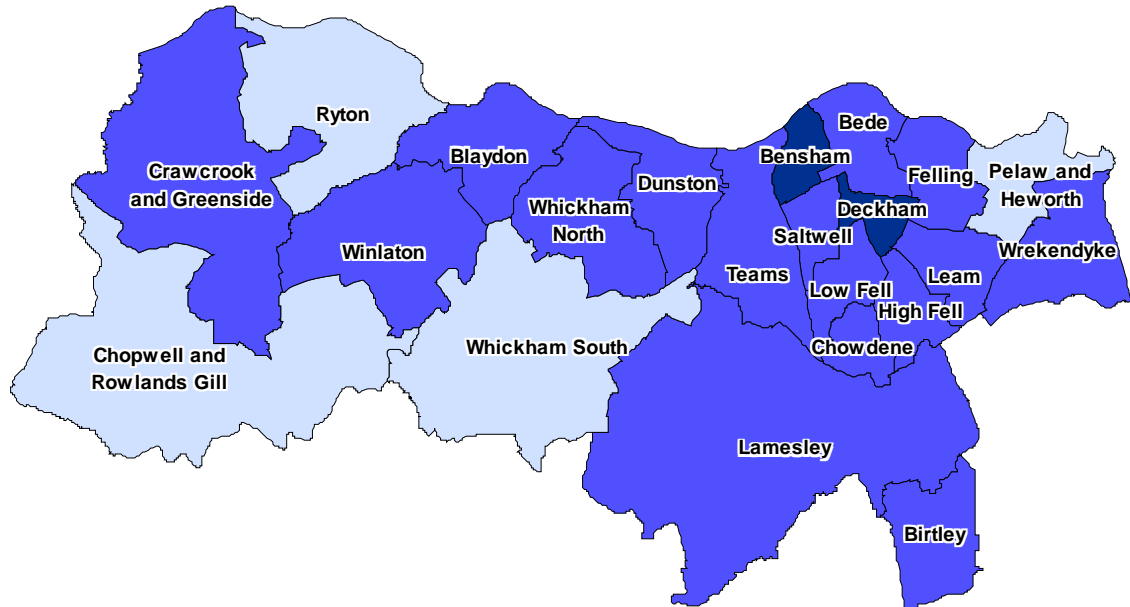
*H/L = significantly higher (H) or lower (L) than England at 95% confidence

** n/a = not available, life expectancy figures only available for local authority areas, all other PCT areas shown share boundaries with a local authority

Source: Office for National Statistics, published by National Centre for Health Outcomes Development at www.nchod.nhs.uk

13.5 Life expectancy at birth for Gateshead wards (cont.)

Female life expectancy at birth, 2002-2004, by pre-June 2004 Gateshead electoral ward.



**Female Life Expectancy at Birth 2002-2004
by pre-June 2004 Gateshead ward**

- 73.0 years to 76.5 years (significantly lower than Gateshead at 95% confidence) (2)
- 76.5 years to 81.5 years (not significantly different to Gateshead) (16)
- 81.5 years to 86.0 years (significantly higher than Gateshead at 95% confidence) (4)

For data, see table overleaf.

13.5 Life expectancy at birth for Gateshead wards (cont.)

Female life expectancy at birth, 2002-2004, by pre-June 2004 Gateshead electoral ward.

Gateshead pre-June 2004 Ward	Female life expectancy 2002-04 (years)	H/L*
Bensham	70.7	L
Deckham	74.0	L
Bede	74.3	
Felling	74.6	
Wrekendyke	75.2	
Dunston	76.4	
Whickham North	76.8	
Winlaton	76.5	
Teams	76.9	
High Fell	77.5	
Blaydon	77.3	
Crawcrook and Greenside	78.2	
Leam	77.6	
Chowdene	78.2	
Saltwell	77.9	
Birtley	78.5	
Lamesley	79.1	
Low Fell	79.5	
Ryton	80.0	H
Pelaw and Heworth	80.4	H
Chopwell and Rowlands Gill	81.9	H
Whickham South	82.7	H
Gateshead PCT	79.0	
Newcastle PCT	79.8	
North Tyneside PCT	79.9	
Northumberland Care Trust	n/a**	
South Tyneside PCT	79.4	
Sunderland Teaching PCT	79.0	
NORTH EAST	79.6	
ENGLAND	80.9	

*H/L = significantly higher (H) or lower (L) than England at 95% confidence

** n/a = not available, life expectancy figures only available for local authority areas, all other PCT areas shown share boundaries with a local authority

Source: Office for National Statistics, published by the National Centre for Health Outcomes Development at www.nchod.nhs.uk

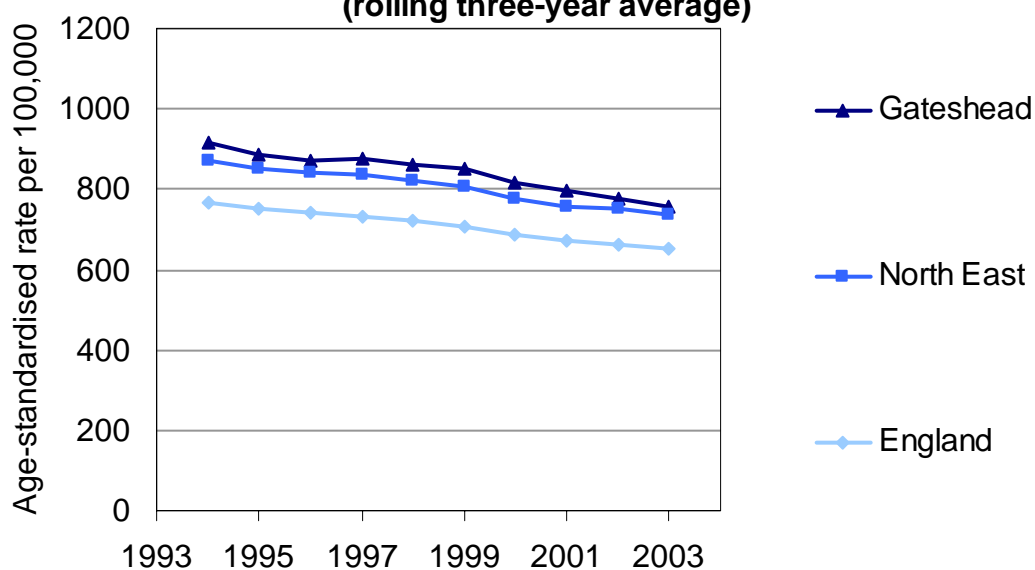
13.6 Directly age-standardised mortality rates due to all causes, all ages

Since November 2006, this has been adopted by the Department of Health as a proxy indicator for the life expectancy target set out in section 13.4. In order to meet this target locally in Gateshead, the gap between the mortality rates for England and Gateshead in 2010 must be 10% smaller than the gap in 1996, the baseline year.

Directly age-standardised mortality rate due to all causes (ICD10 A00-Y99, ICD9 001-E999) per 100,000 population, all ages, three year pooled.

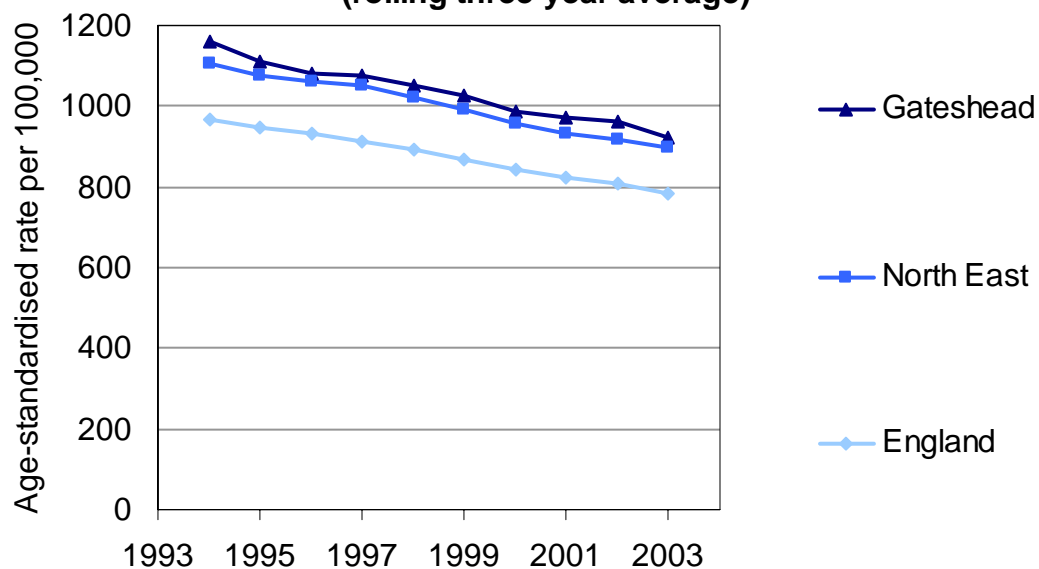
		Rate 1995-1997 (baseline)		Rate 2002-04 (Pooled)				Target 2009-11
		No. of deaths	Rate	No. of deaths	Rate	Lower confidence interval	Upper confidence interval	Rate
Gateshead	Males	3537	1082.8	3238	924.1	892.5	955.7	761
	Females	3916	720.2	3511	625.5	603.6	647.5	
	Persons	7453	872.5	6749	758.2	739.7	776.6	
North East	Males	43900	1060.9	40806	895.2	886.6	903.8	
	Females	46614	685.8	44260	616.5	610.4	622.6	
	Persons	90514	841.9	85066	739.1	734.1	744.2	
England	Males	755215	931.1	704720	784.9	783.1	786.7	664
	Females	821975	606.4	780918	543.7	542.4	545.0	
	Persons	1577190	743.8	1485638	650.3	649.2	651.4	
Gap between Gateshead and England	Males		16.3%		17.7%			14.7%
	Females		18.8%		15.1%			16.9%
	Persons		17.3%		16.6%			15.6%

Trends in mortality from all causes in people - all ages (rolling three-year average)

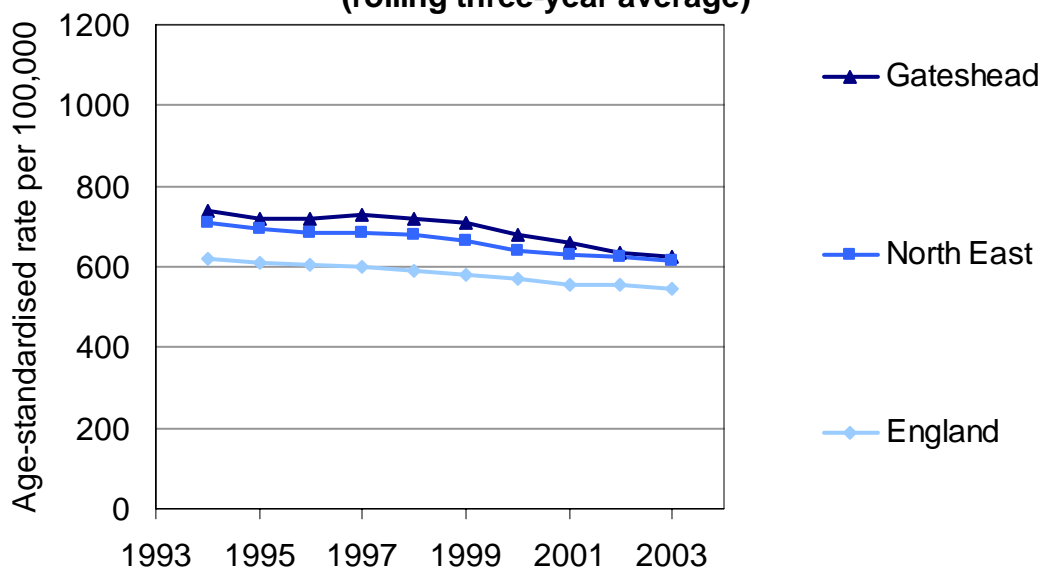


13.6 Directly age-standardised mortality rates due to all causes, all ages (cont.)

Trends in mortality from all causes in males - all ages (rolling three-year average)



Trends in mortality from all causes in females - all ages (rolling three-year average)



13.7 Indirectly standardised mortality ratios due all causes

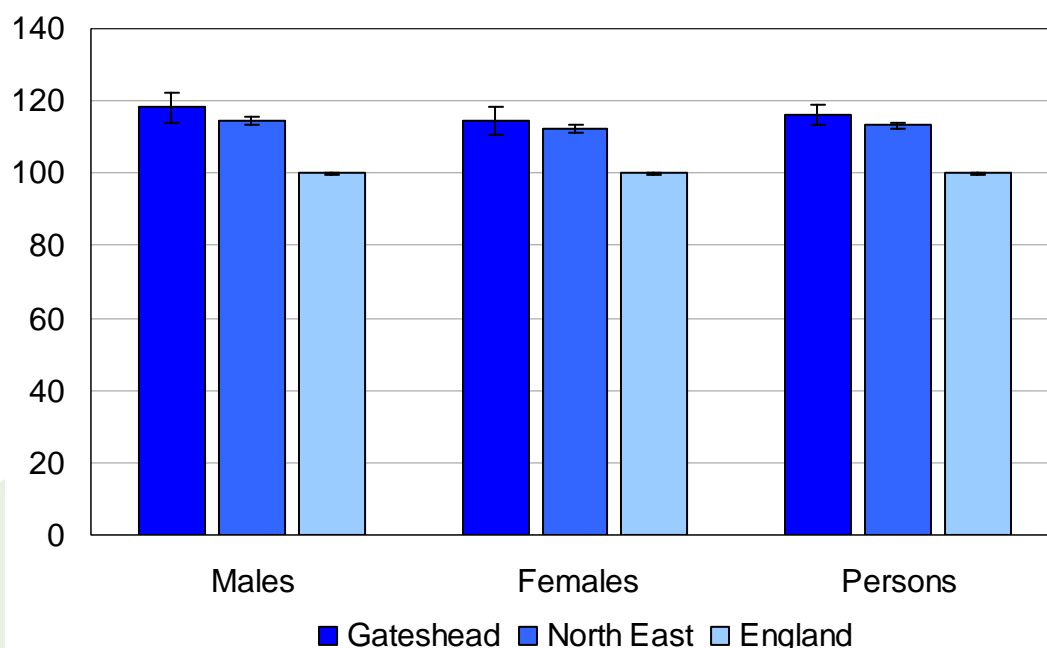
Indirectly age-standardised mortality ratios³ (SMR) due to all causes (ICD10 A00-Y99), all ages, three year pooled.

		2002-04 (Pooled)			
		No. of deaths	SMR	Lower Confidence Interval	Upper Confidence Interval
Gateshead	Males	3,238	118	114	122
	Females	3,511	115	111	118
	Persons	6,749	116	114	119
North East	Males	40,806	115	114	116
	Females	44,260	112	111	113
	Persons	85,066	113	113	114
England	Males	704,720	100	100	100
	Females	780,918	100	100	100
	Persons	1,485,638	100	100	100

Source: Clinical and Health Outcomes Knowledge Base at www.nchod.nhs.uk

Mortality from all causes (ICD10 A00-Y99) 2002-04 (Pooled) All ages

Indirectly standardised ratios (SMR) with 95% confidence intervals



³ SMRs are a comparison of mortality in England (the reference population) with mortality in the study population, here Gateshead or the NE. A ratio of 100 indicates that the level of mortality in the study population e.g. Gateshead is the same as expected mortality if age-specific mortality rates for England are applied to the Gateshead population. Mortality is standardised to the age structure of the study population. As Gateshead and the NE have different population structures the SMRs for each area are not comparable.

13.7 Indirectly standardised mortality ratios due to all causes (cont.)

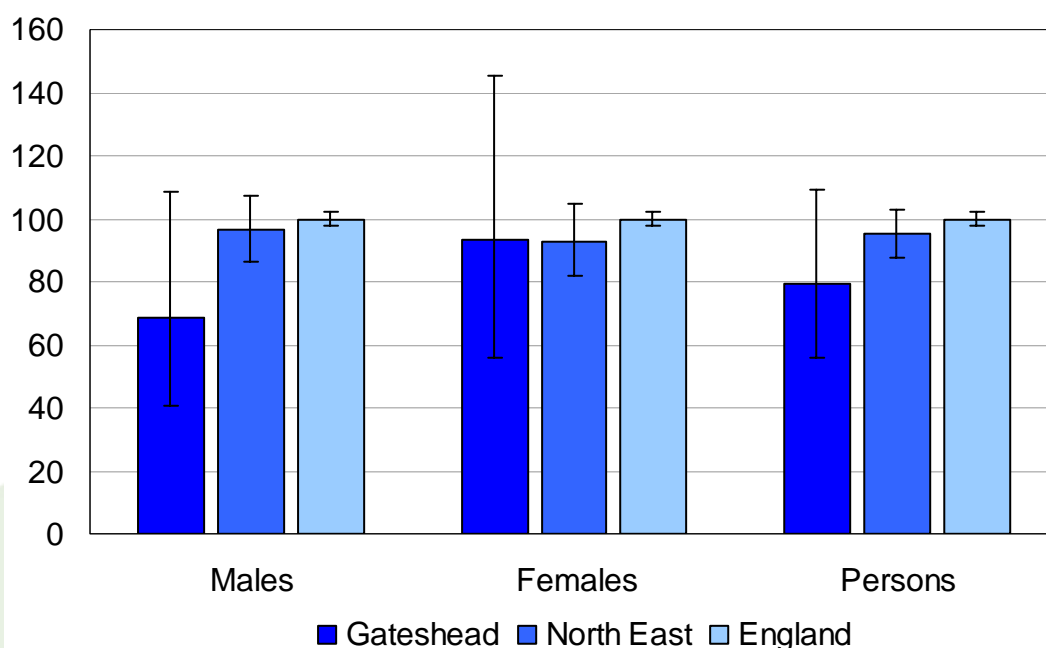
Indirectly age-standardised mortality ratios⁴ (SMR) due to all causes (ICD10 A00-Y99), ages under 15 years, three year pooled.

		2002-04 (Pooled)			
		No. of deaths	SMR	Lower Confidence Interval	Upper
Gateshead	Males	18	69	41	108
	Females	19	93	56	145
	Persons	37	79	56	109
North East	Males	335	97	87	108
	Females	250	93	82	105
	Persons	585	95	87	103
England	Males	7,336	100	98	102
	Females	5,739	100	97	103
	Persons	13,075	100	98	102

Source: Clinical and Health Outcomes Knowledge Base at www.nchod.nhs.uk

Mortality from all causes (ICD10 A00-Y99) 2002-04 (Pooled) Less than 15 years

Indirectly standardised ratios (SMR) with 95% confidence intervals



⁴ SMRs are a comparison of mortality in England (the reference population) with mortality in the study population, here Gateshead or the NE. A ratio of 100 indicates that the level of mortality in the study population e.g. Gateshead is the same as expected mortality if age-specific mortality rates for England are applied to the Gateshead population. Mortality is standardised to the age structure of the study population. As Gateshead and the NE have different population structures the SMRs for each area are not comparable.

13.7 Indirectly standardised mortality ratios due to all causes (cont.)

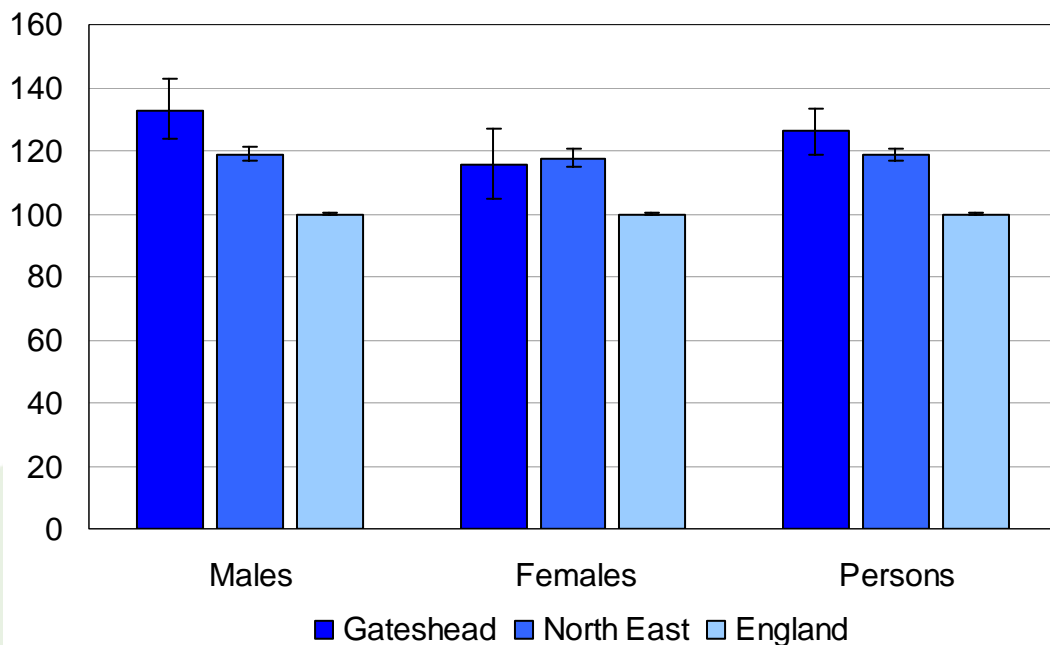
Indirectly age-standardised mortality ratios⁵ (SMR) due to all causes (ICD10 A00-Y99), ages 15-64 years, three year pooled.

		2002-04 (Pooled)			
		No. of deaths	SMR	Lower Confidence Interval	Upper Confidence Interval
Gateshead	Males	760	133	124	143
	Females	416	115	105	127
	Persons	1,176	126	119	134
North East	Males	9,049	119	117	121
	Females	5,609	118	115	121
	Persons	14,658	119	117	120
England	Males	146,417	100	99	101
	Females	91,016	100	99	101
	Persons	237,433	100	100	100

Source: Clinical and Health Outcomes Knowledge Base at www.nchod.nhs.uk

Mortality from all causes (ICD10 A00-Y99) 2002-04 (Pooled) 15 to 64 years

Indirectly standardised ratios (SMR) with 95% confidence intervals



⁵ SMRs are a comparison of mortality in England (the reference population) with mortality in the study population, here Gateshead or the NE. A ratio of 100 indicates that the level of mortality in the study population e.g. Gateshead is the same as expected mortality if age-specific mortality rates for England are applied to the Gateshead population. Mortality is standardised to the age structure of the study population. As Gateshead and the NE have different population structures the SMRs for each area are not comparable.

13.7 Indirectly standardised mortality ratios due to all causes (cont.)

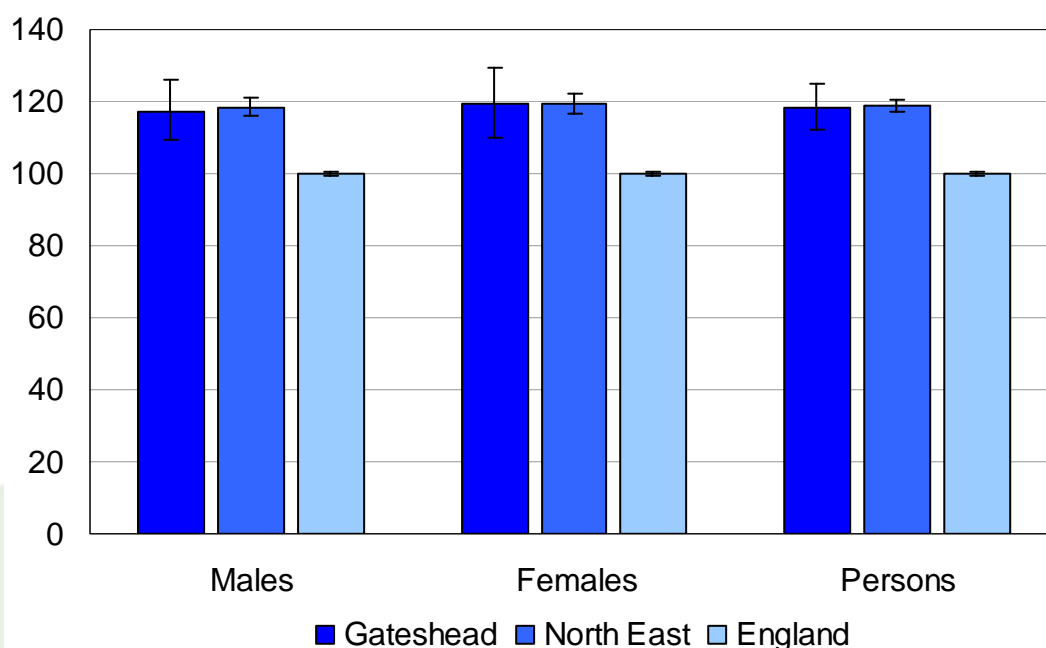
Indirectly age-standardised mortality ratios⁶ (SMR) due to all causes (ICD10 A00-Y99), ages 65-74 years, three year pooled.

		2002-04 (Pooled)			
		No. of deaths	SMR	Lower Confidence Interval	Upper
Gateshead	Males	797	117	109	126
	Females	584	120	110	130
	Persons	1,381	118	112	125
North East	Males	10,037	119	116	121
	Females	7,276	119	117	122
	Persons	17,313	119	117	121
England	Males	153,150	100	100	101
	Females	107,768	100	99	101
	Persons	260,918	100	100	100

Source: Clinical and Health Outcomes Knowledge Base at www.nchod.nhs.uk

Mortality from all causes (ICD10 A00-Y99) 2002-04 (Pooled) 65 to 74 years

Indirectly standardised ratios (SMR) with 95% confidence intervals



⁶ SMRs are a comparison of mortality in England (the reference population) with mortality in the study population, here Gateshead or the NE. A ratio of 100 indicates that the level of mortality in the study population e.g. Gateshead is the same as expected mortality if age-specific mortality rates for England are applied to the Gateshead population. Mortality is standardised to the age structure of the study population. As Gateshead and the NE have different population structures the SMRs for each area are not comparable.

