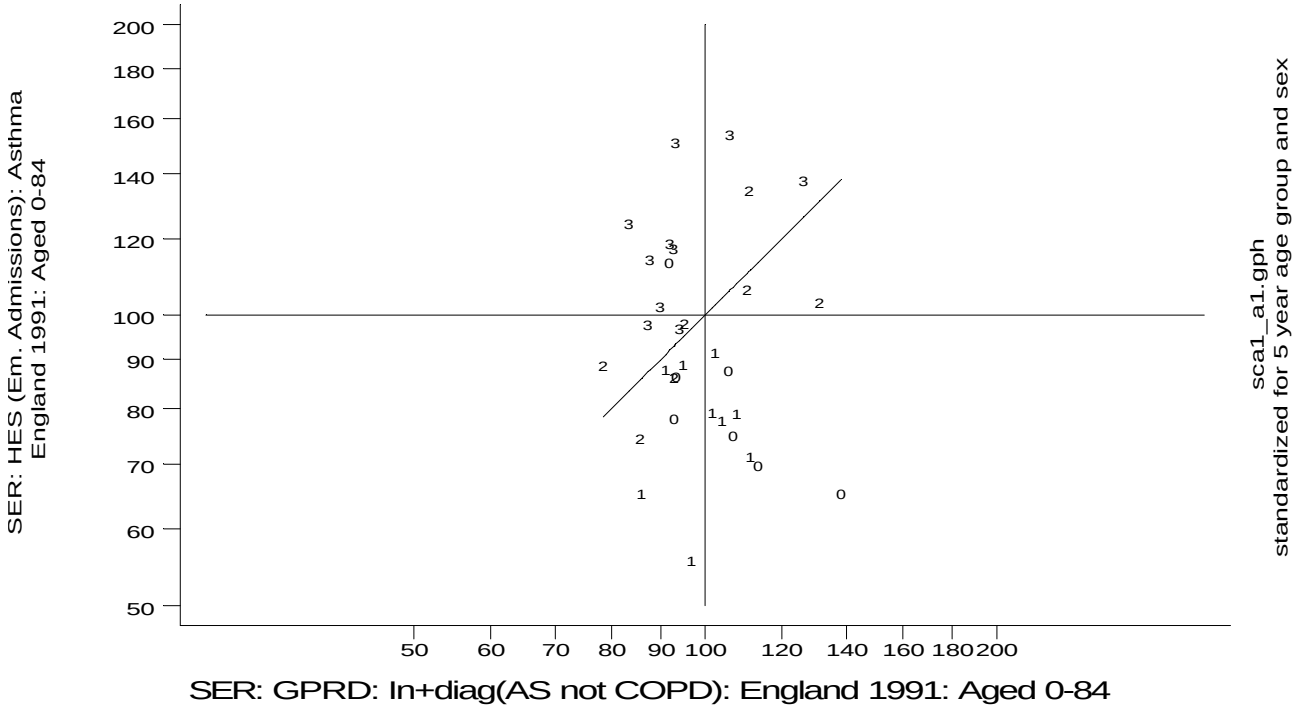
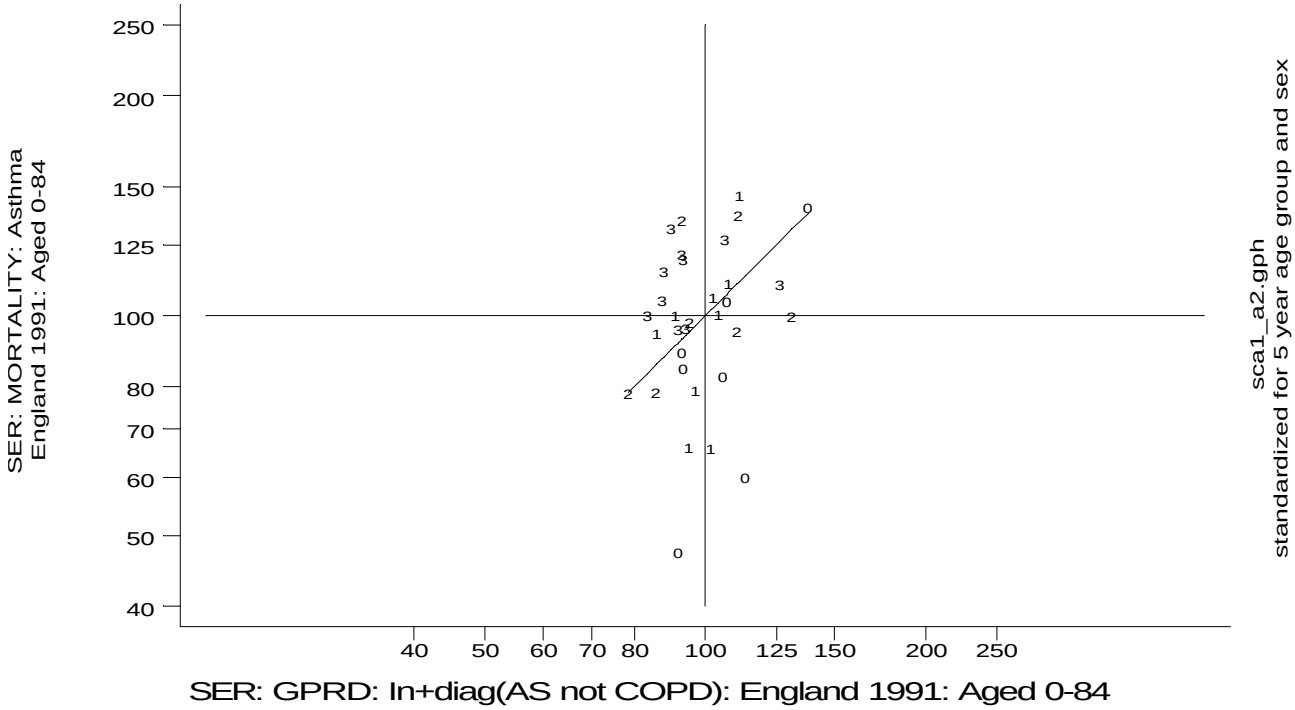
Scatterplots and correlation coefficients (standardised event ratios standardised for age and sex)

- **region and urban-rural comparisons between GPRD, HES and mortality, England 1991, ages 0-84**

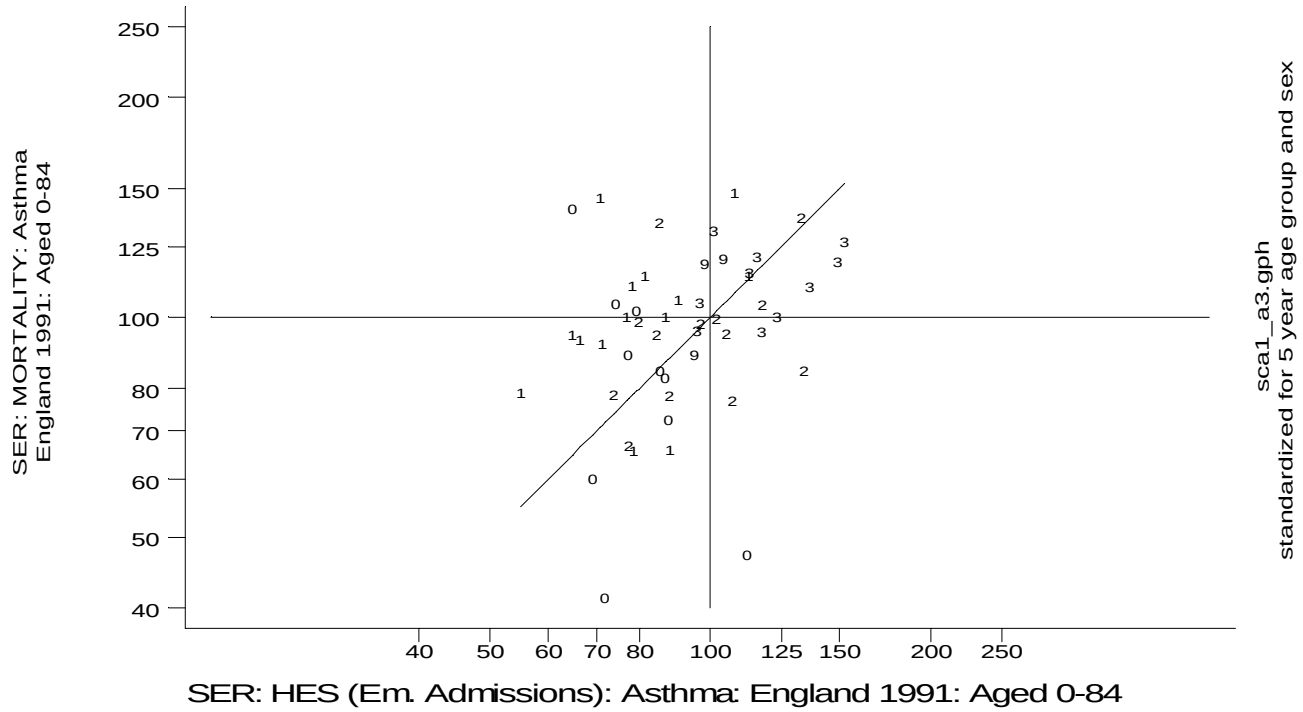
"ALL AGES vs. ALL AGES"





Scatterplots and correlation coefficients (standardised event ratios standardised for age and sex)

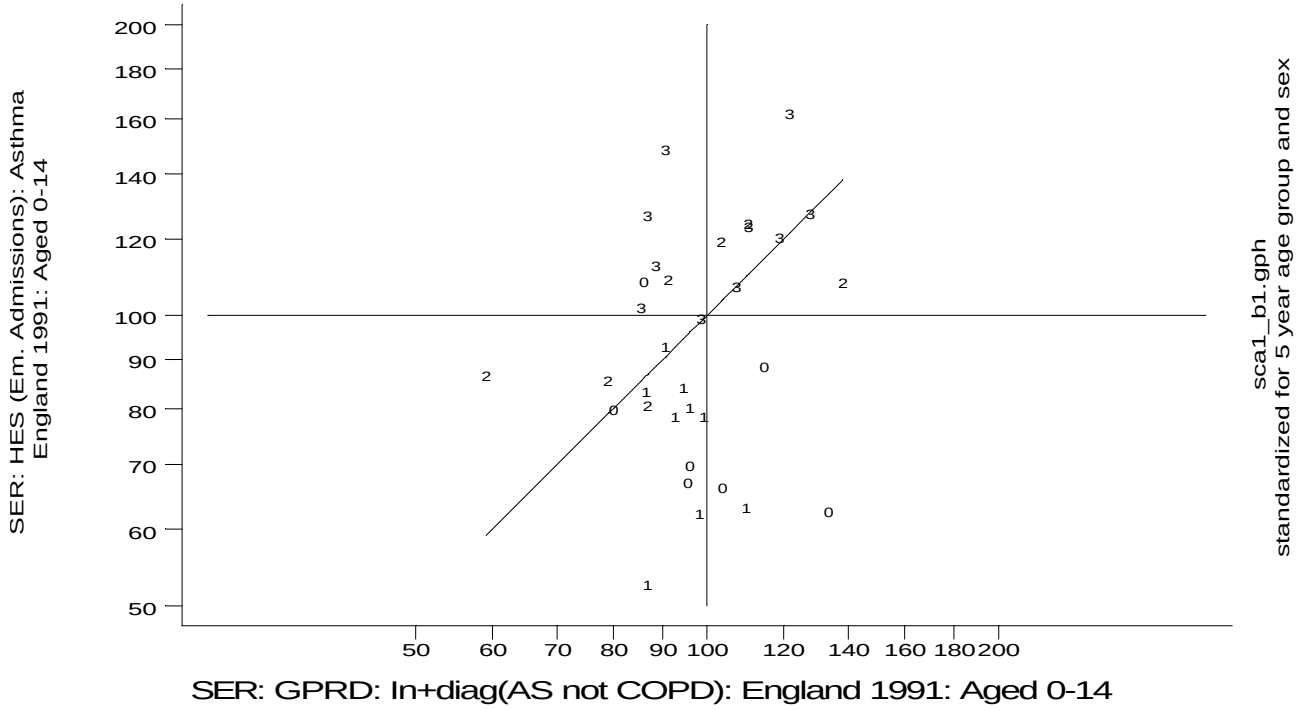
- **region and urban-rural comparisons between GPRD, HES and mortality, England 1991, ages 0-84**



Scatterplots and correlation coefficients (standardised event ratios standardised for age and sex)

- **region and urban-rural comparisons between GPRD, HES and mortality, England 1991, ages 0-84**

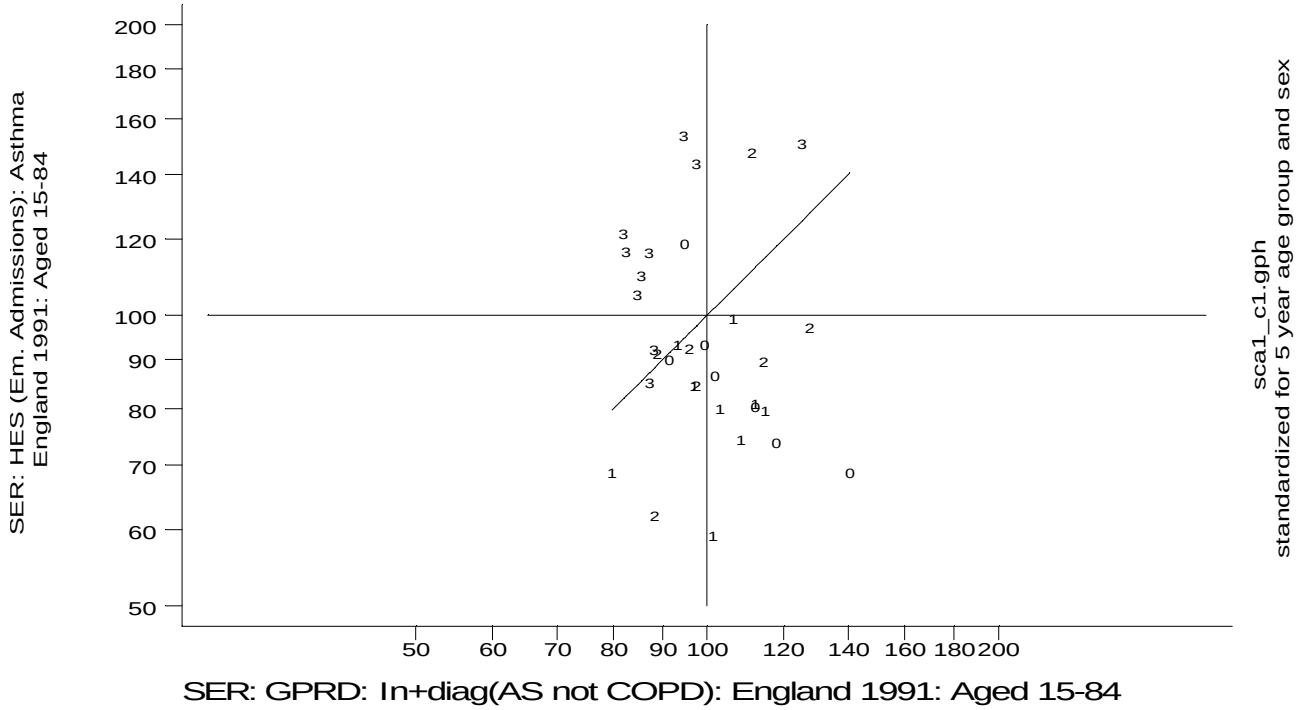
"CHILDREN vs. CHILDREN"



Scatterplots and correlation coefficients (standardised event ratios standardised for age and sex)

- **region and urban-rural comparisons between GPRD, HES and mortality, England 1991, ages 0-84**

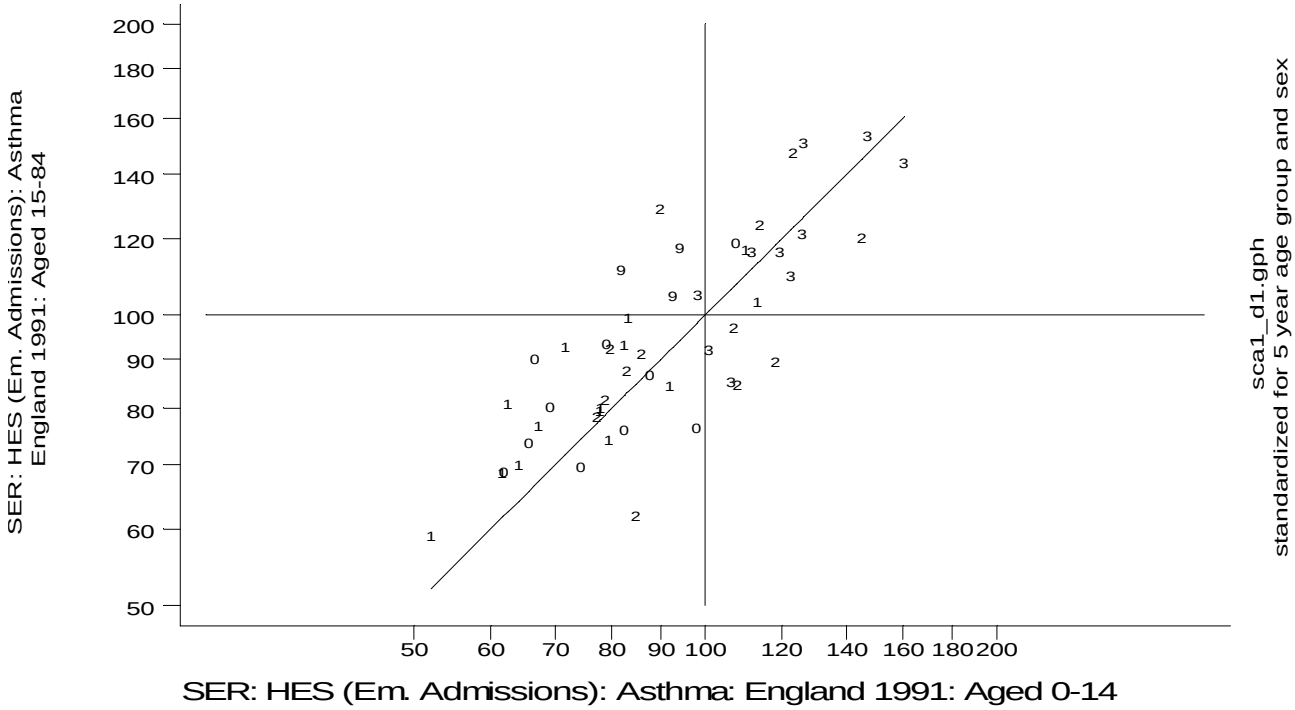
"ADULTS vs. ADULTS"

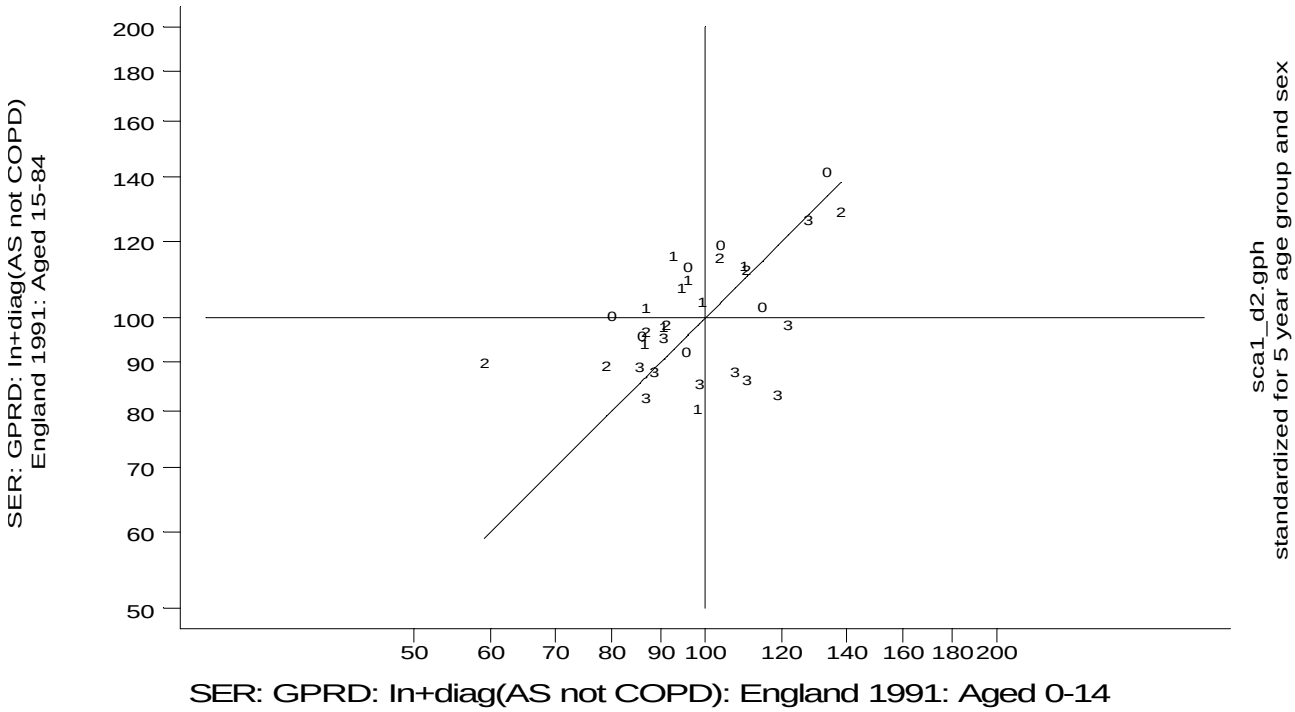


Scatterplots and correlation coefficients (standardised event ratios standardised for age and sex)

- **region and urban-rural comparisons between GPRD, HES and mortality, England 1991, ages 0-84**

"ADULTS vs. CHILDREN"





Scatterplots and correlation coefficients (standardised event ratios standardised for age and sex)

- **region and urban-rural comparisons between GPRD, HES and mortality, England 1991, ages 0-84**

Asthma: Spearman Rank Correlation Coefficients: *"All Ages vs. All Ages"*

	MORTALITY	HES	GPRD: In+diag(AS not COPD)	GPRD: Asthma diag only	GPRD: Inhaler only	GPRD: In+diag((AS or SYM) not COPD)
MORTALITY		0.32	0.23	0.33	0.37	0.33
HES	0.32		-0.12	-0.20	0.13	0.06
GPRD: In+diag(AS not COPD)	0.23	-0.12		0.74	0.44	0.70
GPRD: Asthma diag only	0.33	-0.20	0.74		0.38	0.55
GPRD: Inhaler only	0.37	0.13	0.44	0.38		0.86
GPRD: In+diag((AS or SYM) not COPD)	0.33	0.06	0.70	0.55	0.86	

Asthma: Spearman Rank Correlation Coefficients: *"Children vs. Children"*

	MORTALITY	HES	GPRD
MORTALITY			
HES			0.15
GPRD		0.15	

Asthma: Spearman Rank Correlation Coefficients: *"Adults vs. Adults"*

	MORTALITY	HES	GPRD
MORTALITY			
HES			-0.24
GPRD		-0.24	

Asthma: Spearman Rank Correlation Coefficients: *"Adults vs. Children"*

	MORTALITY	HES	GPRD
MORTALITY			
HES		0.78	
GPRD			0.40

Asthma: Spearman Rank Correlation Coefficients: *Adults and Children*

	HES Aged 0-14	HES Aged 15-84		GPRD Aged 0-14	GPRD Aged 15-84
HES Aged 0-14		0.78		0.15	
HES Aged 15-84	0.78				-0.24
GPRD Aged 0-14	0.15				0.40
GPRD Aged 15-84		-0.24		0.40	

Scatterplots and correlation coefficients (standardised event ratios standardised for age and sex)

- **region and urban-rural comparisons between GPRD, HES and mortality, England 1991, ages 0-84**

```
ALL AGES vs. ALL AGES

a1: HES (0-84) vs. GPRD (0-84)
Number of obs =      33
Spearman's rho =      -0.1230
Test of Ho: hs1_1 and gsc1_8 independent
      Pr > |t| =       0.4953


a2: MORTALITY (0-84) vs. GPRD (0-84)
Number of obs =      33
Spearman's rho =       0.2306
Test of Ho: ms1_1 and gsc1_8 independent
      Pr > |t| =       0.1966


a3: MORTALITY (0-84) vs. HES (0-84)
Number of obs =      50
Spearman's rho =       0.3208
Test of Ho: ms1_1 and hs1_1 independent
      Pr > |t| =       0.0231




Comparisons with alternative Asthma outcomes in the GPRD



HES (0-84) vs. GPRD (0-84)

. spearman hs1_1 gsa1_1
Number of obs =      33
Spearman's rho =      -0.1975
Test of Ho: hs1_1 and gsa1_1 independent
      Pr > |t| =       0.2705

. spearman hs1_1 gsb1_1
Number of obs =      33
Spearman's rho =       0.1263
Test of Ho: hs1_1 and gsb1_1 independent
      Pr > |t| =       0.4836

. spearman hs1_1 gsc1_10
Number of obs =      33
Spearman's rho =       0.0645
Test of Ho: hs1_1 and gsc1_10 independent
      Pr > |t| =       0.7214




MORTALITY (0-84) vs. GPRD (0-84)

. spearman ms1_1 gsa1_1
Number of obs =      33
Spearman's rho =       0.3346
Test of Ho: ms1_1 and gsa1_1 independent
      Pr > |t| =       0.0570

. spearman ms1_1 gsb1_1
Number of obs =      33
Spearman's rho =       0.3697
Test of Ho: ms1_1 and gsb1_1 independent
      Pr > |t| =       0.0342

. spearman ms1_1 gsc1_10
Number of obs =      33
Spearman's rho =       0.3312
Test of Ho: ms1_1 and gsc1_10 independent
      Pr > |t| =       0.0597
```

Scatterplots and correlation coefficients (standardised event ratios standardised for age and sex)

- **region and urban-rural comparisons between GPRD, HES and mortality, England 1991, ages 0-84**

```
Within the GPRD: GPRD (0-84) vs. GPRD (0-84)

. spearman gsa1_1 gsc1_8
Number of obs =      33
Spearman's rho =       0.7390
Test of Ho: gsa1_1 and gsc1_8 independent
      Pr > |t| =       0.0000

. spearman gsb1_1 gsc1_8
Number of obs =      33
Spearman's rho =       0.4418
Test of Ho: gsb1_1 and gsc1_8 independent
      Pr > |t| =       0.0100

. spearman gsc1_10 gsc1_8
Number of obs =      33
Spearman's rho =       0.7029
Test of Ho: gsc1_10 and gsc1_8 independent
      Pr > |t| =       0.0000

. spearman gsb1_1 gsa1_1
Number of obs =      33
Spearman's rho =       0.3767
Test of Ho: gsb1_1 and gsa1_1 independent
      Pr > |t| =       0.0307

. spearman gsc1_10 gsa1_1
Number of obs =      33
Spearman's rho =       0.5531
Test of Ho: gsc1_10 and gsa1_1 independent
      Pr > |t| =       0.0008

. spearman gsb1_1 gsc1_10
Number of obs =      33
Spearman's rho =       0.8573
Test of Ho: gsb1_1 and gsc1_10 independent
      Pr > |t| =       0.0000



CHILDREN vs. CHILDREN

b1: HES (0-14) vs. GPRD (0-14)
Number of obs =      33
Spearman's rho =       0.1527
Test of Ho: hs2_1 and gsc2_8 independent
      Pr > |t| =       0.3961


ADULTS vs. ADULTS

c1: HES (15-84) vs. GPRD (15-84)
Number of obs =      33
Spearman's rho =      -0.2436
Test of Ho: hs3_1 and gsc3_8 independent
      Pr > |t| =       0.1718


ADULTS vs. CHILDREN

d1: HES (15-84) vs. HES (0-14)
Number of obs =      50
Spearman's rho =       0.7818
Test of Ho: hs3_1 and hs2_1 independent
      Pr > |t| =       0.0000


d2: GPRD (15-84) vs. GPRD (0-14)
Number of obs =      33
Spearman's rho =       0.4047
Test of Ho: gsc3_8 and gsc2_8 independent
      Pr > |t| =       0.0195

ALL AGES
```

Scatterplots and correlation coefficients (standardised event ratios standardised for age and sex)

- **region and urban-rural comparisons between GPRD, HES and mortality, England 1991, ages 0-84**

Observed Number of Asthma Events,
England 1991: Aged 0-84

rha	urban	goc1_8	ho1_1	mo1_1
Northern	rural	3148	982	24
Northern	mixed	.	1069	29
Northern	urban	.	1300	14
Northern	conurbat	2002	1878	48
Yorkshir	rural	.	566	7
Yorkshir	mixed	867	779	24
Yorkshir	urban	.	893	14
Yorkshir	conurbat	843	2885	56
Trent	rural	1142	1303	28
Trent	mixed	1290	2644	57
Trent	urban	.	1109	15
Trent	conurbat	2200	3196	50
E Anglia	rural	3161	1397	26
E Anglia	mixed	2126	490	18
E Anglia	Indeterm	.	692	16
NW Thame	mixed	1952	952	24
NW Thame	urban	1256	1409	22
NW Thame	conurbat	1704	3878	73
NE Thame	rural	.	794	14
NE Thame	mixed	.	349	8
NE Thame	urban	454	999	19
NE Thame	conurbat	766	4626	64
SE Thame	rural	642	1035	10
SE Thame	mixed	.	769	27
SE Thame	urban	203	1554	26
SE Thame	conurbat	476	3019	43
SW Thame	mixed	3231	1037	32
SW Thame	urban	279	671	15
SW Thame	conurbat	877	1977	37
Wessex	rural	2017	293	10
Wessex	mixed	1389	1424	22
Wessex	urban	.	1265	31
Wessex	Indeterm	.	992	31
Oxford	rural	.	792	17
Oxford	mixed	1801	2292	52
Oxford	urban	.	277	4
S Wester	rural	1308	1414	31
S Wester	mixed	1457	1283	35
S Wester	urban	1348	1156	36
S Wester	Indeterm	.	830	16
W Midlan	rural	1086	896	37
W Midlan	mixed	.	902	24
W Midlan	urban	2328	1318	26
W Midlan	conurbat	6733	5419	100
Mersey	mixed	1939	887	13
Mersey	urban	.	666	10
Mersey	conurbat	2270	3389	52
N Wester	mixed	.	442	9
N Wester	urban	1700	2591	53
N Wester	conurbat	3975	6794	102

Scatterplots and correlation coefficients (standardised event ratios standardised for age and sex)

- **region and urban-rural comparisons between GPRD, HES and mortality, England 1991, ages 0-84**

Denominator for Asthma Events,
England 1991: Aged 0-84

rha	urban	gdc1_8	hd1_1	md1_1
Northern	rural	73693.9	782999	782999
Northern	mixed	.	597416	597416
Northern	urban	.	553415	553415
Northern	conurbat	46625.4	1114143	1114143
Yorkshir	rural	.	487087	487087
Yorkshir	mixed	21894.9	739537	739537
Yorkshir	urban	.	663675	663675
Yorkshir	conurbat	21123.7	1732867	1732867
Trent	rural	26873.1	944794	944794
Trent	mixed	31104.1	1805855	1805855
Trent	urban	.	616563	616563
Trent	conurbat	50327.4	1283438	1283438
E Anglia	rural	60878.6	1232209	1232209
E Anglia	mixed	39800.4	418874	418874
E Anglia	Indeterm	.	396166	396166
NW Thame	mixed	39289.2	722017	722017
NW Thame	urban	24596.9	777014	777014
NW Thame	conurbat	41145.8	2029948	2029948
NE Thame	rural	.	553971	553971
NE Thame	mixed	.	290283	290283
NE Thame	urban	9959.2	608426	608426
NE Thame	conurbat	18955.0	2277344	2277344
SE Thame	rural	14831.8	561907	561907
SE Thame	mixed	.	589118	589118
SE Thame	urban	5564.5	1052077	1052077
SE Thame	conurbat	12769.3	1432129	1432129
SW Thame	mixed	73245.9	1156955	1156955
SW Thame	urban	7411.1	562687	562687
SW Thame	conurbat	20236.4	1254634	1254634
Wessex	rural	41099.5	247082	247082
Wessex	mixed	29406.8	1080522	1080522
Wessex	urban	.	952302	952302
Wessex	Indeterm	.	643322	643322
Oxford	rural	.	592824	592824
Oxford	mixed	37103.4	1755566	1755566
Oxford	urban	.	177780	177780
S Wester	rural	27446.6	1004839	1004839
S Wester	mixed	30809.9	879303	879303
S Wester	urban	31243.0	819129	819129
S Wester	Indeterm	.	529621	529621
W Midlan	rural	16603.4	823682	823682
W Midlan	mixed	.	818638	818638
W Midlan	urban	38256.0	787725	787725
W Midlan	conurbat	163850.3	2764012	2764012
Mersey	mixed	44506.4	607659	607659
Mersey	urban	.	326479	326479
Mersey	conurbat	38048.6	1446235	1446235
N Wester	mixed	.	235257	235257
N Wester	urban	32636.9	1142919	1142919
N Wester	conurbat	79551.5	2572495	2572495

Scatterplots and correlation coefficients (standardised event ratios standardised for age and sex)

- **region and urban-rural comparisons between GPRD, HES and mortality, England 1991, ages 0-84**

Crude Rate of Asthma Events,
England 1991: Aged 0-84

rha	urban	grc1_8	hr1_1	mr1_1
Northern	rural	42.7	1254.2	30.7
Northern	mixed	.	1789.4	48.5
Northern	urban	.	2349.1	25.3
Northern	conurbat	42.9	1685.6	43.1
Yorkshir	rural	.	1162.0	14.4
Yorkshir	mixed	39.6	1053.4	32.5
Yorkshir	urban	.	1345.5	21.1
Yorkshir	conurbat	39.9	1664.9	32.3
Trent	rural	42.5	1379.1	29.6
Trent	mixed	41.5	1464.1	31.6
Trent	urban	.	1798.7	24.3
Trent	conurbat	43.7	2490.2	39.0
E Anglia	rural	51.9	1133.7	21.1
E Anglia	mixed	53.4	1169.8	43.0
E Anglia	Indeterm	.	1746.7	40.4
NW Thame	mixed	49.7	1318.5	33.2
NW Thame	urban	51.1	1813.4	28.3
NW Thame	conurbat	41.4	1910.4	36.0
NE Thame	rural	.	1433.3	25.3
NE Thame	mixed	.	1202.3	27.6
NE Thame	urban	45.6	1641.9	31.2
NE Thame	conurbat	40.4	2031.3	28.1
SE Thame	rural	43.3	1841.9	17.8
SE Thame	mixed	.	1305.3	45.8
SE Thame	urban	36.5	1477.1	24.7
SE Thame	conurbat	37.3	2108.1	30.0
SW Thame	mixed	44.1	896.3	27.7
SW Thame	urban	37.6	1192.5	26.7
SW Thame	conurbat	43.3	1575.8	29.5
Wessex	rural	49.1	1185.8	40.5
Wessex	mixed	47.2	1317.9	20.4
Wessex	urban	.	1328.4	32.6
Wessex	Indeterm	.	1542.0	48.2
Oxford	rural	.	1336.0	28.7
Oxford	mixed	48.5	1305.6	29.6
Oxford	urban	.	1558.1	22.5
S Wester	rural	47.7	1407.2	30.9
S Wester	mixed	47.3	1459.1	39.8
S Wester	urban	43.1	1411.3	43.9
S Wester	Indeterm	.	1567.2	30.2
W Midlan	rural	65.4	1087.8	44.9
W Midlan	mixed	.	1101.8	29.3
W Midlan	urban	60.9	1673.2	33.0
W Midlan	conurbat	41.1	1960.6	36.2
Mersey	mixed	43.6	1459.7	21.4
Mersey	urban	.	2039.9	30.6
Mersey	conurbat	59.7	2343.3	36.0
N Wester	mixed	.	1878.8	38.3
N Wester	urban	52.1	2267.0	46.4
N Wester	conurbat	50.0	2641.0	39.7

Scatterplots and correlation coefficients (standardised event ratios standardised for age and sex)

- **region and urban-rural comparisons between GPRD, HES and mortality, England 1991, ages 0-84**

Expected Number of Asthma Events,
England 1991: Aged 0-84

rha	urban	gec1_8	he1_1	me1_1
Northern	rural	3389.6	1270.7	27.3
Northern	mixed	.	988.0	19.8
Northern	urban	.	969.5	16.8
Northern	conurbat	2230.3	1859.4	37.0
Yorkshir	rural	.	787.6	17.1
Yorkshir	mixed	1009.4	1203.4	25.7
Yorkshir	urban	.	1154.3	21.3
Yorkshir	conurbat	965.5	2983.4	54.1
Trent	rural	1224.5	1525.3	33.5
Trent	mixed	1417.5	3040.8	57.7
Trent	urban	.	1035.0	19.8
Trent	conurbat	2361.7	2139.6	42.4
E Anglia	rural	2788.0	2021.3	43.8
E Anglia	mixed	1910.4	693.0	12.5
E Anglia	Indeterm	.	664.2	13.5
NW Thame	mixed	1811.3	1215.7	22.0
NW Thame	urban	1137.4	1337.6	23.4
NW Thame	conurbat	1836.3	3341.7	60.9
NE Thame	rural	.	907.2	19.5
NE Thame	mixed	.	490.5	8.8
NE Thame	urban	477.4	1029.1	19.6
NE Thame	conurbat	833.8	3936.5	67.8
SE Thame	rural	700.2	921.9	21.4
SE Thame	mixed	.	944.4	24.0
SE Thame	urban	258.9	1767.3	33.7
SE Thame	conurbat	571.0	2447.4	43.5
SW Thame	mixed	3337.1	1881.5	41.0
SW Thame	urban	325.6	910.0	19.3
SW Thame	conurbat	932.8	2060.5	39.0
Wessex	rural	1888.3	394.7	9.7
Wessex	mixed	1365.2	1812.3	33.9
Wessex	urban	.	1585.9	31.8
Wessex	Indeterm	.	1009.7	26.5
Oxford	rural	.	997.7	16.8
Oxford	mixed	1729.1	2980.5	52.6
Oxford	urban	.	328.2	4.3
S Wester	rural	1236.5	1628.3	38.0
S Wester	mixed	1422.0	1415.8	33.4
S Wester	urban	1451.6	1356.5	27.0
S Wester	Indeterm	.	872.6	18.2
W Midlan	rural	786.7	1384.2	26.6
W Midlan	mixed	.	1357.0	26.1
W Midlan	urban	1774.0	1292.6	26.4
W Midlan	conurbat	7679.9	4786.7	88.1
Mersey	mixed	2043.0	1007.3	20.0
Mersey	urban	.	565.1	9.7
Mersey	conurbat	1797.5	2480.8	47.8
N Wester	mixed	.	391.9	8.0
N Wester	urban	1532.7	1944.1	39.1
N Wester	conurbat	3744.4	4455.3	81.3

Scatterplots and correlation coefficients (standardised event ratios standardised for age and sex)

- **region and urban-rural comparisons between GPRD, HES and mortality, England 1991, ages 0-84**

SER's for Asthma Events, standardized for age5 and sex
England 1991: Aged 0-84

rha	urban	gsc1_8	hs1_1	ms1_1
Northern	rural	92.9	77.3	87.9
Northern	mixed	.	108.2	146.5
Northern	urban	.	134.1	83.4
Northern	conurbat	89.8	101.0	129.7
Yorkshir	rural	.	71.9	40.9
Yorkshir	mixed	85.9	64.7	93.5
Yorkshir	urban	.	77.4	65.8
Yorkshir	conurbat	87.3	96.7	103.6
Trent	rural	93.3	85.4	83.6
Trent	mixed	91.0	86.9	98.8
Trent	urban	.	107.2	75.9
Trent	conurbat	93.2	149.4	118.1
E Anglia	rural	113.4	69.1	59.4
E Anglia	mixed	111.3	70.7	144.0
E Anglia	Indeterm	.	104.2	118.8
NW Thame	mixed	107.8	78.3	109.1
NW Thame	urban	110.4	105.3	93.9
NW Thame	conurbat	92.8	116.0	119.9
NE Thame	rural	.	87.5	71.7
NE Thame	mixed	.	71.1	90.9
NE Thame	urban	95.1	97.1	96.7
NE Thame	conurbat	91.9	117.5	94.4
SE Thame	rural	91.7	112.3	46.8
SE Thame	mixed	.	81.4	112.6
SE Thame	urban	78.4	87.9	77.2
SE Thame	conurbat	83.4	123.4	98.9
SW Thame	mixed	96.8	55.1	78.1
SW Thame	urban	85.7	73.7	77.6
SW Thame	conurbat	94.0	95.9	94.8
Wessex	rural	106.8	74.2	103.2
Wessex	mixed	101.7	78.6	64.9
Wessex	urban	.	79.8	97.4
Wessex	Indeterm	.	98.2	117.1
Oxford	rural	.	79.4	101.1
Oxford	mixed	104.2	76.9	98.9
Oxford	urban	.	84.4	93.5
S Wester	rural	105.8	86.8	81.6
S Wester	mixed	102.5	90.6	104.8
S Wester	urban	92.9	85.2	133.5
S Wester	Indeterm	.	95.1	88.0
W Midlan	rural	138.0	64.7	139.2
W Midlan	mixed	.	66.5	91.9
W Midlan	urban	131.2	102.0	98.5
W Midlan	conurbat	87.7	113.2	113.6
Mersey	mixed	94.9	88.1	65.1
Mersey	urban	.	117.9	102.8
Mersey	conurbat	126.3	136.6	108.9
N Wester	mixed	.	112.8	112.8
N Wester	urban	110.9	133.3	135.7
N Wester	conurbat	106.2	152.5	125.4

Scatterplots and correlation coefficients (standardised event ratios standardised for age and sex)

- **region and urban-rural comparisons between GPRD, HES and mortality, England 1991, ages 0-84**

CHILDREN

Observed Number of Asthma Events,
England 1991: Aged 0-14

rha	urban	goc2_8	ho2_1
Northern	rural	1064	447
Northern	mixed	.	601
Northern	urban	.	807
Northern	conurbat	799	983
Yorkshir	rural	.	309
Yorkshir	mixed	328	391
Yorkshir	urban	.	502
Yorkshir	conurbat	268	1679
Trent	rural	316	632
Trent	mixed	400	1377
Trent	urban	.	501
Trent	conurbat	751	1692
E Anglia	rural	941	708
E Anglia	mixed	808	233
E Anglia	Indeterm	.	342
NW Thame	mixed	547	522
NW Thame	urban	416	893
NW Thame	conurbat	589	2156
NE Thame	rural	.	472
NE Thame	mixed	.	184
NE Thame	urban	164	611
NE Thame	conurbat	256	2617
SE Thame	rural	219	525
SE Thame	mixed	.	349
SE Thame	urban	54	829
SE Thame	conurbat	143	1692
SW Thame	mixed	929	517
SW Thame	urban	72	406
SW Thame	conurbat	338	1153
Wessex	rural	599	141
Wessex	mixed	466	775
Wessex	urban	.	674
Wessex	Indeterm	.	468
Oxford	rural	.	455
Oxford	mixed	571	1317
Oxford	urban	.	167
S Wester	rural	438	752
S Wester	mixed	451	608
S Wester	urban	418	579
S Wester	Indeterm	.	382
W Midlan	rural	387	472
W Midlan	mixed	.	472
W Midlan	urban	835	736
W Midlan	conurbat	2351	3000
Mersey	mixed	609	500
Mersey	urban	.	366
Mersey	conurbat	820	1740
N Wester	mixed	.	231
N Wester	urban	603	1328
N Wester	conurbat	1631	4023

Scatterplots and correlation coefficients (standardised event ratios standardised for age and sex)

- **region and urban-rural comparisons between GPRD, HES and mortality, England 1991, ages 0-84**

Denominator for Asthma Events,
England 1991: Aged 0-14

rha	urban	gdc2_8	hd2_1
Northern	rural	13443.4	146018
Northern	mixed	.	114464
Northern	urban	.	119187
Northern	conurbat	9747.0	212942
Yorkshir	rural	.	90405
Yorkshir	mixed	4017.7	136296
Yorkshir	urban	.	135882
Yorkshir	conurbat	3802.9	350160
Trent	rural	4742.6	172811
Trent	mixed	5605.9	354675
Trent	urban	.	116494
Trent	conurbat	9970.5	241588
E Anglia	rural	10988.7	231367
E Anglia	mixed	8897.9	79281
E Anglia	Indeterm	.	77744
NW Thame	mixed	7113.2	142091
NW Thame	urban	4836.4	158924
NW Thame	conurbat	6488.4	363354
NE Thame	rural	.	102605
NE Thame	mixed	.	58504
NE Thame	urban	2198.4	119864
NE Thame	conurbat	2622.0	449704
SE Thame	rural	3042.5	104546
SE Thame	mixed	.	105583
SE Thame	urban	1099.4	202131
SE Thame	conurbat	1992.6	273090
SW Thame	mixed	12908.8	213009
SW Thame	urban	1089.1	102303
SW Thame	conurbat	3878.8	221192
Wessex	rural	7560.0	44385
Wessex	mixed	5720.5	210665
Wessex	urban	.	179073
Wessex	Indeterm	.	108814
Oxford	rural	.	117802
Oxford	mixed	7123.7	351918
Oxford	urban	.	42788
S Wester	rural	4601.2	185876
S Wester	mixed	5781.1	155829
S Wester	urban	5821.4	152631
S Wester	Indeterm	.	99364
W Midlan	rural	3479.9	163040
W Midlan	mixed	.	157573
W Midlan	urban	7257.8	146513
W Midlan	conurbat	32092.7	565178
Mersey	mixed	8040.9	116525
Mersey	urban	.	68734
Mersey	conurbat	7730.9	291849
N Wester	mixed	.	44915
N Wester	urban	6650.4	228258
N Wester	conurbat	16164.0	525812

Scatterplots and correlation coefficients (standardised event ratios standardised for age and sex)

- **region and urban-rural comparisons between GPRD, HES and mortality, England 1991, ages 0-84**

Crude Rate of Asthma Events,
England 1991: Aged 0-14

rha	urban	grc2_8	hr2_1
Northern	rural	79.1	3061.3
Northern	mixed	.	5250.6
Northern	urban	.	6770.9
Northern	conurbat	82.0	4616.3
Yorkshir	rural	.	3418.0
Yorkshir	mixed	81.6	2868.8
Yorkshir	urban	.	3694.4
Yorkshir	conurbat	70.5	4795.0
Trent	rural	66.6	3657.2
Trent	mixed	71.4	3882.4
Trent	urban	.	4300.7
Trent	conurbat	75.3	7003.7
E Anglia	rural	85.6	3060.1
E Anglia	mixed	90.8	2938.9
E Anglia	Indeterm	.	4399.1
NW Thame	mixed	76.9	3673.7
NW Thame	urban	86.0	5619.0
NW Thame	conurbat	90.8	5933.6
NE Thame	rural	.	4600.2
NE Thame	mixed	.	3145.1
NE Thame	urban	74.6	5097.4
NE Thame	conurbat	97.6	5819.4
SE Thame	rural	72.0	5021.7
SE Thame	mixed	.	3305.5
SE Thame	urban	49.1	4101.3
SE Thame	conurbat	71.8	6195.8
SW Thame	mixed	72.0	2427.1
SW Thame	urban	66.1	3968.6
SW Thame	conurbat	87.1	5212.7
Wessex	rural	79.2	3176.7
Wessex	mixed	81.5	3678.8
Wessex	urban	.	3763.8
Wessex	Indeterm	.	4300.9
Oxford	rural	.	3862.4
Oxford	mixed	80.2	3742.3
Oxford	urban	.	3903.0
S Wester	rural	95.2	4045.7
S Wester	mixed	78.0	3901.7
S Wester	urban	71.8	3793.5
S Wester	Indeterm	.	3844.5
W Midlan	rural	111.2	2895.0
W Midlan	mixed	.	2995.4
W Midlan	urban	115.0	5023.4
W Midlan	conurbat	73.3	5308.1
Mersey	mixed	75.7	4290.9
Mersey	urban	.	5324.9
Mersey	conurbat	106.1	5962.0
N Wester	mixed	.	5143.0
N Wester	urban	90.7	5818.0
N Wester	conurbat	100.9	7651.0

Scatterplots and correlation coefficients (standardised event ratios standardised for age and sex)

- **region and urban-rural comparisons between GPRD, HES and mortality, England 1991, ages 0-84**

Expected Number of Asthma Events,
England 1991: Aged 0-14

rha	urban	gec2_8	he2_1
Northern	rural	1112.7	671.4
Northern	mixed	.	530.6
Northern	urban	.	556.3
Northern	conurbat	810.8	1000.0
Yorkshir	rural	.	415.5
Yorkshir	mixed	334.0	633.3
Yorkshir	urban	.	650.6
Yorkshir	conurbat	313.3	1664.4
Trent	rural	394.4	799.4
Trent	mixed	462.3	1668.0
Trent	urban	.	558.2
Trent	conurbat	829.1	1150.6
E Anglia	rural	906.1	1078.3
E Anglia	mixed	735.8	372.3
E Anglia	Indeterm	.	363.0
NW Thame	mixed	589.3	670.3
NW Thame	urban	402.5	755.9
NW Thame	conurbat	532.9	1758.9
NE Thame	rural	.	481.9
NE Thame	mixed	.	273.7
NE Thame	urban	179.9	566.6
NE Thame	conurbat	215.5	2195.1
SE Thame	rural	254.3	488.6
SE Thame	mixed	.	487.2
SE Thame	urban	91.4	965.3
SE Thame	conurbat	164.8	1344.0
SW Thame	mixed	1070.5	992.8
SW Thame	urban	91.0	478.8
SW Thame	conurbat	314.9	1084.9
Wessex	rural	624.5	203.9
Wessex	mixed	469.4	994.0
Wessex	urban	.	855.7
Wessex	Indeterm	.	505.3
Oxford	rural	.	551.3
Oxford	mixed	594.8	1656.3
Oxford	urban	.	201.3
S Wester	rural	382.7	857.4
S Wester	mixed	477.3	730.1
S Wester	urban	481.6	725.5
S Wester	Indeterm	.	466.7
W Midlan	rural	289.3	762.0
W Midlan	mixed	.	736.2
W Midlan	urban	604.9	687.6
W Midlan	conurbat	2651.8	2688.2
Mersey	mixed	672.4	545.0
Mersey	urban	.	321.4
Mersey	conurbat	641.1	1376.3
N Wester	mixed	.	209.9
N Wester	urban	546.4	1077.7
N Wester	conurbat	1339.2	2508.2

Scatterplots and correlation coefficients (standardised event ratios standardised for age and sex)

- **region and urban-rural comparisons between GPRD, HES and mortality, England 1991, ages 0-84**

SER's for Asthma Events, standardized for age5 and sex
England 1991: Aged 0-14

rha	urban	gsc2_8	hs2_1
Northern	rural	95.6	66.6
Northern	mixed	.	113.3
Northern	urban	.	145.1
Northern	conurbat	98.5	98.3
Yorkshir	rural	.	74.4
Yorkshir	mixed	98.2	61.7
Yorkshir	urban	.	77.2
Yorkshir	conurbat	85.5	100.9
Trent	rural	80.1	79.1
Trent	mixed	86.5	82.6
Trent	urban	.	89.8
Trent	conurbat	90.6	147.0
E Anglia	rural	103.8	65.7
E Anglia	mixed	109.8	62.6
E Anglia	Indeterm	.	94.2
NW Thame	mixed	92.8	77.9
NW Thame	urban	103.4	118.1
NW Thame	conurbat	110.5	122.6
NE Thame	rural	.	98.0
NE Thame	mixed	.	67.2
NE Thame	urban	91.1	107.8
NE Thame	conurbat	118.8	119.2
SE Thame	rural	86.1	107.5
SE Thame	mixed	.	71.6
SE Thame	urban	59.1	85.9
SE Thame	conurbat	86.7	125.9
SW Thame	mixed	86.8	52.1
SW Thame	urban	79.1	84.8
SW Thame	conurbat	107.3	106.3
Wessex	rural	95.9	69.1
Wessex	mixed	99.3	78.0
Wessex	urban	.	78.8
Wessex	Indeterm	.	92.6
Oxford	rural	.	82.5
Oxford	mixed	96.0	79.5
Oxford	urban	.	83.0
S Wester	rural	114.4	87.7
S Wester	mixed	94.5	83.3
S Wester	urban	86.8	79.8
S Wester	Indeterm	.	81.9
W Midlan	rural	133.8	61.9
W Midlan	mixed	.	64.1
W Midlan	urban	138.0	107.0
W Midlan	conurbat	88.7	111.6
Mersey	mixed	90.6	91.7
Mersey	urban	.	113.9
Mersey	conurbat	127.9	126.4
N Wester	mixed	.	110.1
N Wester	urban	110.4	123.2
N Wester	conurbat	121.8	160.4

Scatterplots and correlation coefficients (standardised event ratios standardised for age and sex)

- **region and urban-rural comparisons between GPRD, HES and mortality, England 1991, ages 0-84**

ADULTS

Observed Number of Asthma Events,
England 1991: Aged 15-84

rha	urban	goc3_8	ho3_1
Northern	rural	2084	535
Northern	mixed	.	468
Northern	urban	.	493
Northern	conurbat	1203	895
Yorkshir	rural	.	257
Yorkshir	mixed	539	388
Yorkshir	urban	.	391
Yorkshir	conurbat	575	1206
Trent	rural	826	671
Trent	mixed	890	1267
Trent	urban	.	608
Trent	conurbat	1449	1504
E Anglia	rural	2220	689
E Anglia	mixed	1318	257
E Anglia	Indeterm	.	350
NW Thame	mixed	1405	430
NW Thame	urban	840	516
NW Thame	conurbat	1115	1722
NE Thame	rural	.	322
NE Thame	mixed	.	165
NE Thame	urban	290	388
NE Thame	conurbat	510	2009
SE Thame	rural	423	510
SE Thame	mixed	.	420
SE Thame	urban	149	725
SE Thame	conurbat	333	1327
SW Thame	mixed	2302	520
SW Thame	urban	207	265
SW Thame	conurbat	539	824
Wessex	rural	1418	152
Wessex	mixed	923	649
Wessex	urban	.	591
Wessex	Indeterm	.	524
Oxford	rural	.	337
Oxford	mixed	1230	975
Oxford	urban	.	110
S Wester	rural	870	662
S Wester	mixed	1006	675
S Wester	urban	930	577
S Wester	Indeterm	.	448
W Midlan	rural	699	424
W Midlan	mixed	.	430
W Midlan	urban	1493	582
W Midlan	conurbat	4382	2419
Mersey	mixed	1330	387
Mersey	urban	.	300
Mersey	conurbat	1450	1649
N Wester	mixed	.	211
N Wester	urban	1097	1263
N Wester	conurbat	2344	2771

Scatterplots and correlation coefficients (standardised event ratios standardised for age and sex)

- **region and urban-rural comparisons between GPRD, HES and mortality, England 1991, ages 0-84**

Denominator for Asthma Events,
England 1991: Aged 15-84

rha	urban	gdc3_8	hd3_1
Northern	rural	60250.6	636981
Northern	mixed	.	482952
Northern	urban	.	434228
Northern	conurbat	36878.4	901201
Yorkshir	rural	.	396682
Yorkshir	mixed	17877.2	603241
Yorkshir	urban	.	527793
Yorkshir	conurbat	17320.8	1382707
Trent	rural	22130.5	771983
Trent	mixed	25498.2	1451180
Trent	urban	.	500069
Trent	conurbat	40357.0	1041850
E Anglia	rural	49889.9	1000842
E Anglia	mixed	30902.5	339593
E Anglia	Indeterm	.	318422
NW Thame	mixed	32176.0	579926
NW Thame	urban	19760.5	618090
NW Thame	conurbat	34657.4	1666594
NE Thame	rural	.	451366
NE Thame	mixed	.	231779
NE Thame	urban	7760.8	488562
NE Thame	conurbat	16333.0	1827640
SE Thame	rural	11789.3	457361
SE Thame	mixed	.	483535
SE Thame	urban	4465.1	849946
SE Thame	conurbat	10776.7	1159039
SW Thame	mixed	60337.0	943946
SW Thame	urban	6322.0	460384
SW Thame	conurbat	16357.6	1033442
Wessex	rural	33539.5	202697
Wessex	mixed	23686.3	869857
Wessex	urban	.	773229
Wessex	Indeterm	.	534508
Oxford	rural	.	475022
Oxford	mixed	29979.7	1403648
Oxford	urban	.	134992
S Wester	rural	22845.4	818963
S Wester	mixed	25028.8	723474
S Wester	urban	25421.6	666498
S Wester	Indeterm	.	430257
W Midlan	rural	13123.6	660642
W Midlan	mixed	.	661065
W Midlan	urban	30998.3	641212
W Midlan	conurbat	131757.6	2198834
Mersey	mixed	36465.5	491134
Mersey	urban	.	257745
Mersey	conurbat	30317.7	1154386
N Wester	mixed	.	190342
N Wester	urban	25986.5	914661
N Wester	conurbat	63387.5	2046683

Scatterplots and correlation coefficients (standardised event ratios standardised for age and sex)

- **region and urban-rural comparisons between GPRD, HES and mortality, England 1991, ages 0-84**

Crude Rate of Asthma Events,
England 1991: Aged 15-84

rha	urban	grc3_8	hr3_1
Northern	rural	34.6	839.9
Northern	mixed	.	969.0
Northern	urban	.	1135.3
Northern	conurbat	32.6	993.1
Yorkshir	rural	.	647.9
Yorkshir	mixed	30.2	643.2
Yorkshir	urban	.	740.8
Yorkshir	conurbat	33.2	872.2
Trent	rural	37.3	869.2
Trent	mixed	34.9	873.1
Trent	urban	.	1215.8
Trent	conurbat	35.9	1443.6
E Anglia	rural	44.5	688.4
E Anglia	mixed	42.7	756.8
E Anglia	Indeterm	.	1099.2
NW Thame	mixed	43.7	741.5
NW Thame	urban	42.5	834.8
NW Thame	conurbat	32.2	1033.2
NE Thame	rural	.	713.4
NE Thame	mixed	.	711.9
NE Thame	urban	37.4	794.2
NE Thame	conurbat	31.2	1099.2
SE Thame	rural	35.9	1115.1
SE Thame	mixed	.	868.6
SE Thame	urban	33.4	853.0
SE Thame	conurbat	30.9	1144.9
SW Thame	mixed	38.2	550.9
SW Thame	urban	32.7	575.6
SW Thame	conurbat	33.0	797.3
Wessex	rural	42.3	749.9
Wessex	mixed	39.0	746.1
Wessex	urban	.	764.3
Wessex	Indeterm	.	980.3
Oxford	rural	.	709.4
Oxford	mixed	41.0	694.6
Oxford	urban	.	814.9
S Wester	rural	38.1	808.3
S Wester	mixed	40.2	933.0
S Wester	urban	36.6	865.7
S Wester	Indeterm	.	1041.2
W Midlan	rural	53.3	641.8
W Midlan	mixed	.	650.5
W Midlan	urban	48.2	907.7
W Midlan	conurbat	33.3	1100.1
Mersey	mixed	36.5	788.0
Mersey	urban	.	1163.9
Mersey	conurbat	47.8	1428.5
N Wester	mixed	.	1108.5
N Wester	urban	42.2	1380.8
N Wester	conurbat	37.0	1353.9

Scatterplots and correlation coefficients (standardised event ratios standardised for age and sex)

- **region and urban-rural comparisons between GPRD, HES and mortality, England 1991, ages 0-84**

Expected Number of Asthma Events,
England 1991: Aged 15-84

rha	urban	gec3_8	he3_1
Northern	rural	2276.9	599.3
Northern	mixed	.	457.3
Northern	urban	.	413.3
Northern	conurbat	1419.5	859.4
Yorkshir	rural	.	372.0
Yorkshir	mixed	675.4	570.1
Yorkshir	urban	.	503.7
Yorkshir	conurbat	652.2	1319.0
Trent	rural	830.1	725.9
Trent	mixed	955.2	1372.8
Trent	urban	.	476.8
Trent	conurbat	1532.7	988.9
E Anglia	rural	1881.9	943.1
E Anglia	mixed	1174.6	320.7
E Anglia	Indeterm	.	301.2
NW Thame	mixed	1222.0	545.4
NW Thame	urban	734.9	581.7
NW Thame	conurbat	1303.4	1582.8
NE Thame	rural	.	425.4
NE Thame	mixed	.	216.8
NE Thame	urban	297.5	462.5
NE Thame	conurbat	618.4	1741.4
SE Thame	rural	445.9	433.4
SE Thame	mixed	.	457.2
SE Thame	urban	167.5	802.0
SE Thame	conurbat	406.2	1103.4
SW Thame	mixed	2266.7	888.7
SW Thame	urban	234.6	431.2
SW Thame	conurbat	617.9	975.5
Wessex	rural	1263.8	190.8
Wessex	mixed	895.8	818.2
Wessex	urban	.	730.3
Wessex	Indeterm	.	504.4
Oxford	rural	.	446.4
Oxford	mixed	1134.3	1324.2
Oxford	urban	.	126.8
S Wester	rural	853.8	770.9
S Wester	mixed	944.8	685.7
S Wester	urban	970.0	630.9
S Wester	Indeterm	.	406.0
W Midlan	rural	497.4	622.3
W Midlan	mixed	.	620.8
W Midlan	urban	1169.1	605.0
W Midlan	conurbat	5028.1	2098.5
Mersey	mixed	1370.6	462.3
Mersey	urban	.	243.7
Mersey	conurbat	1156.5	1104.4
N Wester	mixed	.	182.0
N Wester	urban	986.3	866.4
N Wester	conurbat	2405.3	1947.1

Scatterplots and correlation coefficients (standardised event ratios standardised for age and sex)

- **region and urban-rural comparisons between GPRD, HES and mortality, England 1991, ages 0-84**

SER's for Asthma, standardized for age5 and sex
England 1991: Aged 15-84

rha	urban	gsc3_8	hs3_1
Northern	rural	91.5	89.3
Northern	mixed	.	102.3
Northern	urban	.	119.3
Northern	conurbat	84.7	104.1
Yorkshir	rural	.	69.1
Yorkshir	mixed	79.8	68.1
Yorkshir	urban	.	77.6
Yorkshir	conurbat	88.2	91.4
Trent	rural	99.5	92.4
Trent	mixed	93.2	92.3
Trent	urban	.	127.5
Trent	conurbat	94.5	152.1
E Anglia	rural	118.0	73.1
E Anglia	mixed	112.2	80.1
E Anglia	Indeterm	.	116.2
NW Thame	mixed	115.0	78.8
NW Thame	urban	114.3	88.7
NW Thame	conurbat	85.5	108.8
NE Thame	rural	.	75.7
NE Thame	mixed	.	76.1
NE Thame	urban	97.5	83.9
NE Thame	conurbat	82.5	115.4
SE Thame	rural	94.9	117.7
SE Thame	mixed	.	91.9
SE Thame	urban	88.9	90.4
SE Thame	conurbat	82.0	120.3
SW Thame	mixed	101.6	58.5
SW Thame	urban	88.2	61.5
SW Thame	conurbat	87.2	84.5
Wessex	rural	112.2	79.7
Wessex	mixed	103.0	79.3
Wessex	urban	.	80.9
Wessex	Indeterm	.	103.9
Oxford	rural	.	75.5
Oxford	mixed	108.4	73.6
Oxford	urban	.	86.7
S Wester	rural	101.9	85.9
S Wester	mixed	106.5	98.4
S Wester	urban	95.9	91.5
S Wester	Indeterm	.	110.4
W Midlan	rural	140.5	68.1
W Midlan	mixed	.	69.3
W Midlan	urban	127.7	96.2
W Midlan	conurbat	87.2	115.3
Mersey	mixed	97.0	83.7
Mersey	urban	.	123.1
Mersey	conurbat	125.4	149.3
N Wester	mixed	.	115.9
N Wester	urban	111.2	145.8
N Wester	conurbat	97.5	142.3