

CHAPTER 2

Cancer

2.1 Death Rates for All Cancer

Figure 2.1 illustrates that the three health authorities have all experienced higher mortality rates for cancer than the national average. However, if recent trends continue, the forecast is to surpass the 20% target reduction for all cancer mortality in the South Yorkshire Coalfields. The forecast is for the Coalfields area to achieve a rate close to the England and Wales target in 2010.

Due to the less stable nature of the time series in each district and each PCG/PCT the downward trend is less clear and prediction intervals are wide and include the target in every case. The small numbers make precision difficult as revealed by the wide confidence intervals so it is the confidence intervals which are important when interpreting these graphs.

Saving Lives: Our Healthier Nation (Department of Health, 1999) gives the all cancer mortality rate as the principal target but cancer is a collection of very different diseases, each requiring a different approach to reducing mortality and morbidity. The following analysis is intended to provide more detailed information to support strategy development. Death rates for individual cancers are not presented for PCGs/PCT as the numbers of deaths proved insufficient to give a stable basis for forecasting.

2.2 Registration Rates for All Cancer

The best way to prevent people dying from cancer is to stop them contracting it in the first place. Every newly diagnosed cancer case is registered with a Regional Cancer Registry and these registrations are as close as we can get to a measure of incidence. Figure 2.2 shows that registration rates have risen throughout the South Yorkshire Coalfields.

A large part of this rise is due to improvements in data gathering and it is likely that this will continue to improve as links with the pathology laboratories are extended. These links were only introduced in Trent in 1998; links exist with Doncaster's pathology laboratories but are only just being introduced in Barnsley and Rotherham. This should pick up cases where the hospital coding system or death certificate has not included the diagnosis of cancer and will result in increased registration rates. As it is impossible to ascertain true changes in cancer incidence, forecasting was felt to be unhelpful.

The two PCGs in Barnsley along with Doncaster East, Doncaster West and Rother Valley PCGs are all amongst the top ten PCGs/PCTs in Trent for overall cancer registration rates (Trent Cancer Registry, 2000). Doncaster East, Barnsley West and Doncaster West have the three highest incidence rates of all, with one person of every 36 in the population being newly diagnosed with cancer every year.

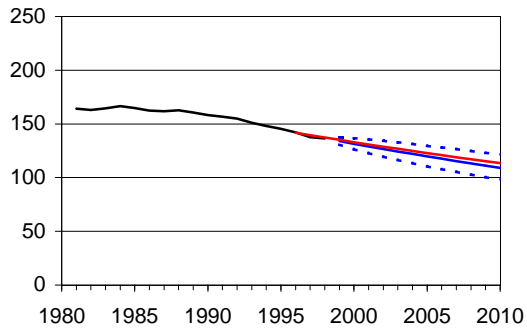
Figure 2.1 - Death Rates for All Cancers

Directly Standardised Rates per 100,000 Resident Population
ICD-9 140-208 All persons aged under 75

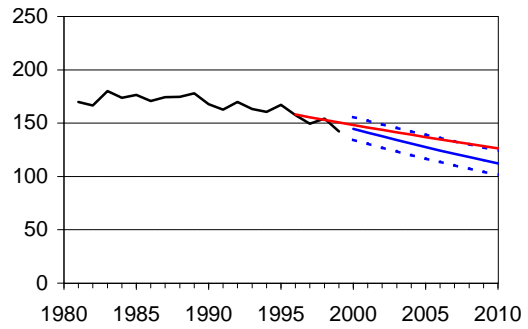
Target: (*Saving Lives: Our Healthier Nation*) To reduce the death rate by 20% by 2010 from the 1995-7 baseline.

Sources: ONS: Annual Abstracts of Deaths, Mid-Year Estimates of Population and 20th Century Mortality in England & Wales; Trent RHA: Deaths prior to 1992.

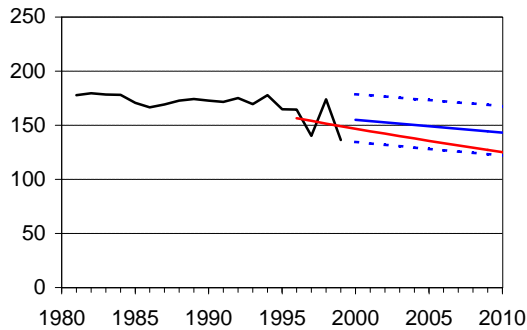
England & Wales



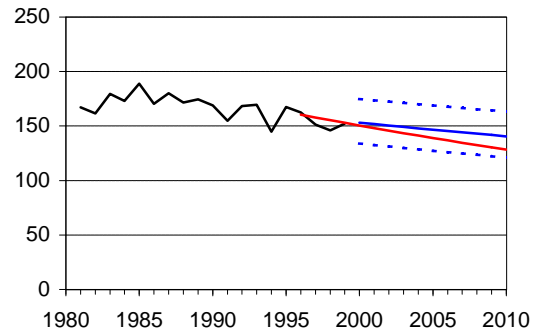
South Yorkshire Coalfields HAZ



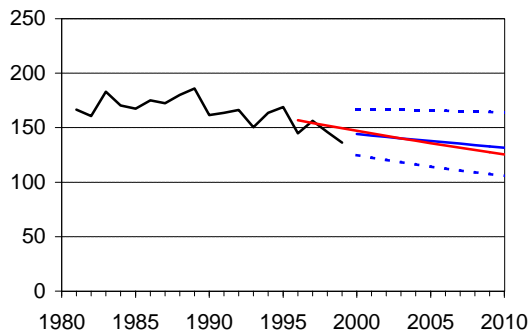
Barnsley HA



Doncaster HA



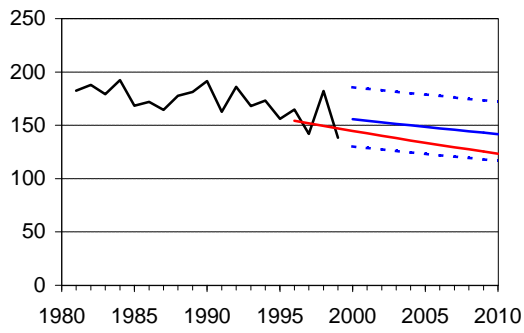
Rotherham HA



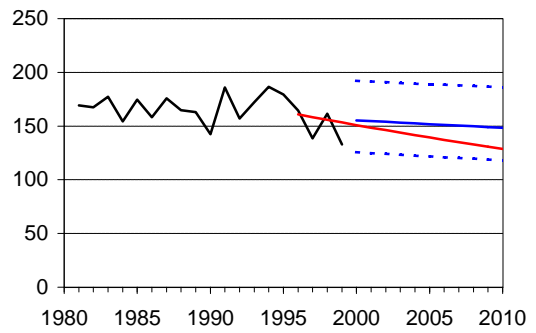
— Directly Standardised Rate
— Forecast Rate
..... 95% Confidence Interval
— OHN Target Line

Rates forecast with 95% confidence intervals
by Holt's Method on logit-transformed data.

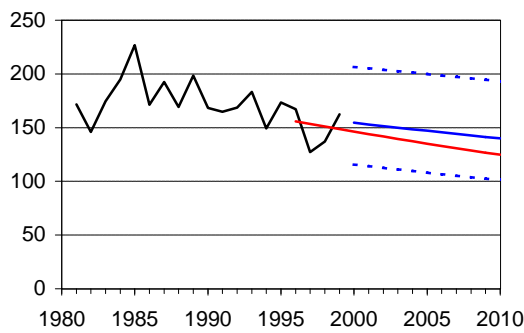
Barnsley East PCG



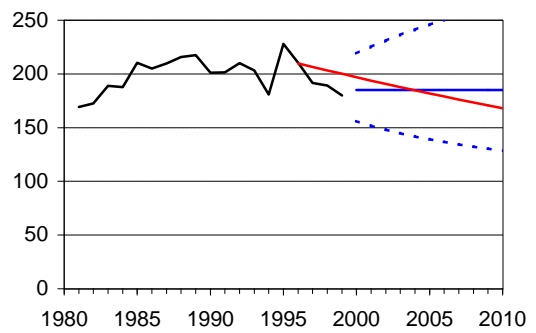
Barnsley West PCG



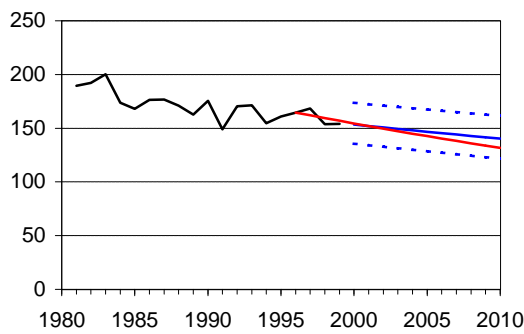
Doncaster Central PCT



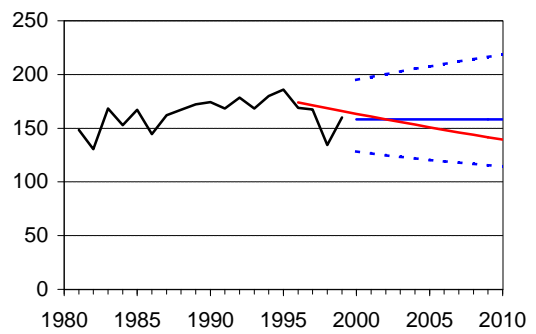
Doncaster East PCG



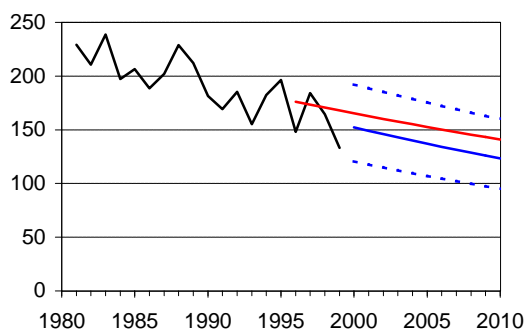
Doncaster West PCG



Rother Valley PCG



Rotherham PCG



Wentworth PCG

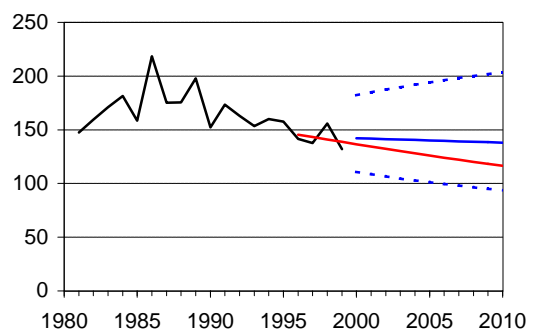


Figure 2.2 - Registration Rates for All Cancers

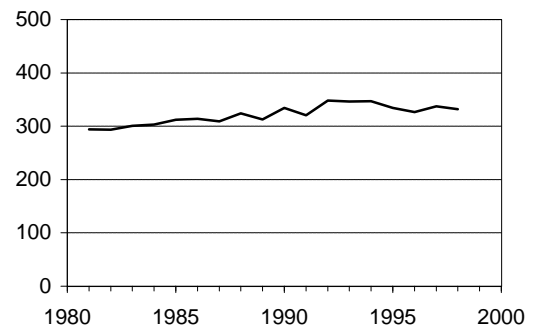
Directly Standardised Rates per 100,000 Resident Population
ICD-9 140-208, ICD-10 C00-C97 All persons aged under 75

Sources: Trent Cancer Registry, ONS Mid-Year Estimates of Population.

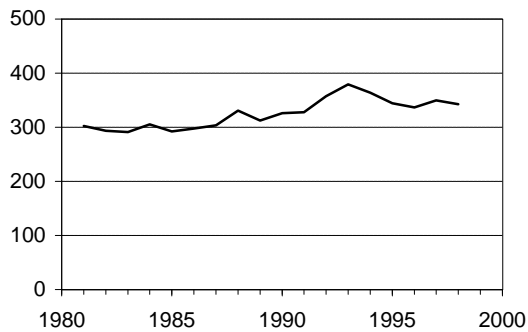
England and Wales

Data Not Available

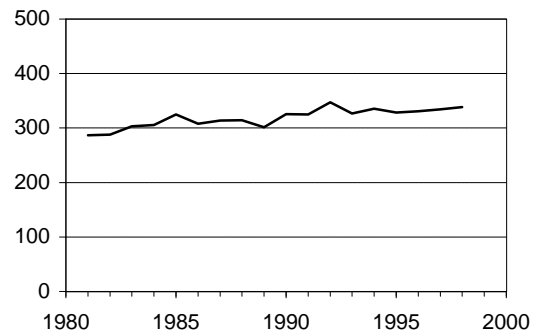
South Yorkshire Coalfields HAZ



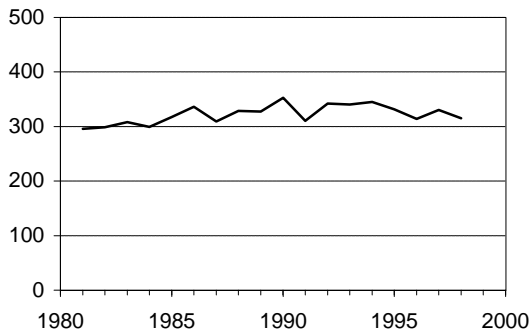
Barnsley HA



Doncaster HA



Rotherham HA



— Directly Standardised Rate

2.3 Death Rates for Lung Cancer

Figures 2.3a and 2.3b show trends in mortality rates separately for males and females, as they clearly have totally distinct trends from one another.

Rates for men have been falling very rapidly nationally. This pattern has been repeated in the South Yorkshire Coalfields, although it has remained above the national rate. At least 90% of lung cancers are caused by smoking (Peto *et al*, 1992) and 95% of people diagnosed from lung cancer die from the disease (ONS, 1999) – most within one year of diagnosis. In one sense, the strategy for reducing deaths is straightforward; reduce consumption of cigarettes. Practically this is not easily done. Furthermore, because the disease takes years or even decades to develop, current initiatives aimed at reducing tobacco use will only affect mortality rates in ten to 20 years' time.

For women the picture is less encouraging. Smoking prevalence in women has tended to mimic that of men twenty years earlier. While smoking in women reduced from 44% in 1961 to 30% in 1988 (Chollat-Traquet, 1992) there is evidence that it has stabilised recently (ONS, 1998) and is increasing in young females (see section 7.2). Nationally the forecasts are for no change in mortality rates, but alarmingly, and consistently throughout the three health authorities, rates seem set to continue rising. Furthermore there is evidence that cigarette smoking shortens women's lives even more than those of men (Prescott *et al*, 1998).

More women die from lung cancer in the South Yorkshire Coalfields than from breast cancer and on current trends, by 2010 death rates among women will be almost the same as men. Tackling smoking in women must be a priority.

Lung cancer incidence rates are higher in Doncaster East and Doncaster West PCGs than in any other PCG/PCT in Trent, with rates more than double the lowest PCGs/PCTs in the region (Trent Cancer Registry, 2000).

Figure 2.3c shows the rates for the most deprived 20% of areas within each health authority compared with the rest of the population. The much higher rates in the deprived areas are apparent. In all three districts, and most obviously in Rotherham, the gap between the most deprived and the rest appears to have narrowed. This is encouraging, but we should be cautious, as discussed in section 1.1; it is possible that this is an erroneous result caused by demographic changes within the districts prior or subsequent to the 1991 Census.

2.4 Death Rates for Colorectal Cancer

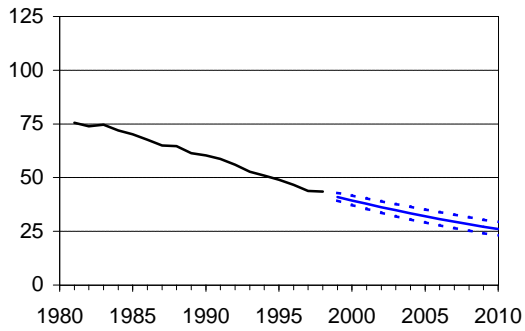
Mortality is falling steadily at the national level (figure 2.4). This is not reflected in the South Yorkshire Coalfields however, where forecasts suggest much more modest reductions. Death rates are presented here for under 75s, but in people over 75, the burden of the disease may be increasing. More than two-thirds of patients diagnosed with cancer of the colon or rectum are killed by the disease within ten years (ONS, 1999).

Figure 2.3a - Lung Cancer Death Rates for Men

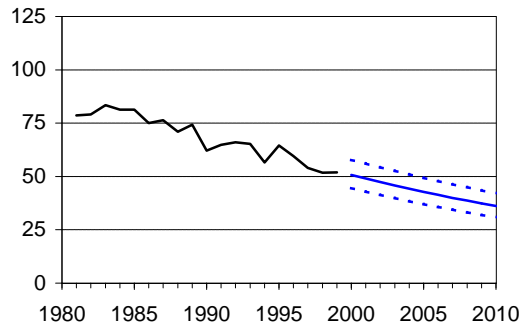
Directly Standardised Rates per 100,000 Resident Population
ICD-9 162 Males aged under 75

Sources: ONS: Annual Abstracts of Deaths, Mid-Year Estimates of Population and 20th Century Mortality in England & Wales; Trent RHA: Deaths prior to 1992.

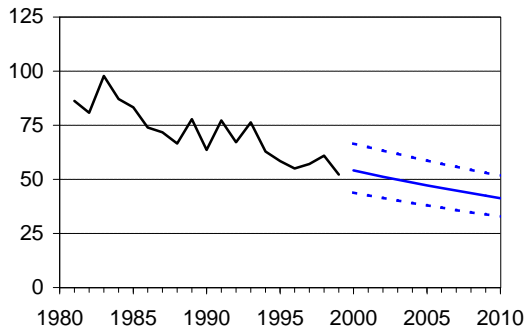
England & Wales



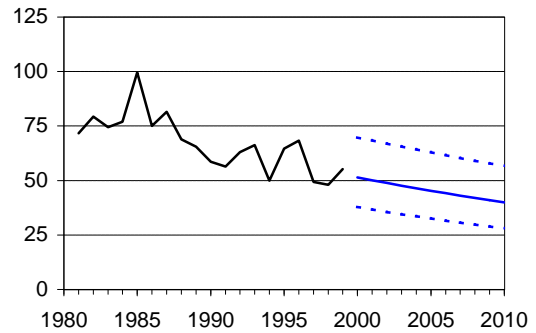
South Yorkshire Coalfields HAZ



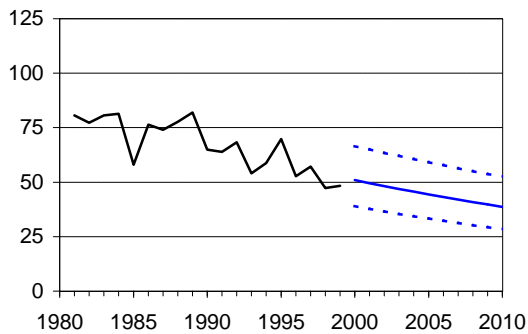
Barnsley HA



Doncaster HA



Rotherham HA



— Directly Standardised Rate
— Forecast Rate
..... 95% Confidence Interval

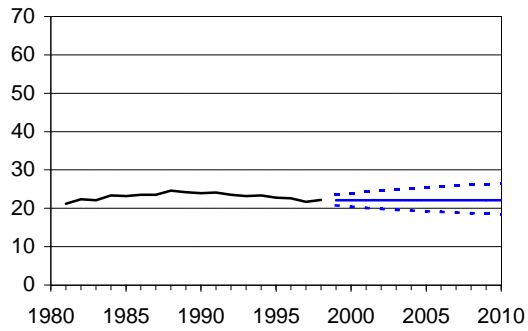
Rates forecast with 95% confidence intervals
by Holt's Method on logit-transformed data.

Figure 2.3b - Lung Cancer Death Rates for Women

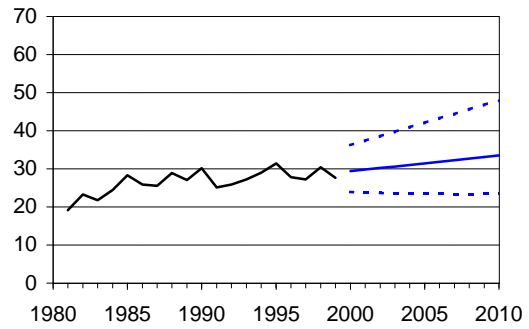
Directly Standardised Rates per 100,000 Resident Population
ICD-9 162 Females aged under 75

Sources: ONS: Annual Abstracts of Deaths, Mid-Year Estimates of Population and 20th Century Mortality in England & Wales; Trent RHA: Deaths prior to 1992.

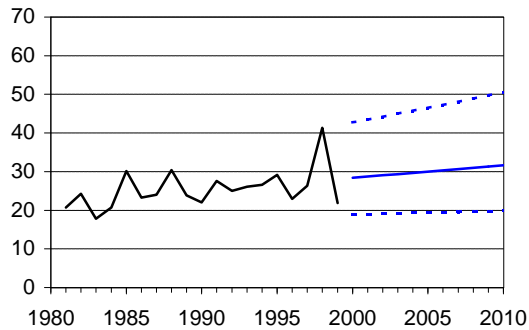
England & Wales



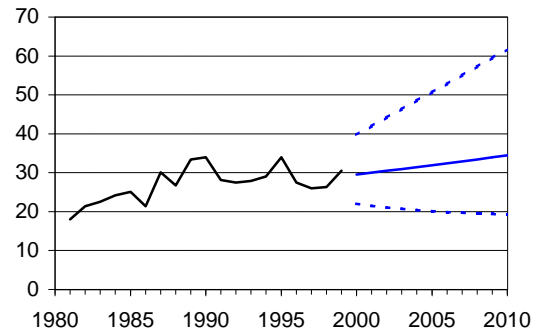
South Yorkshire Coalfields HAZ



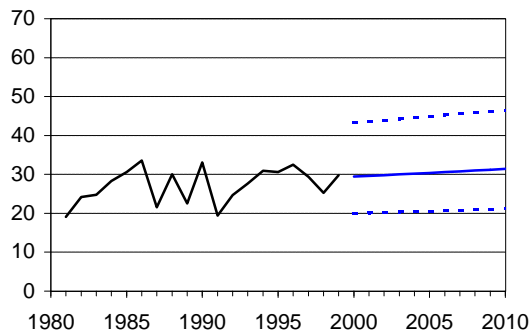
Barnsley HA



Doncaster HA



Rotherham HA



— Directly Standardised Rate
— Forecast Rate
..... 95% Confidence Interval

Rates forecast with 95% confidence intervals
by Holt's Method on logit-transformed data.

Figure 2.3c - Death Rates for Lung Cancer

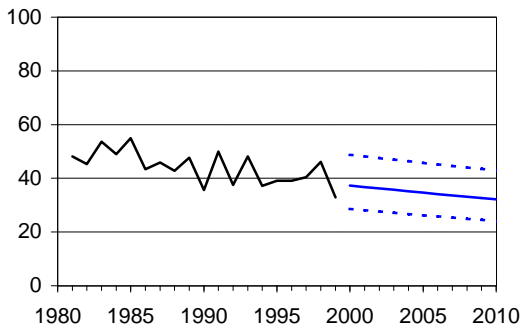
Directly Standardised Rates per 100,000 Resident Population
ICD-9 162 All Persons aged under 75

Target: Doncaster: To improve the under 75 age standardised mortality rate for lung cancer in the most deprived 20% enumeration districts in Doncaster at a faster rate than the rest of the population.

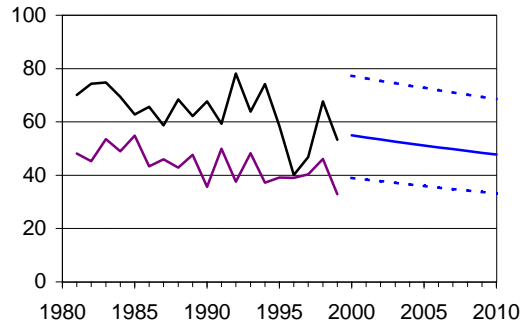
Sources: ONS: Annual Abstracts of Deaths, Mid-Year Estimates of Population and 20th Century Mortality in England & Wales; Trent RHA: Deaths prior to 1992.

— Directly Standardised Rate 95% Confidence Interval
— Forecast Rate — Quintiles 1-4 (replicated from left hand graph)

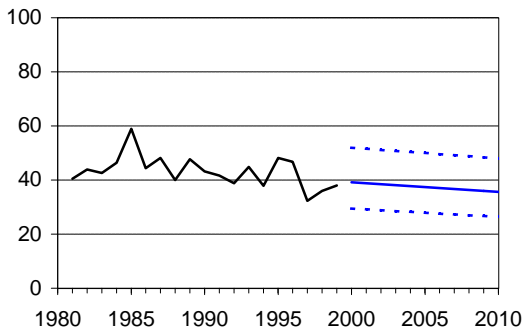
Barnsley Quintiles 1-4



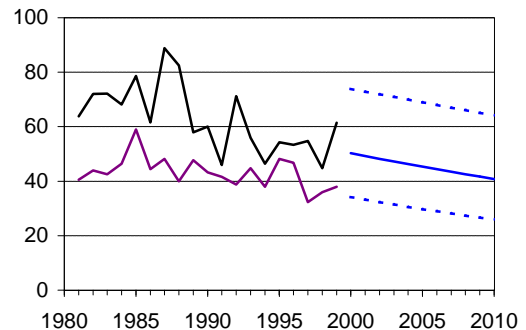
Barnsley Quintile 5 (Most Deprived)



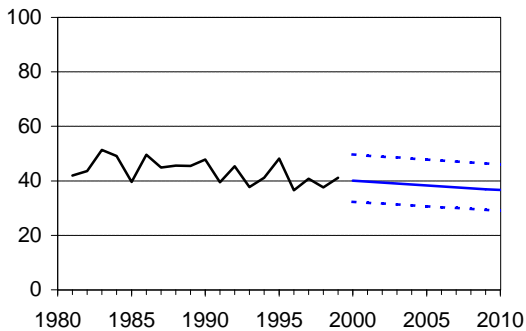
Doncaster Quintiles 1-4



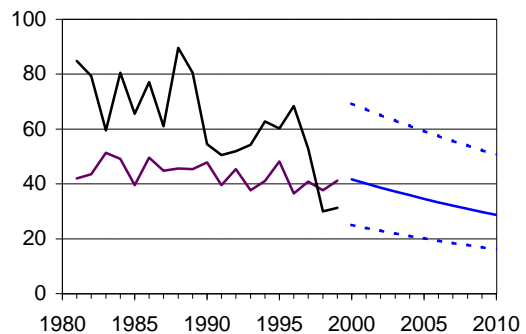
Doncaster Quintile 5 (Most Deprived)



Rotherham Quintiles 1-4



Rotherham Quintile 5 (Most Deprived)



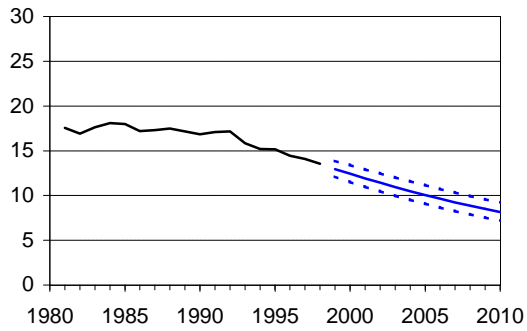
Rates forecast with 95% confidence intervals by Holt's Method on logit-transformed data

Figure 2.4 - Death Rates for Colorectal Cancer

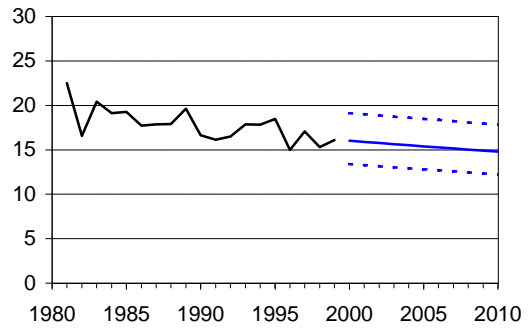
Directly Standardised Rates per 100,000 Resident Population
ICD-9 152-153 All persons aged under 75

Sources: ONS: Annual Abstracts of Deaths, Mid-Year Estimates of Population and 20th Century Mortality in England & Wales; Trent RHA: Deaths prior to 1992.

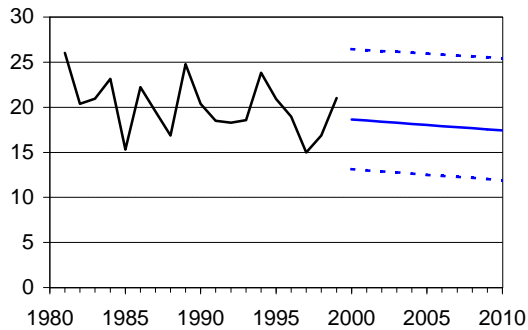
England & Wales



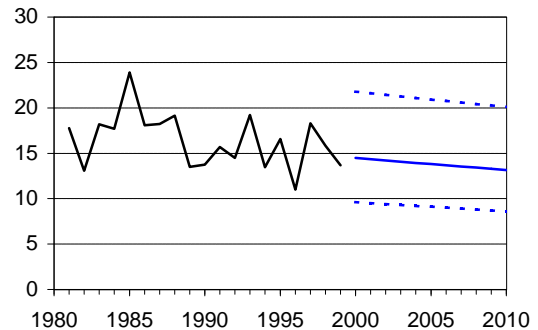
South Yorkshire Coalfields HAZ



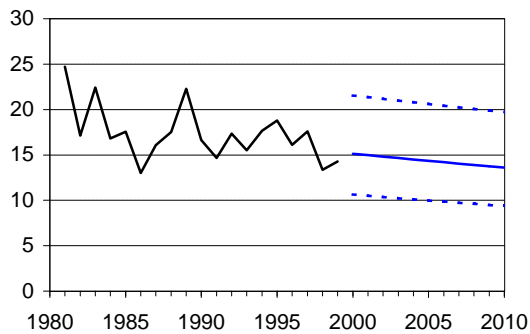
Barnsley HA



Doncaster HA



Rotherham HA



— Directly Standardised Rate
— Forecast Rate
..... 95% Confidence Interval

Rates forecast with 95% confidence intervals
by Holt's Method on logit-transformed data.

2.5 Death Rates for Breast Cancer

Once again the downward trend apparent at the national level is not reflected locally (figure 2.5). However the wide confidence intervals reveal the principle reason; the lack of stability in the time series. Nevertheless for the last three years all three health authorities have had lower death rates than the national average. Screening, service improvements such as wider availability of tamoxifen and chemotherapy and increased breast awareness in women may help further reduce deaths from breast cancer. However a close watch needs to be kept on these rates.

2.6 Death and Registration Rates for Cervical Cancer

Deaths from cervical cancer are fortunately comparatively rare and do not easily support time series analysis; figure 2.6a shows that the rates have fallen and are projected to fall further both at a national level and locally. This is, at least in part, due to the highly successful screening services in the three districts (see section 2.7). Of all cancer sites, cervical cancer is one of the most successfully treated with over 50% of patients surviving to ten years (ONS, 1999). Figure 2.6b shows that within the South Yorkshire Coalfields registration rates have been falling since 1988. Cervical cancer is largely a sexually transmitted disease (STD) and hence can be expected to benefit from the efforts being made to reduce the incidence of other STDs.

2.7 Coverage Rates for Cervical and Breast Screening

All three health authorities have an excellent record of cytology screening coverage (Figure 2.7a), Doncaster consistently achieving over 88%, Rotherham over 85% and Barnsley over 83%. While these figures are well in excess of the nationally required standard of 80%, trends are certainly more downward than upward and constant vigilance is required to ensure that standards don't fall. It is possible that recent discussion in the national press around deficiencies in the services in some parts of the country has affected confidence and hence compliance.

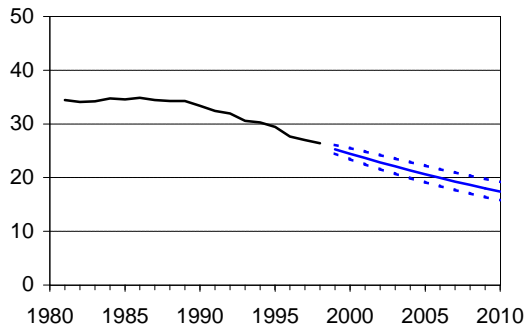
The breast screening programme has been set up more recently (starting in 1989/90) with a target of 70% coverage for women aged 50-64. In 1999, all three health authorities achieved the 70% target which only Barnsley has done consistently since 1995 (see Figure 2.7b). Barnsley has, in fact achieved its local target of 75% every year since 1995.

Figure 2.5 - Death Rates for Breast Cancer

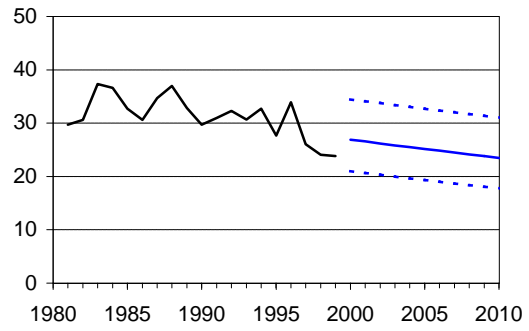
Directly Standardised Rates per 100,000 Resident Population
ICD-9 174 Females aged under 75

Sources: ONS: Annual Abstracts of Deaths, Mid-Year Estimates of Population and 20th Century Mortality in England & Wales; Trent RHA: Deaths prior to 1992.

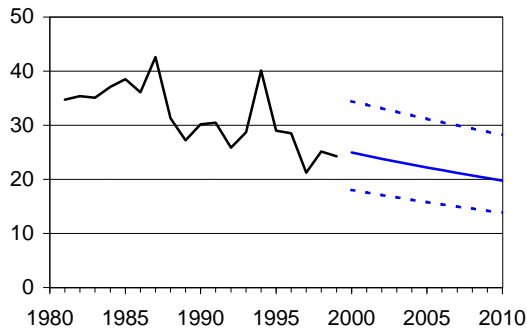
England & Wales



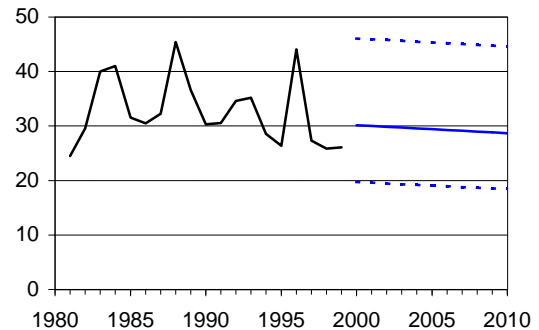
South Yorkshire Coalfields HAZ



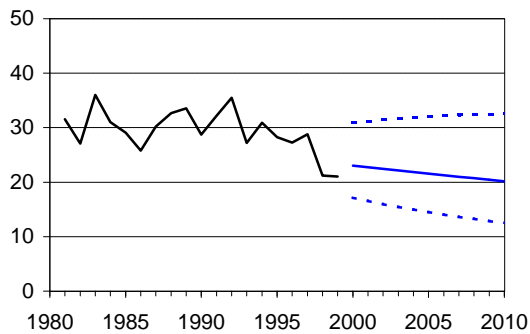
Barnsley HA



Doncaster HA



Rotherham HA



— Directly Standardised Rate
— Forecast Rate
..... 95% Confidence Interval

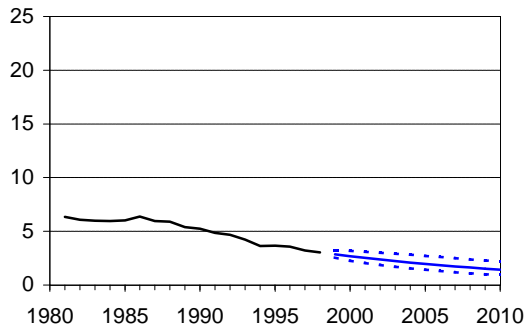
Rates forecast with 95% confidence intervals
by Holt's Method on logit-transformed data.

Figure 2.6a - Death Rates for Cervical Cancer

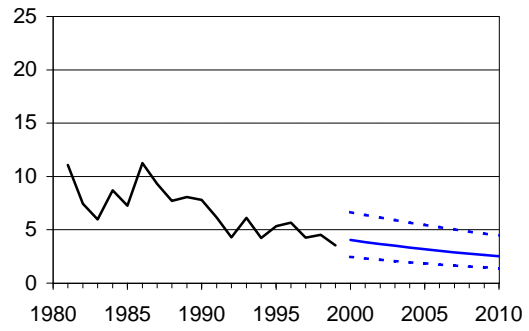
Directly Standardised Rates per 100,000 Resident Population
ICD-9 180 Females aged under 75

Sources: ONS: Annual Abstracts of Deaths, Mid-Year Estimates of Population and 20th Century Mortality in England & Wales; Trent RHA: Deaths prior to 1992.

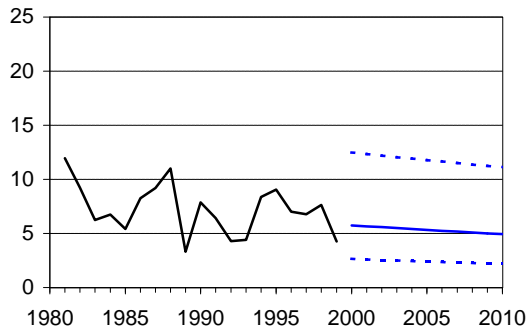
England & Wales



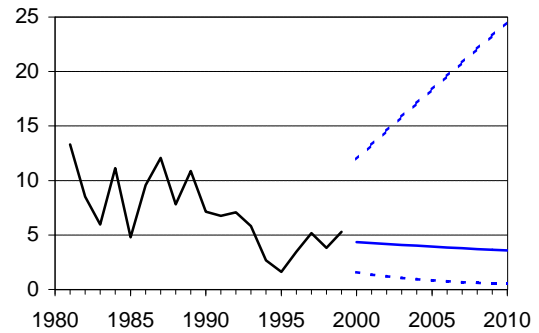
South Yorkshire Coalfields HAZ



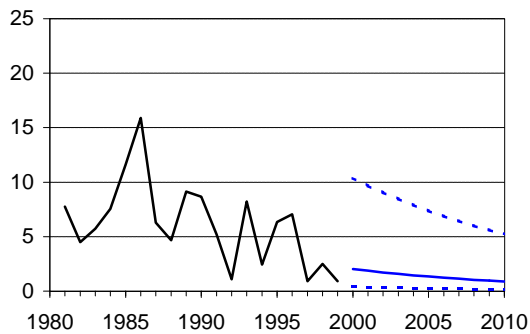
Barnsley HA



Doncaster HA



Rotherham HA



— Directly Standardised Rate
— Forecast Rate
..... 95% Confidence Interval

Rates forecast with 95% confidence intervals
by Holt's Method on logit-transformed data.

Figure 2.6b - Registration Rates for Cervical Cancer

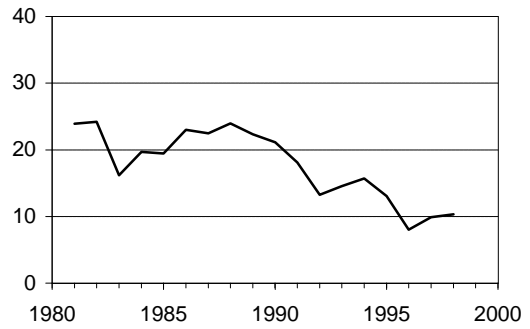
Directly Standardised Rates per 100,000 Resident Population
 ICD-9 180, ICD-10 C53 Females aged under 75

Sources: Trent Cancer Registry, Mid-Year Estimates of Population.

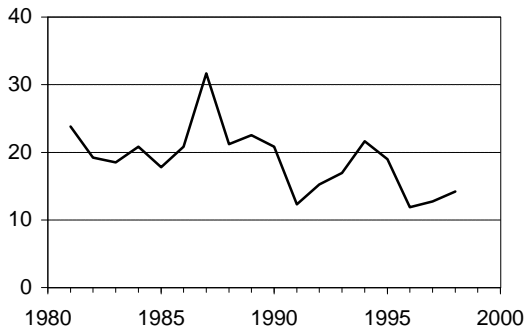
England and Wales

Data Not Available

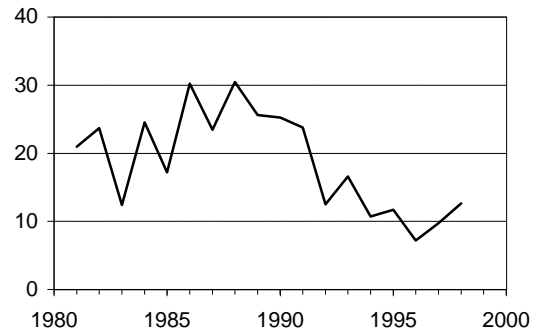
South Yorkshire Coalfields HAZ



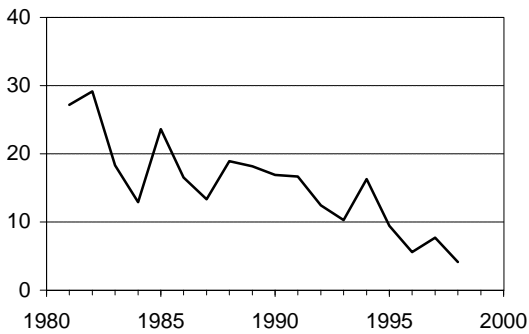
Barnsley HA



Doncaster HA



Rotherham HA



— Directly Standardised Rate

Figure 2.7a - Cervical Screening Uptake Rates

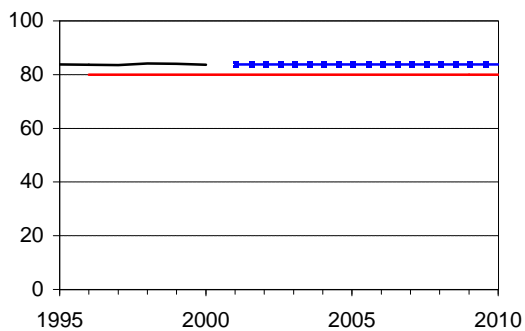
Percentage of Eligible Female Population Screened within Previous Five Years

Target: To maintain 80% coverage rates.

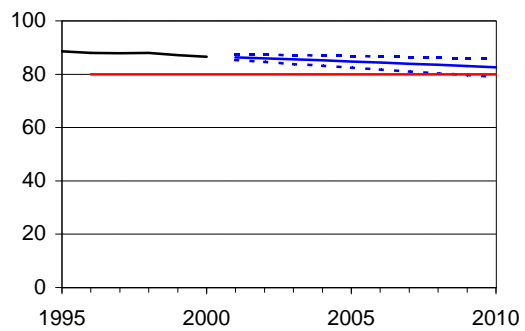
Source: DoH Statistical Bulletin 1999/32

Notes: The denominator for the calculation of coverage was amended in 1999 to exclude from the population those women with recall ceased for clinical reasons. Data for 1995 to 1998 have been adjusted to this new basis. (DoH. Statistical Bulletin 1999/32).

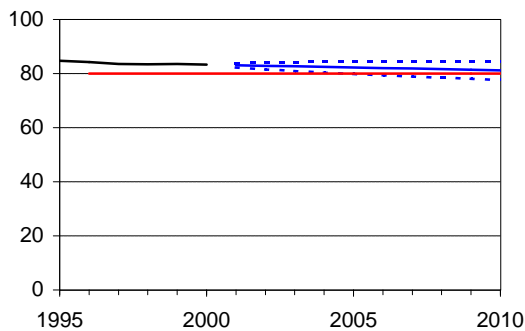
England & Wales



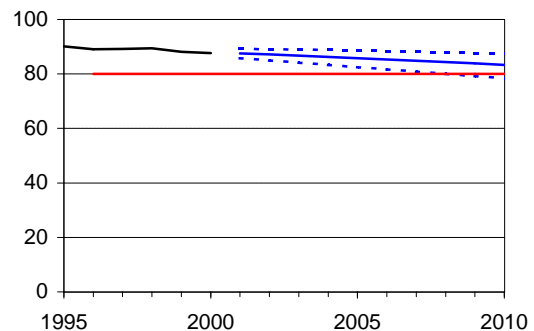
Trent Region



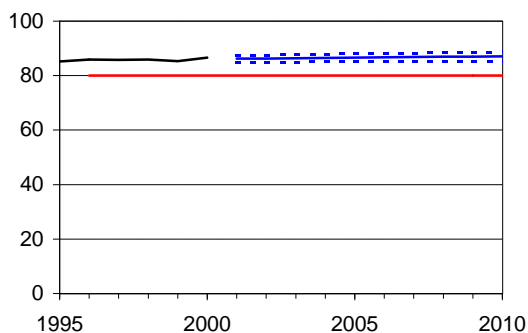
Barnsley HA



Doncaster HA



Rotherham HA



- Directly Standardised Rate
- Forecast Rate
- 95% Confidence Interval
- 80% National Standard

Rates forecast with 95% confidence intervals by Holt's Method on logit-transformed data.

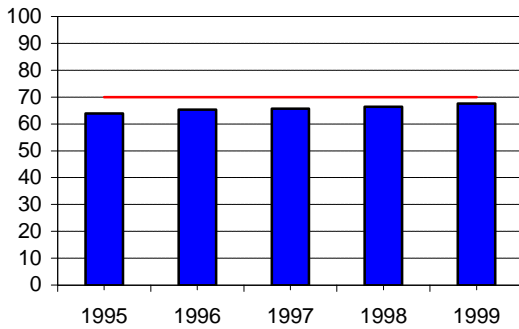
Figure 2.7b - Breast screening programme

Coverage of the target age group (50-64) by health authority at 31 March each year
Percentage less than 3 years since last test

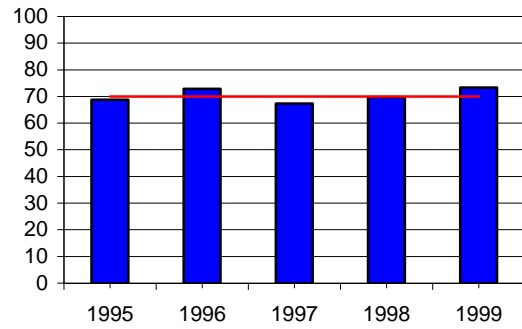
Target: National Target: 70%
Barnsley HImP Target: 75%

Sources: Form KC63 - Table 11

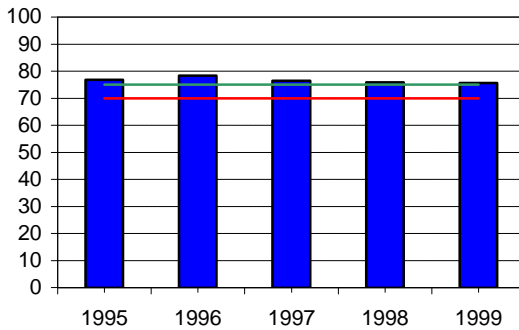
England



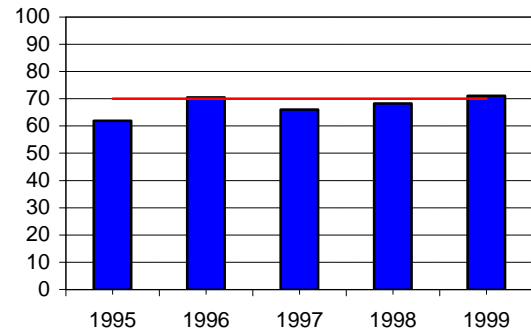
South Yorkshire Coalfields HAZ



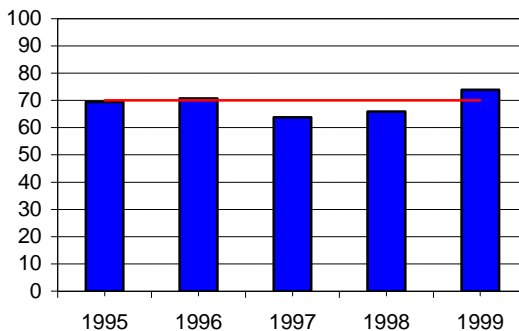
Barnsley HA



Doncaster HA



Rotherham HA



— 70% National Standard
— HImP Target (where applicable)

2.8 Waiting Times for Cancer Patients

Patients with a suspected cancer should be able to see a specialist within two weeks of their GP deciding they need to be seen urgently and requesting an appointment. The data in table 2.8 come from the 2000 NHS Performance Indicators and show data for breast cancer only, for January-March 2000. While Doncaster achieved the target and Rotherham very nearly did so, Barnsley has some way to go in this area.

Table 2.8 – Waiting Times for Breast Cancer Patients

	% of patients seen within 14 days when GP referral request was received within 24hrs	HImP Target 2001
Barnsley	71	-
Doncaster	100	100
Rotherham	98	100

Source: Quality and Performance in the NHS: NHS Performance Indicators July 2000

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