

CHAPTER 3

Coronary Heart Disease and Stroke

3.1 Death Rates for All Circulatory Diseases

The trends in circulatory disease mortality for under 75s are very clear (figure 3.1a) and show that the number of deaths is expected to continue decreasing. The target reduction of 40% demanded by *Saving Lives: Our Healthier Nation* (Department of Health, 1999) looks well within reach in every area, but the rates are higher in the South Yorkshire Coalfields than nationally, particularly in Rotherham.

3.2 Death Rates for Coronary Heart Disease

The primary reason for the decline in circulatory disease mortality in under 75s is the huge fall in coronary heart disease (CHD) deaths. As other circulatory disease deaths are not diminishing so quickly, to achieve the 40% target will require even larger falls in CHD mortality. The national forecast shown in figure 3.2a suggests a drop of 54% by 2010 from the 1995-7 baseline. The forecasts within the South Yorkshire Coalfields are for a 40% reduction, with Barnsley's rates falling more steeply than elsewhere. Doncaster East PCG needs to pay particular attention to this area.

Figure 3.2b shows the reductions in the most deprived areas, compared with the rest – the purple line on the right-hand graph is simply a replica of the rates presented on the left-hand graph, for ease of comparison. It appears from this analysis that steep reductions are being experienced fairly consistently, although the deprived areas start from much higher levels. As discussed earlier (section 1.1), we should exhibit caution in interpreting these results. There is evidence that the gap in CHD mortality is widening; comparing the areas with the lowest CHD mortality rates with those with the highest rates led Shaw *et al* (1999:121) to this conclusion.

3.3 Death Rates for Stroke

Figure 3.3 demonstrates that, while stroke follows the same general downward trend as CHD, the rates are not declining as fast.

3.4 Hospital Admission Rates for Revascularisation

The government have specified a national target for revascularisations of an increase of 3,000 by April 2002. Revascularisation includes bypass graft surgery (CABG) and angioplasty (PTCA). This target equates to six revascularisations per 100,000 resident population; in other words 13 extra revascularisations per year in Barnsley, 17 in Doncaster and 15 in Rotherham. These procedures have not been shown to save life except in those with the most severe disease, but they do increase the quality of life through symptom relief those who live with heart disease (NHS Centre for Reviews and Dissemination, 1997; Bucher *et al*, 2000). Figure 3.4 illustrates that rates have increased enormously in all areas.

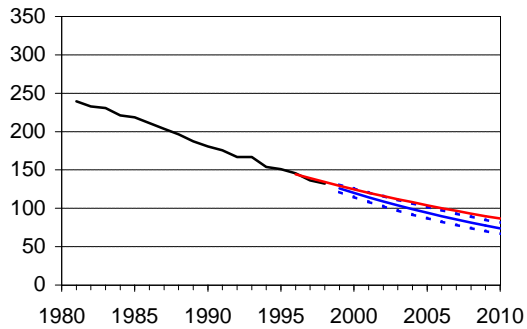
Figure 3.1 - Death Rates for All Circulatory Disease

Directly Standardised Rates per 100,000 Resident Population
ICD-9 390-459 All persons aged under 75

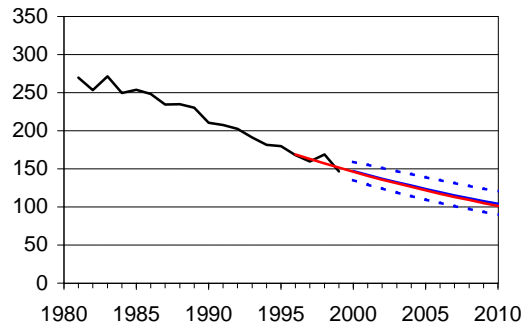
Target: (*Saving Lives: Our Healthier Nation*) To reduce death rates by 40% by 2010 from the 1995-7 baseline.

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

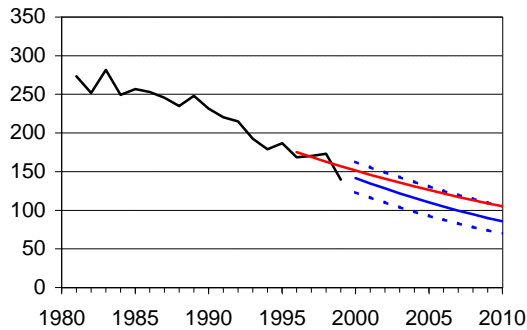
England & Wales



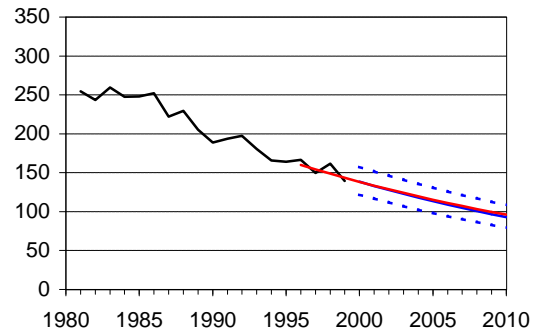
South Yorkshire Coalfields HAZ



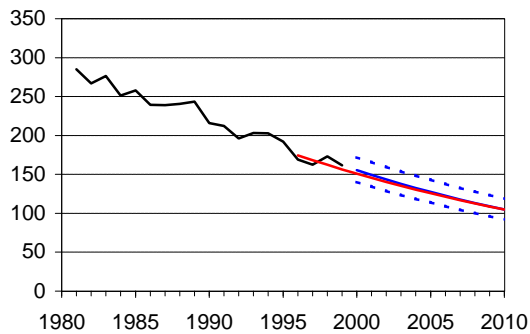
Barnsley HA



Doncaster HA



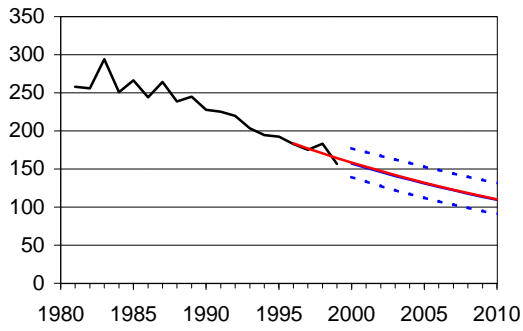
Rotherham HA



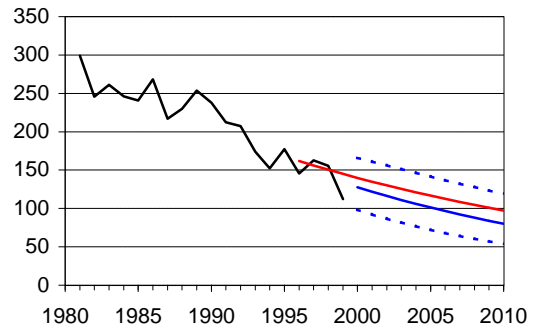
— Directly Standardised Rate
— Forecast Rate
..... 95% Confidence Interval
— OHN Target Line

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

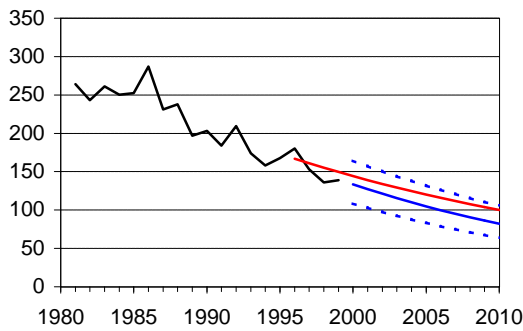
Barnsley East PCG



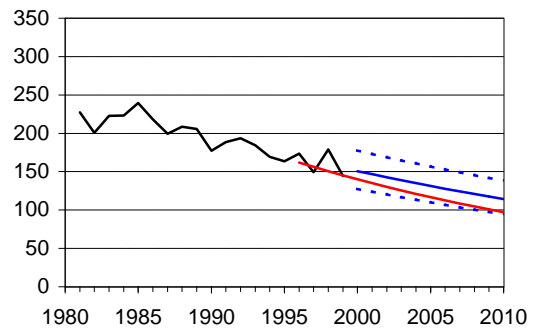
Barnsley West PCG



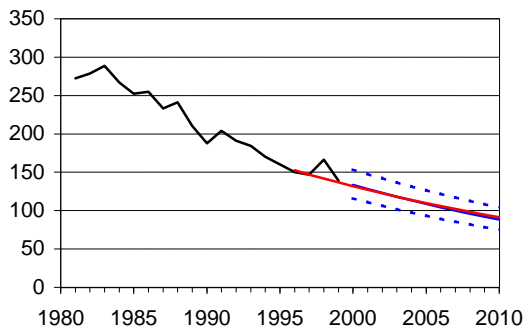
Doncaster Central PCT



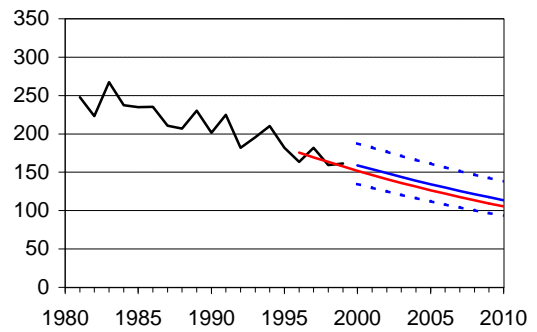
Doncaster East PCG



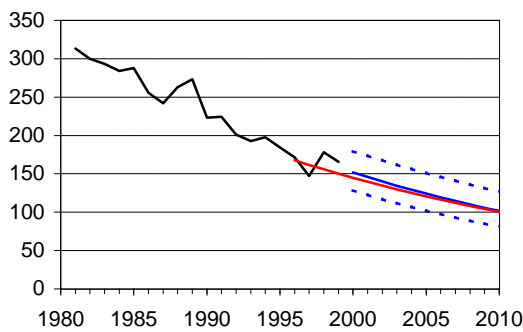
Doncaster West PCG



Rother Valley PCG



Rotherham PCG



Wentworth PCG

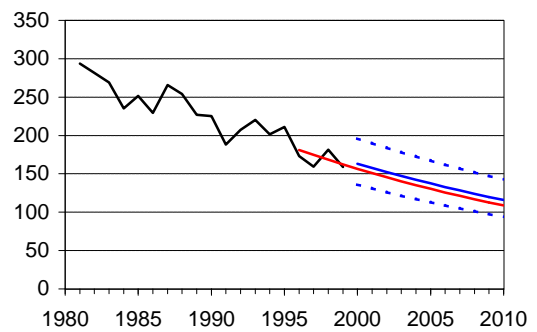
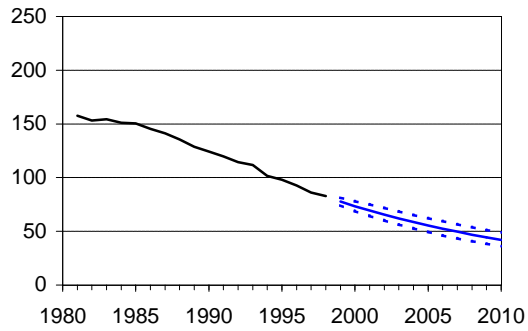


Figure 3.2a - Death Rates for Coronary Heart Disease

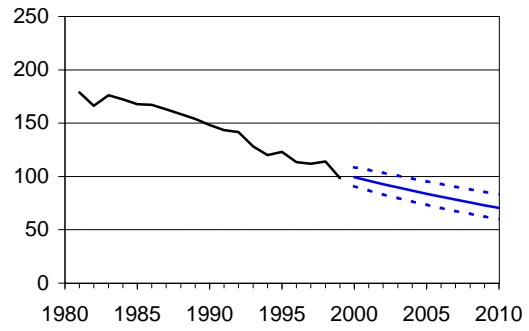
Directly Standardised Rates per 100,000 Resident Population
ICD-9 410-414 All persons aged under 75

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

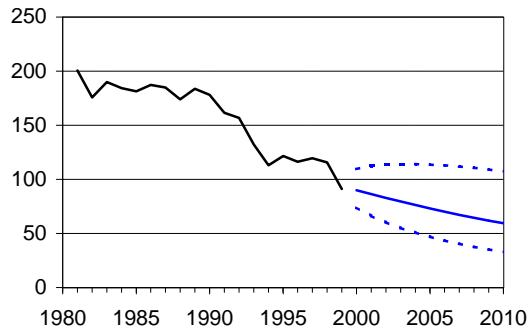
England & Wales



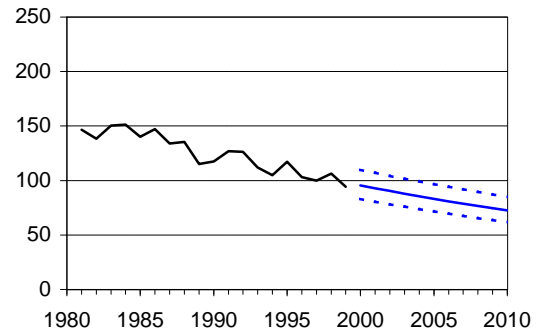
South Yorkshire Coalfields HAZ



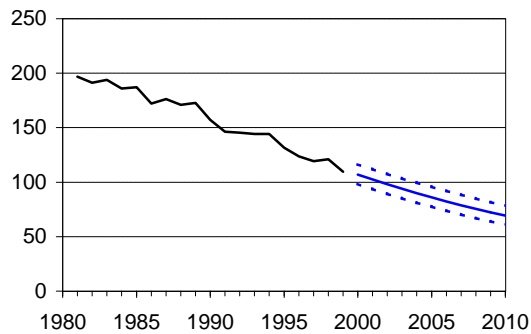
Barnsley HA



Doncaster HA



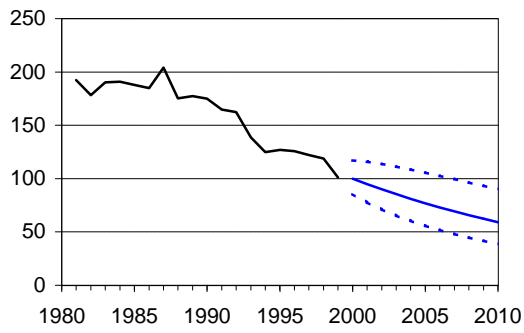
Rotherham HA



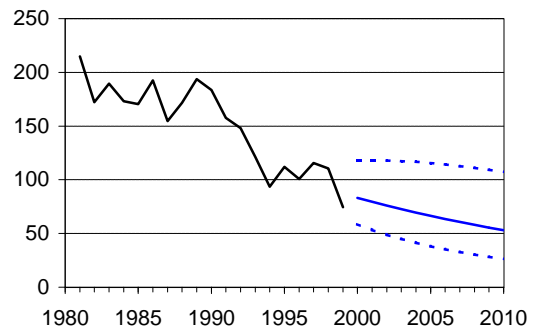
— Directly Standardised Rate
— Forecast Rate
..... 95% Confidence Interval

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

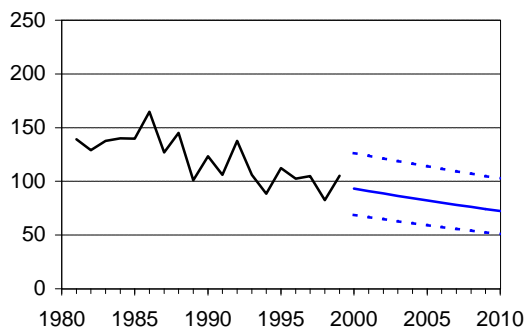
Barnsley East PCG



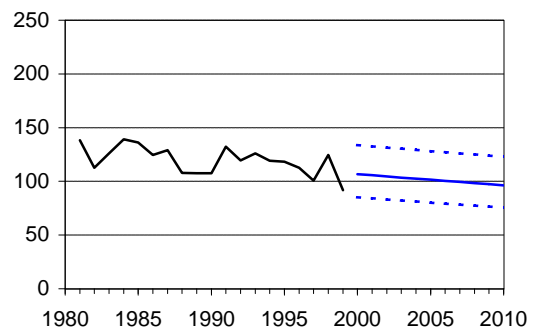
Barnsley West PCG



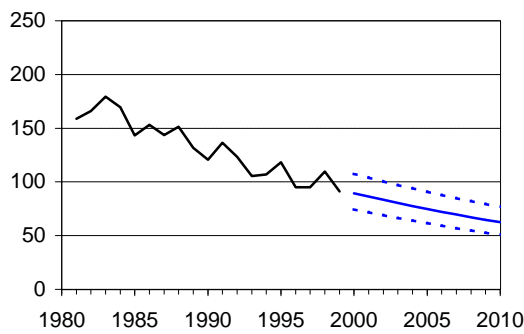
Doncaster Central PCT



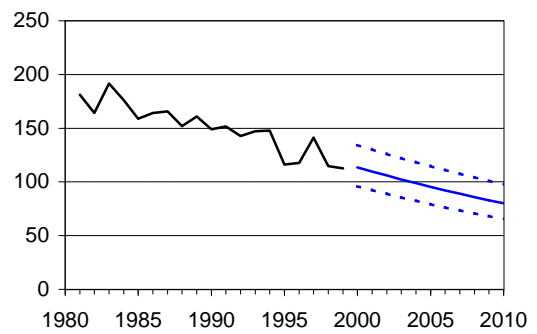
Doncaster East PCG



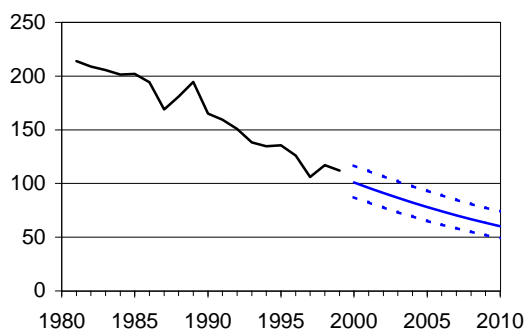
Doncaster West PCG



Rother Valley PCG



Rotherham PCG



Wentworth PCG

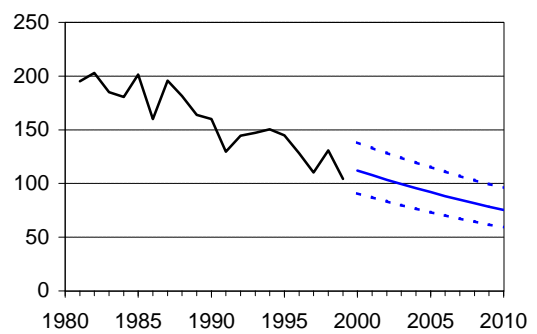


Figure 3.2b - Death Rates for Coronary Heart Disease

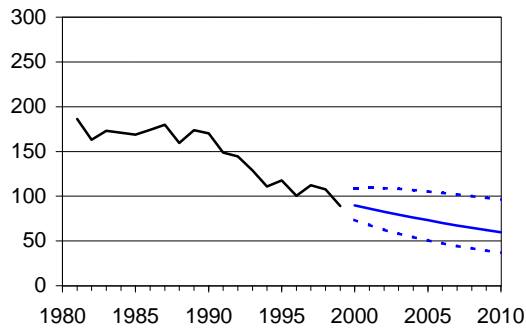
Directly Standardised Rates per 100,000 Resident Population
ICD-9 410-414 All persons aged under 75 years

Target: Rotherham: Reduce the difference between quintiles of electoral wards with the highest and lowest CHD death rates by a third for people aged under 65

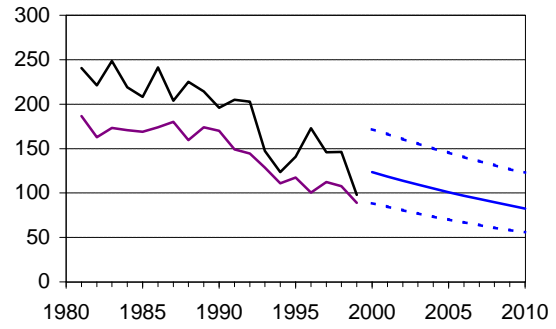
Sources: ONS: Annual Abstracts of Deaths, Mid-Year Estimates of Population and 20th Century Mortality in England & Wales; Trent RHA: Deaths prior to 1992.

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

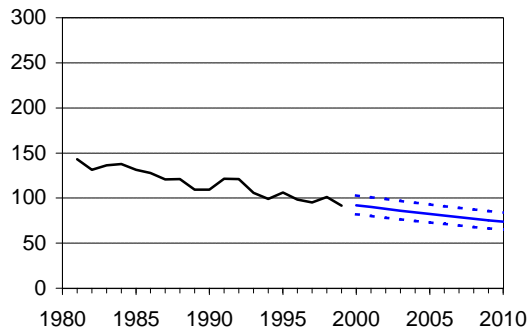
Barnsley Quintiles 1-4



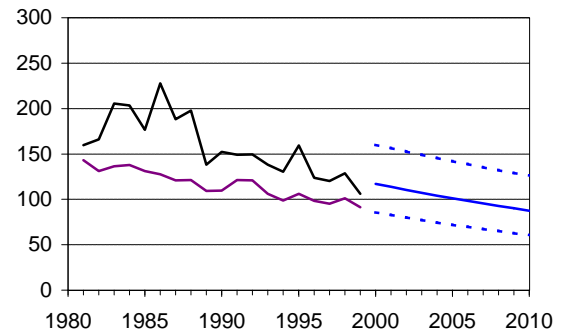
Barnsley Quintile 5 (Most Deprived)



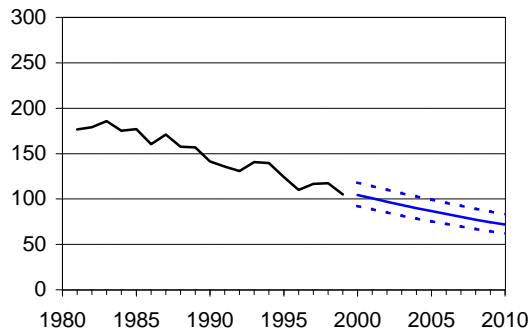
Doncaster Quintiles 1-4



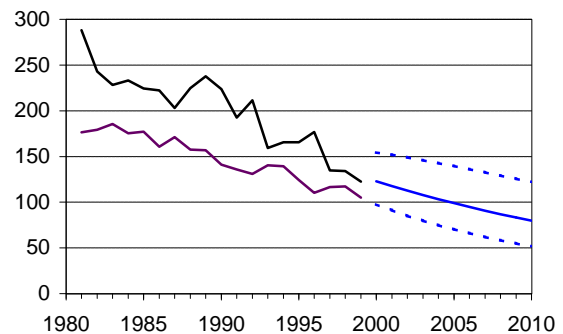
Doncaster Quintile 5 (Most Deprived)



Rotherham Quintiles 1-4



Rotherham Quintile 5 (Most Deprived)



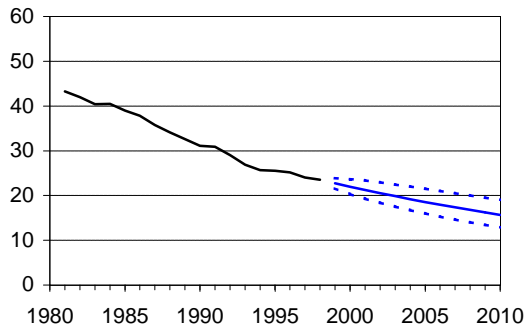
Rates forecast with 95% confidence intervals by Holt's Method on logit-transformed data

Figure 3.3 - Death Rates for Stroke

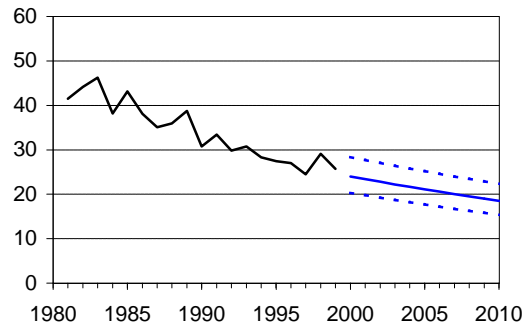
Directly Standardised Rates per 100,000 Resident Population
ICD-9 430-438 All persons aged under 75

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

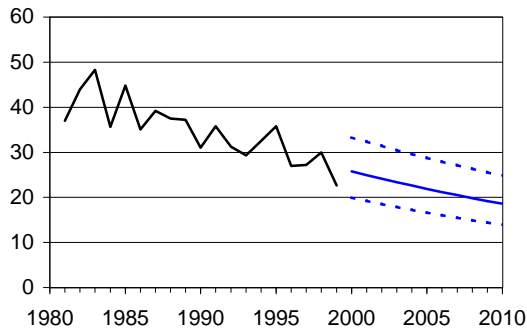
England & Wales



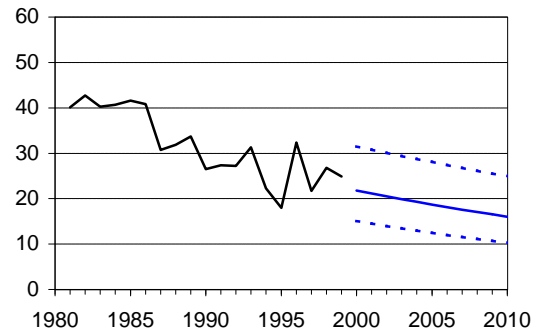
South Yorkshire Coalfields HAZ



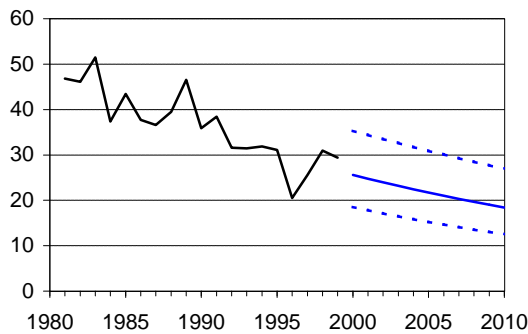
Barnsley HA



Doncaster HA



Rotherham HA



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

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

Figure 3.4 - Admission rates for Revascularisation

Directly Standardised Rates per 100,000 Resident Population
 OPCS 4 K40-K46, K49-K50 All Persons all ages

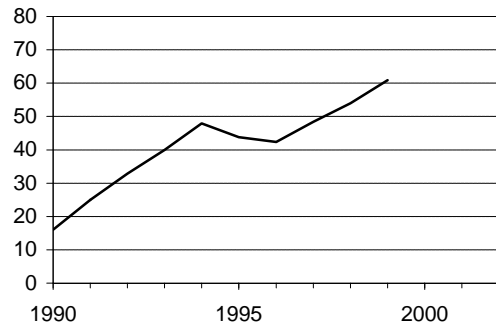
Target: Barnsley: Increase the number of coronary revascularisations by April 2002 to contribute to the national target increase of 3000

Sources: CMDS, Trent Region PIS Archive, ONS Mid-Year Estimates of Population

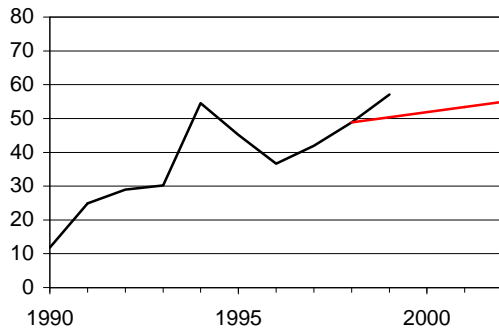
England and Wales

Data Not Available

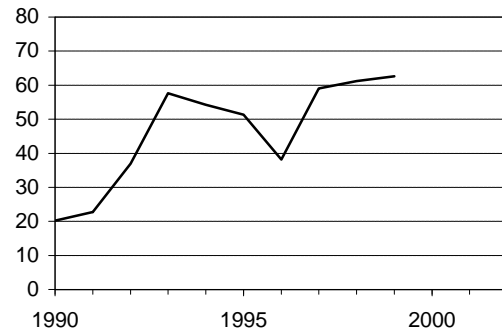
South Yorkshire Coalfields HAZ



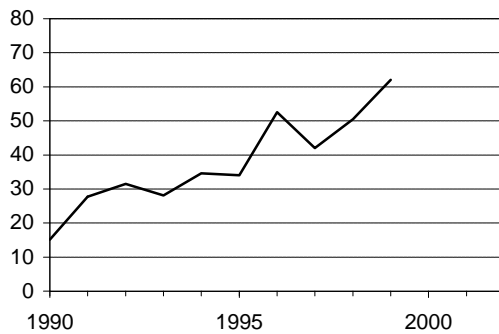
Barnsley HA



Doncaster HA



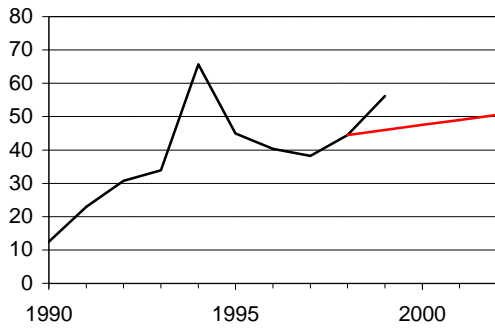
Rotherham HA



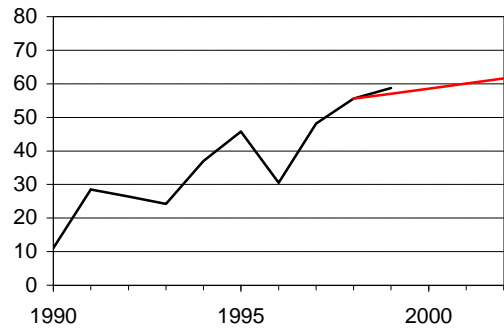
— Directly Standardised Rate
 — National Target applied pro rata (where appropriate)

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

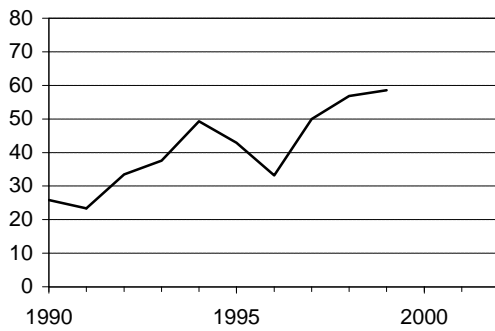
Barnsley East PCG



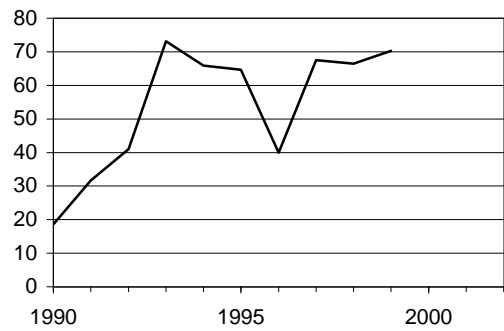
Barnsley West PCG



Doncaster Central PCT



Doncaster East PCG



Doncaster West PCG



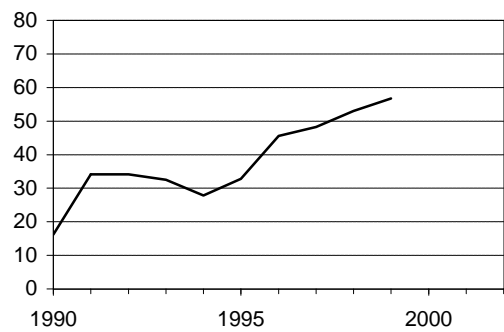
Rother Valley PCG



Rotherham PCG



Wentworth PCG



3.5 Aspirin Therapy

Doncaster has a target to assess 100% of patients at high risk of coronary or ischaemic cerebrovascular events for suitability for aspirin therapy by 2001. Audit suggests that currently 66% of patients are being considered for aspirin therapy (Doncaster MAAG, 2000).

References.

Bucher HC, Hengstler P, Schindler C, Guyatt GH (2000). Percutaneous transluminal coronary angioplasty versus medical treatment for non-acute coronary heart disease: meta-analysis of randomised controlled trials. *BMJ* **321**:73-77.

Department of Health (1999). *Saving Lives: Our Healthier Nation*. London: The Stationery Office.

Doncaster MAAG (2000). *Multi-practice audit of aspirin use in patients with ischaemic heart disease*.

NHS Centre for Reviews and Dissemination (1997). Management of stable angina. *Effective Health Care* **3(5)**.

Shaw M, Dorling D, Gordon D, Smith GD (1999). *The widening gap – Health inequalities and policy in Britain*. Bristol: The Policy Press.