Chapter 3: Vital statistics and trends

Key points

- Men from the most deprived neighbourhoods of the Bradford district have eight years shorter life expectancy than those in the least deprived areas (women five years shorter).
- Lung cancer, mental health problems, chronic obstructive pulmonary disease, infant mortality and coronary heart disease are the biggest causes of health inequity between Bradford district and the rest of England.
- In the last decade the premature mortality rate for cardiovascular disease (CVD) and cancer has fallen across the district, although mortality remains higher in the most deprived parts of the community.
- Particularly high mortality rates occur in south east and east Bradford, Manningham and Keighley central.
- The highest hospital admission rates for heart attacks are in Bradford Moor, City and Manningham wards, with the highest rates for stroke in central Keighley.
- Due to population growth, the number of people living with CVD is likely to grow from 30,000 to 37,000 by 2030. An additional 2000 people may be registered on CVD and cancer GP registers by 2015.
- NHS Bradford and Airedale is investing in interventions to reduce CVD (such as smoking cessation services) and expanding primary prevention by using statin drugs to reduce cholesterol.

Life expectancy

On average men and women in Bradford have a life expectancy two years below that of England as a whole (76 years compared to 78 years for men, and 80 years compared to 82 years for women).

Significant variations in deprivation, lifestyle and disease rates within the district mean that men from the most deprived neighbourhoods have over eight years shorter life expectancy than those in the least deprived areas (72 years compared to 80 years) (figure 6). The difference for women is less striking but there remains a five year gap (77 years compared to 82 years).

Figure 6: Life expectancy at birth for males and females (2003 – 2007) for deprivation quintiles in Bradford and Airedale

<table>
<thead>
<tr>
<th>Quintile*</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>80.0</td>
<td>82.4</td>
</tr>
<tr>
<td>2</td>
<td>78.1</td>
<td>81.7</td>
</tr>
<tr>
<td>3</td>
<td>78.0</td>
<td>82.0</td>
</tr>
<tr>
<td>4</td>
<td>76.3</td>
<td>79.9</td>
</tr>
<tr>
<td>5</td>
<td>72.2</td>
<td>77.2</td>
</tr>
<tr>
<td>All</td>
<td>75.6</td>
<td>79.7</td>
</tr>
</tbody>
</table>

*Quintile 1 is the least deprived 20% of the community and quintile 5 the most deprived 20%
Source: Association for Public Health Observatories
Trends in mortality rate

The overall mortality rate for Bradford and Airedale is falling, although the relative gap between the district and England and Wales is growing (figure 7).

Particularly high mortality rates occur in south east and east Bradford, Manningham and Keighley Central (figure 8).

Figure 7: Mortality rate for all age all cause mortality rate for Bradford and Airedale district compared to England and Wales

Source: NHS Bradford and Airedale Intelligence and Analysis Team

Figure 8: All age all cause mortality rate by ward (2004 – 2007)

Source: Bradford Observatory (Public Health)
Cancer incidence and mortality

Cancer remains a major priority for the NHS as it is the leading cause of mortality in the population. If diagnosed early, outcomes from cancer – including survival – can be significantly improved for many. Over the next few years, the NHS should place a renewed focus on symptom awareness and early diagnosis of cancer. This will require the design of a range of new initiatives.

There are approximately 2,000 new cases of cancer per year in the Bradford district and 1,000 deaths. Since the 1990s the mortality rate for cancer in the UK and in Bradford has fallen (Figure 10). The local rate, however, is still significantly higher than England and Wales. In males, lung, colorectal and prostate cancer account for roughly half of new cases and are also the three main causes of cancer deaths (figure 9). For women, lung, breast and colorectal cancer have the highest incidence rate and account for more than half of cancer deaths.

There is still a large difference in the incidence and mortality from cancer between the most affluent and most deprived parts of the district, with the highest overall cancer rate in Royds ward (figure 11). Incidence of cancer is largely a reflection of risk factors (including age, lifestyle and genetic risk). Survival is largely a measure of treatment outcomes and mortality is a measure of both. Over the last 10 years there have been extensive, and successful, efforts to improve cancer treatment services. In order to make further improvements to

Figure 9: Cancer incidence by type (2002 – 2006) for males and females separately compared to Yorkshire Cancer Network as a whole

Figure 10: Mortality Rate for All Cancers (age < 75 years) for Bradford and Airedale district compared to England and Wales

Source: NYCRIS 2008

Source: NHS Bradford and Airedale Intelligence and Analysis Team
cancer outcomes we need to continue to improve treatment services, but also we need to focus on earlier diagnosis.

**Recommendation:**
We need to carefully consider what services and interventions we need to provide to improve symptom awareness, particularly in communities and in primary care, in order to ensure people are diagnosed as early as possible.

Hospital admissions are higher in Royds, the Baildon and Shipley area, and parts of more affluent Wharfedale and rural west of the district (figure 12). This suggests there is inequity in access to hospital services for treatment of cancer. Cancer services are beginning to target the interventions that will be necessary to diagnose cancer earlier. This will include health education, activity in primary care to identify and refer at an earlier stage and to reduce the proportion of cancers diagnosed following an emergency admission for some other issue.

**Cardiovascular disease**
Cardiovascular disease (CVD) principally describes strokes and heart attacks. It is important because it is a leading cause of preventable early death, a major cause of morbidity, and causes significant inequalities in health, particularly affecting deprived populations and ethnic minorities. In the last decade the mortality rate for circulatory diseases (<75 years) has fallen across the district (figure 13). Similar to cancer, however, mortality remains higher in the most deprived parts of the district.
The distribution of coronary heart disease (CHD) deaths and hospital admissions follow a similar pattern. Mortality is highest in central Bradford (Toller, Manningham, Bradford Moor, Bowling and Barkerend wards – figure 14) with the highest admissions in Bradford Moor, City and Manningham wards (figure 15). Many of the neighbourhoods covered by these wards suffer from extreme deprivation. For stroke (maps not shown here) mortality is highest in central Keighley and Manningham, with the
highest hospital admissions also in central Keighley.

Over half of this growth is related to an increase in the district’s South Asian population who as a group have a higher prevalence of cardiovascular disease (CVD) (figure 16).

Currently about 7% of the population are living with cardiovascular disease but due to population growth the number may grow from 30,000 to 37,000 people by 2030.
Looking to the future

Lung cancer, mental health problems, chronic obstructive pulmonary disease, infant mortality and coronary heart disease are the biggest causes of inequity between the health of Bradford district and England. Locally, the numbers of early deaths (those less than 75 yrs old) from heart disease, stroke and smoking related causes are significantly greater that the England average and above the level of Yorkshire and Humber. Approximately one quarter of deaths in Bradford and Airedale are caused by cancer, with a further 17% from coronary heart disease (CHD) and 9% stroke. Due mainly to population growth there is estimated to be an additional 330 cancer deaths, 220 deaths from CHD and 63 deaths due to stroke per year by 2030.

Current government targets measure reductions in inequalities between poor and affluent population groups regardless of their size. Two key government targets are:

- reducing health inequalities by 10% by 2010 as measured by infant mortality rates and life expectancy at birth, and
- reducing adult smoking rates to 21% or less by 2010, with a reduction in prevalence among routine and manual groups to 26% or less.

The size of Bradford’s South Asian and deprived population will increase over the next 20 years, groups that generally suffer higher levels of chronic diseases. For example, forecasting work by the NHS Bradford and Airedale shows that an additional 2,000 people should be registered on CHD, stroke and cancer GP registers by 2015 and an extra 6900 by 2030 (figure 17). Therefore
the district will experience increased pressure on local health services that will occur regardless of any minor reductions in overall mortality or prevalence rates.

NHS Bradford and Airedale is investing in various interventions to reduce CVD disease such as smoking cessation services and expanding primary CVD prevention using drugs such as statins that are effective at reducing cholesterol levels.

Statins are a class of drugs that have been shown to be clinically effective in the reduction of blood cholesterol levels, leading to a reduction in CVD disease. Simvastatin, a commonly used statin, is relatively inexpensive compared to its competitors and has been recommended for treatment of adults who have a >20% 10-year risk of developing CVD. By fully identifying those suitable for statin treatment the effect over three years for Bradford and Airedale would be an estimated 116 fewer strokes or heart attacks annually, including 26 fewer deaths caused by CHD and 22 fewer deaths due to stroke (Figure 18).

NHS Bradford and Airedale is carefully assessing the cost effectiveness of expanding primary CVD prevention using statins. However, increased investment in prescribing and identification of patients suitable for primary prevention, will be offset by savings made in secondary care by not having to treat these events.