

Developing The Public Health Observatory For Wales  
Datblygu Arsyllfa Iechyd y Cyhoedd i Gymru

# Betsi Cadwaladr University

Local Health Board

## > Demography Profile

Betsi Cadwaladr University Local Health Board (LHB), covering almost a third of the landmass of Wales<sup>1</sup> is the largest Local Health Board in Wales, both in terms of geography and population. 10.2 percent, 17.5 percent, 16.5 percent, 14.3 percent, 22.2 percent and 19.4 percent of the population live in the local authority areas of Isle of Anglesey, Gwynedd, Conwy, Denbighshire, Flintshire and Wrexham respectively.

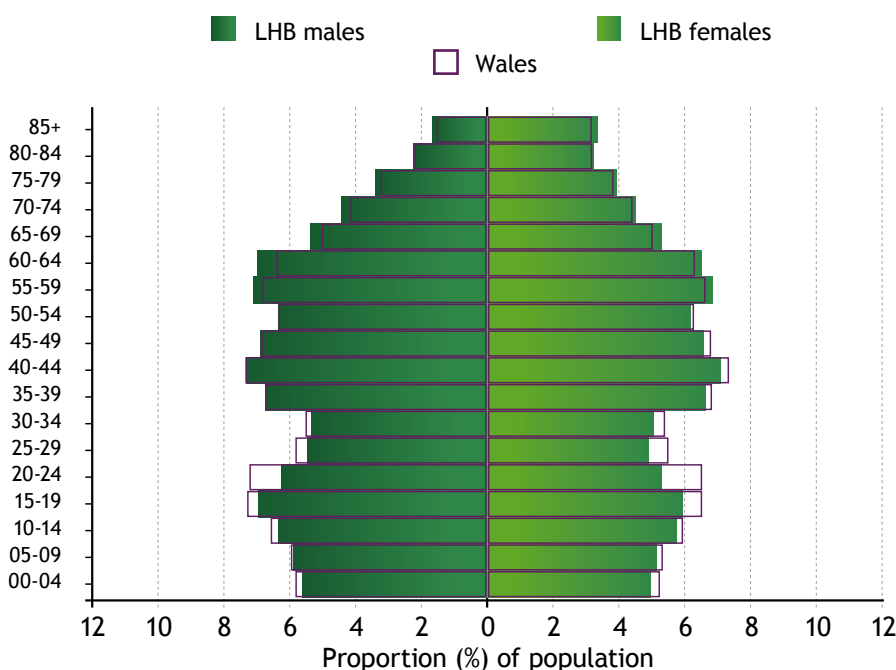
With 23% of Wales' population the area's **age and sex profile** is similar to that of Wales (Fig. 1) with fewer people aged 20-29 and more people aged 55 and over. Although the 2001 Census reported that one percent of the population came from a black and ethnic minority background<sup>4</sup>, the effect of migration since this time is more difficult to quantify.

Across Wales and the UK, the **general fertility rate**, the number of births per 1,000 women of child bearing age, had been falling until 2001/2002. However, it has been slowly rising since (Fig. 2). The Betsi Cadwaladr University LHB area general fertility rate is higher than the Wales rate but closely reflects the Welsh pattern<sup>5</sup>.



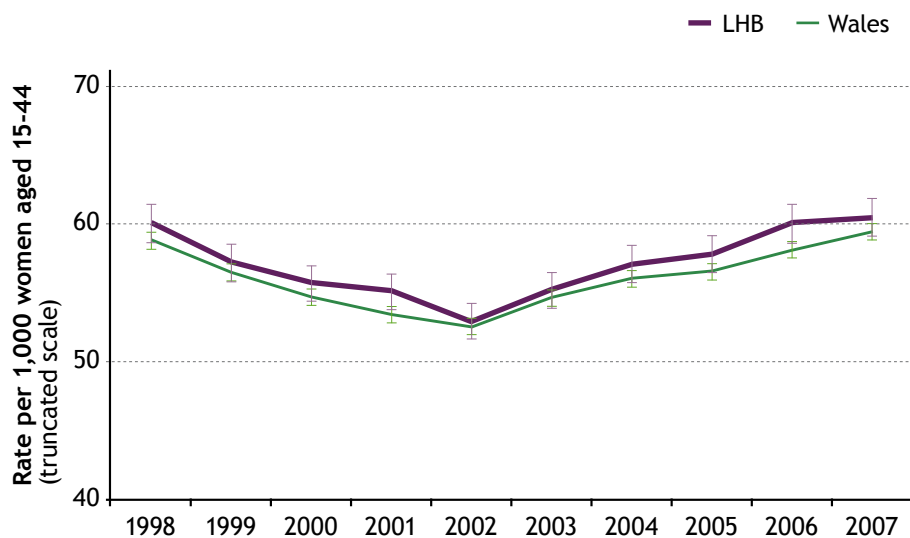
Key Statistics	Wales	Betsi Cadwaladr University LHB
Area size <sup>[1]</sup>	20,779 km <sup>2</sup>	6,172 km <sup>2</sup>
Total population <sup>[2]</sup>	2,980,000	678,500
Life expectancy at birth - males <sup>[3]</sup>	76.8 years	77.2 years
Life expectancy at birth - females <sup>[3]</sup>	81.2 years	81.5 years
Persons per km <sup>2</sup> <sup>[1, 2]</sup>	143.4	109.9
% population from ethnic minority background (2001) <sup>[4]</sup>	2.1%	1.0%
Total number of births <sup>[5]</sup>	34,572	7,570
Number of deaths <sup>[6]</sup>	32,148	7,448
% lower super output areas (LSOAs) in most deprived 5th of Wales <sup>[7]</sup>	20%	12%

> Fig 1: Population Pyramid Betsi Cadwaladr University LHB and Wales  
Data source: Office for National Statistics, mid year estimates 2007



➤ **Fig 2: General Fertility Rate trend, Betsi Cadwaladr University LHB and Wales, 1998 - 2007**

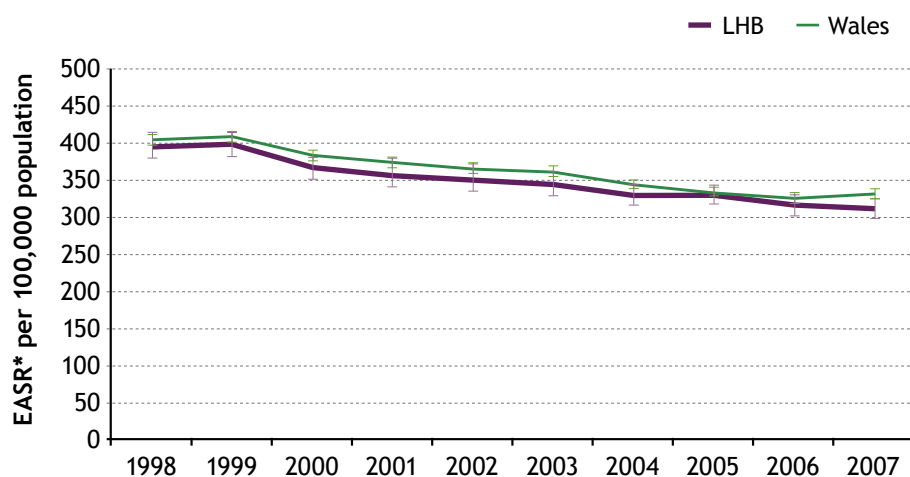
Data source: Office for National Statistics, Annual District Births Extract, mid year estimates



Error bars represent 95% confidence intervals. These reflect how random variation might influence the rate shown. This variation is greater in smaller populations, giving rise to wider intervals (for further details see website).

➤ **Fig 3: Under 75 mortality rate trend, Betsi Cadwaladr University LHB and Wales 1998 -2007**

Data source: Office for National Statistics, Annual District Deaths Extract, mid year estimates



\*EASR: European age standardised rate. Age standardisation allows comparison of rates across populations or time periods even when the age structures in these populations/time periods are different.

1. Office for National Statistics, 2007 geography.

2. Office for National Statistics, 2007 mid year estimates (rounded to the nearest 100).

3. Office for National Statistics, 2005-07 deaths registration and mid-year population estimates data.

4. Office for National Statistics, 2001 Census.

5. Office for National Statistics, Annual District Births Extract.

6. Office for National Statistics, Annual District Deaths Extract.

7. Welsh Assembly Government (Welsh Index of Multiple Deprivation domains: income employment, health, education, access to service, housing, physical environment, community safety).

In the Betsi Cadwaladr University LHB area, the under 75 age standardised mortality rate dropped by 21 percent between 1998 and 2007 (Fig. 3). It has remained consistently below the Wales rate. This fall is likely to reflect not only the activities of health services, but also improvements in living standards in the Betsi Cadwaladr University LHB area in the latter part of the 20th century.

The greatest causes of death in people aged under 75 among Betsi Cadwaladr University LHB residents are cancer, circulatory disease, and respiratory disease, accounting for 40%, 28% and 9% respectively of approximately 2,500 deaths in 2007<sup>6</sup>.

Geographically based deprivation measures can be used to show inequalities in health and suggest areas likely to most need measures to improve health and manage ill-health. The Welsh Index of Multiple Deprivation 2008, is produced at a small area level called Lower Super Output Area (LSOA), and is derived from a broad range of factors<sup>7</sup>.

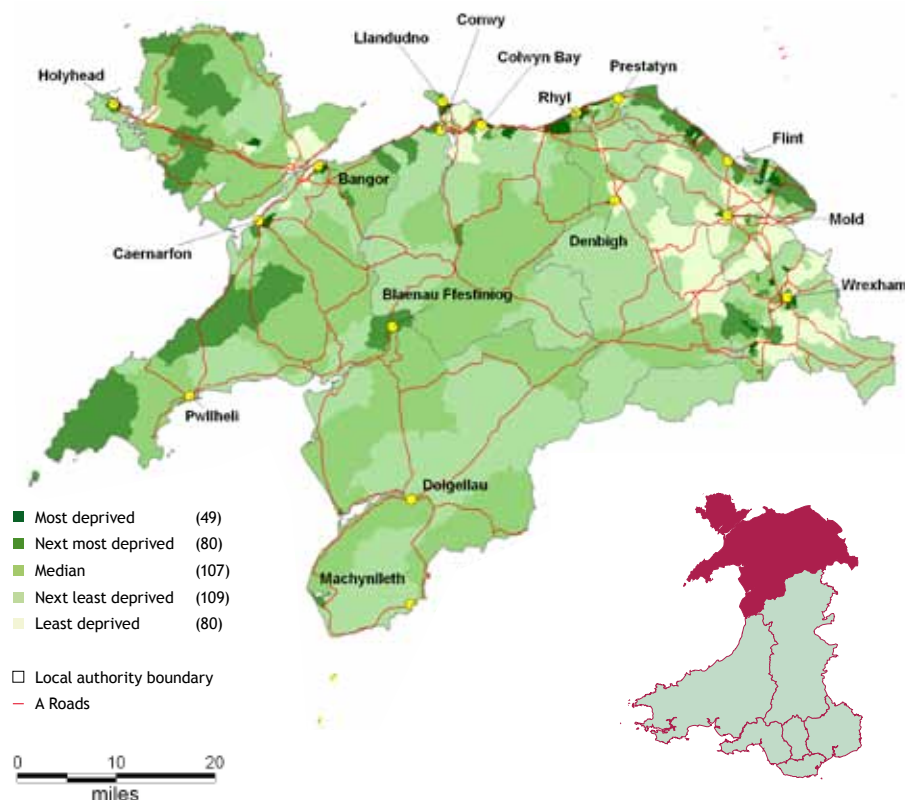
Within the LHB there are areas of deprivation, mainly found in coastal areas such as around Rhyl and Colwyn Bay and also Wrexham (Fig. 4). 49 out of the 425 LSOAs in the LHB (12 percent) are among the most deprived fifth in Wales with 80 (19 percent) in the least deprived fifth. However, within less deprived areas there are often pockets of hidden deprivation.

Current projections see a rise in the older population (75 years and over) of Betsi Cadwaladr

➤ **Fig 4: Overall Welsh Index of Multiple Deprivation 2008**

Fifths of deprivation, Lower Super Output Areas.

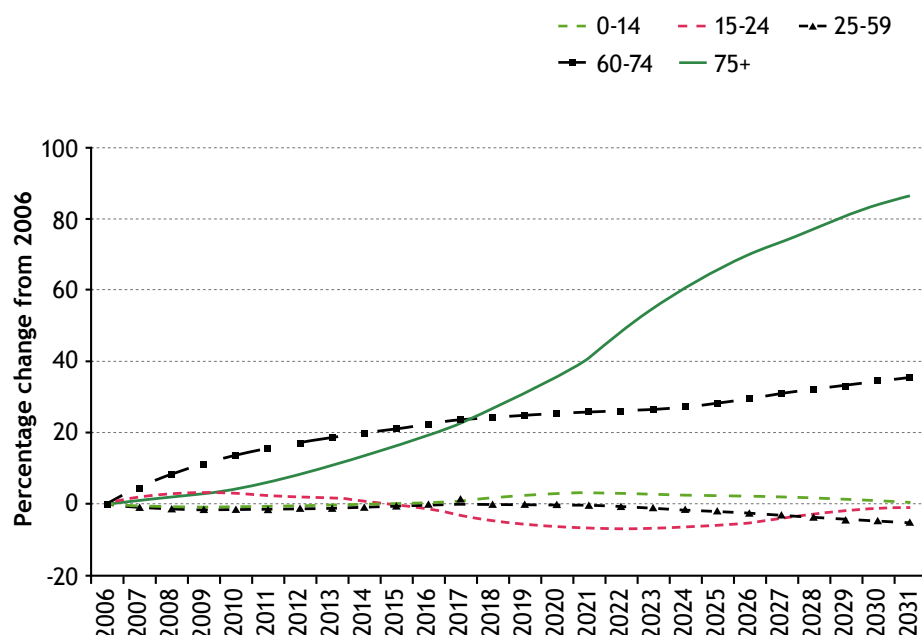
Data source: Welsh Assembly Government



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➤ **Fig 5: Population projections, Betsi Cadwaladr University LHB**

Data source: Derived from LA Population Projections (2006-based)  
Welsh Assembly Government



University LHB residents from 61,000 (9% of the total population) in 2006 to 115,000 (15% of the total population) in 2031 (Fig. 5). These estimates are based on assumptions about births, deaths and migration. The increase in the number of older people is likely to cause a rise in chronic conditions such as circulatory and respiratory diseases and cancers. Meeting the needs of these individuals will be a key challenge for the LHB. In the current economic climate, the relative (and absolute) increase in economically dependent and, in some cases, care-dependent populations will pose particular challenges to communities.

➤ **Further Information:**

More detail on the demography of the residents of Betsi Cadwaladr University LHB and Wales to accompany this profile is available at [www.wch.wales.nhs.uk](http://www.wch.wales.nhs.uk). This includes information at small area level, local variations in mortality and further resources to support LHB work.

This profile presents information for use by the newly formed Local Health Boards of Wales. It has been produced as the first of a series of information products made available by the newly created Public Health Observatory for Wales, a collaboration between the Wales Centre for Health and the National Public Health Service for Wales. LHB requirements will direct future profile development.

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