A review of the future financial sustainability of health care in Wales

Commissioned by the Welsh NHS Confederation

Prof John Appleby
Chief Economist, The King’s Fund

James Thompson
Information Analyst, The King’s Fund
About The King’s Fund

The King’s Fund is a charitable foundation whose work is focussed on health and social care and whose goals are to help develop:

- Informed policy by undertaking original research and providing objective analysis of key health issues
- Skilled people and organisations by building understanding, capacity and leadership

The King’s Fund has internationally renowned knowledge and expertise in the field of health and social care. Its leadership and organisation development covers issues such as:

- Developing confidence in senior leaders testing ideas and learning in action learning sets
- Developing a deep understanding of individual behaviours, personal impact and leadership models a precursor to being more effective in groups and teams and as a leader
- Developing knowledge, skills and aptitudes for clinical leaders at board level and at every level below the board
- Developing whole boards, individual executives, aspiring directors and non executives, to increase the capacity of senior leadership
- Developing skills in governance, leadership and relationship management for leaders of the new GP Commissioning consortia.

In addition to its internal faculty The King’s Fund has a wide range of associates and partners who are used to bring additional expertise and capacity in areas such as health policy, leadership, personal impact and communication.

The King’s Fund
11-13 Cavendish Square
London W1G 0AN
www.kingsfund.org.uk
Tel: 020 7307 2591
Fax: 020 7307 2801

Charity registration number: 1126980
Contents

1. Introduction

Summary

2. The macroeconomic outlook


4. Health system resources and performance

5. The current fiscal position: 2013/14

6. Short to medium term outlook: The next five to ten years

7. Meeting the funding challenge

References
Figures and tables

Figure 1: Quarterly UK GDP (2009 prices)
Figure 2: Gross Value Added per head of population at 2010/11 prices, by UK territory
Figure 3: Gross Value Added per head of population at 2010/11 prices: Index: 1989-2011 by UK territory
Figure 4: UK public spending on health: OBR projections to 2023/24 (per cent GDP)
Figure 5: Total NHS spending: Wales: Current and 2010/11 prices: 1999/2000-2010/11
Figure 6: Year to year percentage changes in health spending: 2010/11 prices: 1999/2000-2010/11
Figure 7: UK regions’ health spending: 2010/11 prices: 1999/2000-2010/11
Figure 8: Spending per head UK regions relative to England: 2010/11 prices: 1999/2000-2010/11
Figure 10: Total Departmental Expenditure Limits: Devolved administrations, 2010/11 prices
Figure 11: Total NHS spending: Wales: Current and 2010/11 prices: 1999/2000-2014/15
Figure 12: Year to year percentage changes in health spending: 2010/11 prices: 1999/2000-2014/15
Figure 13: UK regions’ health spending: 2010/11 prices: 1999/2000-2014/15
Figure 14: Spending per head: 2010/11 prices: UK regions relative to England: Index, 1999/00-2014/15
Figure 15: Spending per head: 2010/11 prices: UK regions, 1999/00-2014/15
Figure 16: Trends in beds per 1000 population: England and Wales: 2000/1 to 2011/12
Figure 17: Total HCHS medical and dental staff (FTE) per 1,000 population, UK constituent countries, 2010 – 2011
Figure 18: Total NHS non-medical workforce (full-time equivalent) per 1,000 population, UK constituent countries, 2011
Figure 19: General practitioners per 10,000 population by UK constituent country, 2004 – 2012
Figure 20: Inpatients per head of nursing staff: Wales and England: 2000-2011
Figure 21: Inpatients per head of HCHS medical and dental staff: Wales and England: 2000-2011
Figure 22: Inpatients per head of HCHS medical and dental and qualified nursing staff: Wales and England: 2000-2011
Figure 23: Hospital activity per head of Hospital and Community Health Services (HCHS) staff, UK constituent countries, 2009/10
Figure 24: Comparison of Wales, Scotland and Northern Ireland hospital activity per head of HCHS staff indexed to England, 2009/10
Figure 25: Inpatients per available bed: England and Wales: 2000/1 to 2011/12
Figure 26: All patients waiting to start treatment waiting more than 26/36 weeks, Wales, October 2009 to March 2013
Figure 27: All patients treated having waited over 26/36 weeks, Wales, October 2009 to March 2013
Figure 28: Planned and achieved savings 2010/11 to 2012/13
Figure 29: Percentage of planned savings achieved 2010/11 to 2012/13 by organisation
Figure 30: Spending pressure projections: 2010/11 to 2023/4 (current prices): Baseline demographic projection
Figure 31: Spending pressure projection: 2010/11 to 2023/4 (current prices): ‘Five Year Framework’ estimates extended
Figure 32: Spending pressure projections: 2010/11 to 2023/4 (current prices): Office for Budget Responsibility UK projections adapted to Wales
Figure 33: Spending pressure and actual spend projections: 2010/11 to 2023/4 (current prices): Baseline demographic projection
Figure 34: Spending pressure and actual spend projection: 2010/11 to 2023/4 (current prices): 'Five Year Framework' estimates extended
Figure 35: Spending pressure and actual spend projections: 2010/11 to 2023/4 (current prices): Office for Budget Responsibility UK projections adapted to Wales
Figure 36: Summary: Spending pressures vs actual spending

Table 1: Changes in NHS budgets: 2010/11 to 2014/15
Table 2: Population and health statistics, UK constituent countries
Table 3: Age-standardised mortality rates for causes of death considered avoidable, by country and sex, 2001-11
Table 4: Financial allocations 2012/13 and 2013/14
Table 5: Financial situation in 2012/13 and estimates for 2013/14 across trusts and health boards in Wales
Table 6: Summary of spending projections and assumptions for actual spending (2010/11 prices)
Table 7: Actual spend minus spending pressure projections: Average annual percentage of actual spend 2010/11 to 2023/4
Table 8: Actual spend minus spending pressure projections: Average annual percentage of actual spend 2015/16 to 2023/4

**Statistical health warning:** Where possible and appropriate statistical comparisons are made with other regions of the UK. While every attempt has been made to check the comparability of statistical definitions, caution is required in interpreting differences due to variations in statistical collections.
1: Introduction

In response to growing deficits arising from the impact of the 2008 recession and the scale of the financial rescue for the banking sector, public finances across the UK have been squeezed, with significant real reductions planned up to 2014/15 and a significant likelihood of continued downward pressure for some years beyond.

Although health spending across the UK has received some degree of protection relative to other areas of public spending, decisions in Wales imply the largest real reductions in health spending compared to other regions of the UK.

In the light of a tough financial settlement, this review aims to provide:

1. An independent view of the long term economic situation and how that might affect the availability of resources for health care in Wales.
2. A view on the relative level of need in Wales and the factors driving changes in need over the next decade.
3. A better understanding of the relative costs of delivery in Wales and to what extent current policy e.g. in relation to labour markets and working with commercial partners, may affect the ability to meet the resource/needs challenges identified in the future.

The Review also sets out the historical context with respect to funding and spending and the current financial situation (and in particular the underlying deficit situation in individual NHS organisations across Wales).

It will also provide estimates of spending pressures over the next five to ten years based on projections of the costs of demographic change plus additional scenarios to reflect pressures from factors such as changing medical technology.

In section 2 we look at the broad macroeconomic outlook over the next decade and projections of GDP and UK health and social care spending produced by the Office for budgetary Responsibility (OBR). In section 3 we examine health spending in Wales from 1999 to 2015 and in comparison with other regions of the UK. Section 4 examines some indicators of health system performance both over time and, where possible, in comparison with other parts of the UK. Section 5 describes the current financial position in health across Wales and for individual trusts and health boards. Section 6 then provides a number of alternative projections of actual health funding and spending pressures up to 2023/4 to provide estimates of the possible scale of the future funding shortfall. In the light of the results of the projections exercise, section 7 concludes with an overview of policy options.

John Appleby

James Thompson

August 9 2013
Summary

The macroeconomic outlook

- After the financial shocks of 2008, 2009 the UK economy remains weak with virtually no growth for the last 30 months. Prospects for a recovery to pre-recession growth rates remain gloomy with forecasts of between 1.5% to 2% in 2014 and a return to long run trends of around 3% by 2017 - a decade after the initial financial crisis.

- As a result of these forecasts and other factors, total public spending across the UK is projected to fall 5 percentage points by 2017, to 40.5% of GDP

- Overall, public spending - including health spending - looks to be constrained at least to 2017/18, with some recovery possible thereafter dependent on general economic growth.

Health spending in Wales: 1999/2000-2014/15

- The decade from 1999/2000 saw Welsh health spending increase by nearly 80% in real terms.

- Following the 2010 Spending Review and a planned reduction of nearly 10% in the Welsh block grant to 2014/15, 2010/11 was a turning point in health funding across the UK - and particularly in Wales following Welsh Government budget decisions - bringing to an end one of the longest runs of increased funding in many decades.

- By 2014/15, overall health spending in Wales will be back to spending levels of 2008/9 (following a real cut of around 6.6% - the largest reduction across the UK), representing a smaller share of national wealth and will be over 30% less in real terms compared to the level of spending that would have occurred if trend increases had carried on to 2014/15.

- In 2013/14, health spending per capita in Wales will have fallen below that of England for the first time in many years. By 2014/15 per capita spend is projected to be 6% less than in England.

Health system resources and performance

- Increased funding over the last decade has allowed the Welsh NHS to employ more staff and in general to produce more activity. However, it should not be surprising that with a real rise in funding of nearly 80% since 1999/2000 to 2010/11 that labour inputs and activity outputs have increased.

- On one crude measure of productivity - hospital activity per head of staff - it would appear that medical staff productivity has fallen, and remained fairly constant for nursing staff. In England, there were also reductions in medical staff productivity (but not as great as in Wales) and increases in nursing productivity.
• Nursing productivity in terms of inpatient activity per head was 56% higher in England than in Wales in 2011/12.

• In terms of bed use, while Wales recorded an increase in the number of inpatients treated per bed of 28% between 2000/1 and 2009/10, in England the increase has been 54%.

The current fiscal position: 2013/14

• While most health boards/trusts broke even in 2012/13 this was achieved in part through additional financial support from within the total NHS Wales budget.

• With the start of a fourth consecutive year of reduced real funding - and on current budget figures, the largest reduction over the whole period - there are evident and continuing financial pressures across the health system as a whole and across all health organisations.

• Analysis of board papers for health organisations suggests a gap this financial year (2013/14) between allocations and cost and other pressures amounting to around £320 million. Currently, around half this sum remains to be identified in savings plans.

Short to medium term outlook: The next five to ten years

• Three alternative estimates of future NHS spending pressures in Wales - a baseline demographic model, estimates derived from the Five year framework (Welsh Assembly Government, 2010) and projections for UK health spending by the Office of Budget Responsibility (OBR) and applied to Wales - suggest a range of pressure to increase spending over the next decade.

• Using 2010/11 as a baseline, the various combination of models and assumptions about future funding and spending pressures suggest an average annual gap between actual funding and spending pressures from 2010/11 to 2023/4 of between -5% to -21%

• Rebasining the analysis to 2014/15, reduces this average annual range to +6% (ie higher actual funding than spending pressures) to -14%

Meeting the funding challenge

• The four main options for these financial challenges are limited and none are without consequences:
  • ‘Do nothing’
  • Increase funding
  • Reprioritise services within projected budget
  • Improve productivity
• ‘Doing nothing’ would have major implications for service delivery and quality and it is impossible to see the consequent deterioration in services - from increased waiting times to negative impacts on health outcomes - being seen as acceptable by the public.

• Increasing funding raises a fundamental problem of where the extra money is to come from. Finding enough money from other budgets in Wales to meet inflation and changes in demands arising from changes in demography for the three years beyond the current spending round for example would require annual cuts in all other non-health care spending of around 2.0% on average each year (equivalent to real annual cuts of around 4%). This would be in addition to annual real reductions in budgets of around 2% as a result of real cuts in the block grant.

• Reprioritising services within projected budgets could help fill the quantity/quality gap represented by the monetary value difference between actual funding and spending pressures through, for example, maintaining growth in front line services funded by reductions in less direct functions. However, the monetary value of the annual gap between the NHS Delivery revenue budget projection based on changes in population and demographic structure would require around 130% of all capital spending each year to 2023/4.

• Improvements in productivity could, through a combination of reducing costs and improving outputs per pound spent, in part help meet fiscal breakeven rules, and meet additional/changing demands and improve quality (partly through reinvestment in higher-value services from cash releasing activities and partly through changes in service delivery/organisation etc). The difficult question is what scope exists in the system to deliver more and better health services through more efficient use of every health care pound not just over the next few years, but, even under the most optimistic future funding scenario, over the next decade at an average minimum rate of 5% per year. The somewhat limited labour productivity evidence in this review suggests that relative to England there should be scope for further improvements in productivity. However, such evidence needs more detailed examination and, if differences persist, investigation of the reasons for this.

• Even when funding is more generous, there is always an obligation on public services to spend the public’s money as efficiently and as productively as possible. This means that while productivity gains will, over time, become harder to achieve, effort still needs to be devoted to the task. However, there also needs to be a realistic view about how close the system is, and individual organisations are, to their theoretical maximum output given the inputs at their disposal.
Overall, there is no doubt that the NHS across Wales faces a very difficult financial time not just at present but over the next half decade. In the absence of a significant financial boost over the next few years, improving productivity and the value that every health care pound can buy has to be the main policy response. However, the size of the funding gap identified in this review suggests that there needs to be a step change in traditional approaches to improving productivity; small incremental changes at the margin will not suffice. But to meet the transformational challenge required, the NHS in Wales will need support and backing to think and act more radically if services are to meet the future needs and expectations of patients and the public.
2: The macro economic outlook to 2023

An important part of the context for this review of the future financial sustainability of health care in Wales lies in the upheavals in the broader macroeconomic environment.

As in the rest of the UK and many other countries, Wales has faced an extremely difficult time economically over the last five to six years. The unfolding of the banking crisis in 2007 saw investors in Northern Rock withdraw over £1 billion in the biggest run on a bank in more than a century. Responding to increasing failure in the financial sector and the ensuing recession lead eventually to the cutting of the central bank base rate to 0.5% (its lowest since introduced in 1694), around £375 billion in quantitative easing and a severe set of tax and spend austerity measures.

Meanwhile the UK economy has suffered a loss of output relative to pre-recession trends of nearly 14% of total GDP in 2012 (see figure 1). Worse is the trajectory of the post-recession recovery (red line in figure 1) which so far has failed to get back to pre-recession trends. Over the longer term it is likely that the UK will have suffered a permanent and significant loss of output.

Figure 1: Quarterly UK GDP (2009 prices)

The impact of the 2008-2011 recession is evident in figures 2 and 3. Real Gross Value Added (GVA) per head in 2011 in all countries has fallen back to 2004/2005 levels. The position of Wales relative to other countries is also evident, with per capita GVA rising more slowly over
the last quarter of a century with a consequent growing gap between Wales and England, Scotland and Northern Ireland.

**Figure 2: Gross Value Added per head of population at 2010/11 prices, by UK territory**

Source: Data: ONS, 2013d (and previous GVA publications)

NB: Shaded areas = periods of recession

NB: Gross value added (GVA) is a measure of economic activity valued in basic prices, which means it includes taxes (less subsidies) on production but excludes taxes (less subsidies) on products.
Prospects for the UK (and most of its regional) economies over the next few years remain gloomy. The National Institute for Economic and Social Research, for example, predict GDP growth this year to be around 0.9%, and in 2014 to be 1.5% (Kirby, Portes, 2013) - well below long run average growth trends in the UK economy. Price Waterhouse Coopers (PwC, 2013) forecast similar real increases in GDP or around 1% this year and 2% in 2014. The Institute for Fiscal Studies (Emerson et al, 2013) also report similar real growth rates, with an expectation that real GDP growth will reach nearly 3% by 2017 - nearly a decade after the start of the recent recession.

The Office for Budget Responsibility (OBR) in its latest Economic and Financial Outlook (EFO: OBR, 2013) report a slightly gloomier forecast, with GDP growth of 0.6% this year, 1.8% in 2014 rising to 2.8% in 2017. These rates would just about take GDP growth back to pre-recession trends - but of course running at an absolute lower rate. It is important to note that all forecasts have uncertainties. The OBR forecast for 2013 suggests that there is a 30% chance that GDP will shrink rather than expand for example.

As a result of these forecasts, coupled with forecasts for a range of other economic variables, including government receipts, the OBR also forecast future aggregate public spending to 2017/18. With a pick up in GDP growth and continued fiscal consolidation plans by government, total public spending (total managed expenditure -TME) is predicted to fall as a share of GDP by 2017 - to 40.5%, from 45.5% in 2011. Real spending will be effectively flat to 2017.
Economic and spending forecasts beyond 2017 (up to 2060/61) are produced by the OBR in their annual Fiscal Sustainability report (OBR, 2012). Under various assumptions and scenarios projections for annual real GDP growth range from around 1.5% to 2.5% by 2023/24 - with a central projection of around 2%.

In addition to GDP projections, the OBR also make projections for key areas of government spending, revenues and borrowing. On revenues, while the OBR assume they will broadly remain constant as a share of GDP (hence growing in real terms at the rate of GDP growth), they temper this assumption with speculation about the impact on total revenues of non-demographic factors on revenues - such as depleting oil and gas reserves and the globalisation impacts on corporation tax and VAT revenues. Their conclusion is that ‘future governments are likely to need to find replacement streams of revenue merely to hold the tax burden constant, let alone to meet upward pressures on spending.’

On public spending, and health in particular, figure 4 shows the OBR’s projections for (UK) health spending to 2023/4 as a percentage of GDP under seven scenarios and one central projection.

Figure 4: UK public spending on health: OBR projections to 2023/24 (per cent GDP)

Apart from the projection that assumes 3% real growth per annum in health spending, most notable is the fact that there is little difference in spending projections between different assumptions and that by 2023/4, and following a fall in spending to 2015/16, spending as a proportion of GDP is projected to climb back to current levels.

It is important to note that these projections assume no change in policy and are projections, not forecasts; future health spending is a matter of policy choice not an Act of God or a whim of Nature. These projections form the basis of one of the future spending scenarios for the NHS in Wales examined in section 6.
Conclusion

While public spending decisions are a matter of policy choice, choices are necessarily constrained by broader macroeconomic considerations. The recent recession and ongoing stagnation in economic output has severely constricted government’s room for manoeuvre. Although economists may disagree over the details of the size, balance and timing of current austerity programme of tax rises and public spending reductions, some action to repair public finances and to restore a sustainable level of government borrowing was required. The depth and length of the combined impact of the banking crisis, recession and ensuing economic stagnation are unprecedented and it is clear that it is likely to have taken between seven and ten years from the start of the crisis in 2007 before the UK’s economy climbs back to its pre-recession size.

On the basis of OBR forecasts of GDP growth to 2017, it seems unlikely that the UK economy will in the medium term return to the trend path it was on pre-2007. More likely is that economic growth returns to a rate of around 2% to 2.5% per annum with the economy paralleling its historic trend, but at a permanently reduced level. Projections for future government revenues (on the assumption of no change in policy) from the OBR suggest a declining proportion of GDP over the next fifty years. The exact extent of this decline is somewhat uncertain, but suggests that future governments will need to seek other sources of revenue just to maintain revenue as a share of GDP.

The implications of the UK’s macroeconomic situation for public spending, and health care in particular, over the next decade depend on a number of factors - not least the robustness of GDP projections and success in eroding the deficit - beyond the current planned spending round it would be safe to assume at least two to three more years of downward pressure on public spending (to 2017/18). Thereafter - to 2023/4 - there would likely be room for real growth of around 2% to 2.5% - increases that that modestly outpace growth in real GDP and hence increase health care’s share of GDP. By 2023/4 this would return UK health care spending as a share of GDP to where it was a decade earlier. As ever, we would emphasise the health warnings attached to these projections; the outlook for public spending could be much gloomier for instance if the economy fails to reach its pre-recession growth rates.

Next we examine recent trends in health spending in Wales and in comparison to the rest of the UK as well as plans up to 2014/15.

Spending: 1999/2000-2010/11

The latest Treasury public expenditure statistical analysis (HMT, 2013) detailing UK regional outturn spending by function shows health spending in Wales in 2010/11 reaching £6.1 billion - a cash rise of around 128% since 1999/2000 and after accounting for general (not NHS-specific) inflation, a real rise of around 80% (figure 5).

Figure 5: Total NHS spending: Wales: Current and 2010/11 prices: 1999/2000-2010/11

While these increases represent an average annual real rise of just under 5% each year since 1999/2000, as figure 6 shows, year-on-year real outturn spending has varied - from a small real cut in 2010/11 to an increase of over 12% in 2003/4.
Compared to other parts of the UK, real spending on health in Wales (+79%) has broadly kept pace with Northern Ireland (+89%), exceeded real increases in Scotland (+68%), but lagged behind increases in England (+94%) (figure 7).

Part of the increase in spending reflects changes in population size and composition. The English population has risen by 6.5% between 1999/2000 and 2010/11. In Scotland and Wales the increase has been less, at 3% and 3.7% respectively, and in Northern Ireland the
population has increased by 7.2%. Figure 8 shows health spending per head and reveals the historic gap between England and other parts of the UK.

**Figure 8: Health spending per head: UK regions, 2010/11 prices: 1999/2000-2010/11**

![Graph showing health spending per head for UK regions from 1999/2000 to 2010/11.](image1.png)

Source: Data: HMT (2013, 2006)

Figure 9 shows regional health spending (at 2010/11 prices) relative to England. Spending per head in Wales has fluctuated between +2% and +12% of the spending in England.

**Figure 9: Spending per head UK regions relative to England: 2010/11 prices: 1999/2000-2010/11**

![Graph showing spending per head relative to England for UK regions from 1999/2000 to 2010/11.](image2.png)

Source: Data: HMT (2013, 2006)
Of note across all these figures is the way health spending holds up through the recession of 2008/10 - a typical situation historically, with public spending planned and committed three to four years in advance.

**Spending 1999/2000-2014/15**

The block grant for Scotland, Wales and Northern Ireland, largely set by the Barnett formula, funds the vast bulk of public services in those countries. Figure 10 shows the size of the total departmental expenditure limit changes as announced in the 2010 spending review. For Wales this amounted to a reduction of 9.6% in real terms by 2014/15 compared to 2010/11 - a cut of around £1.3 bn over four years.

**Figure 10: Total Departmental Expenditure Limits: Devolved administrations, 2010/11 prices**

With reductions of this size to the main funding source for public services, maintaining historic rates of real growth for the NHS - the single largest spending area in Wales, consuming over 42% of all public spending - was clearly a hugely difficult task.

It is worth noting here that in-year changes to budget decisions over the last few years have added to plans set out in the Final Budget. Table 1 shows how recent years’ budgets have evolved as supplementary adjustments have been made to original plans.
### Table 1: Changes in NHS budgets: 2010/11 to 2014/15

<table>
<thead>
<tr>
<th>Total health Budget¹</th>
<th>2010/11 £000</th>
<th>2011/12 £000</th>
<th>2012/13 £000</th>
<th>2013/14 £000</th>
<th>2014/15 £000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Budget 2010 (December 2009)</td>
<td>5,983.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st supplementary Budget (June 2010)</td>
<td>6,171.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd supplementary Budget (February 2011)</td>
<td>6,334.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final budget 2011 (February 2011)</td>
<td>6,061.3</td>
<td>6,040.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Budget 2011 (restated)</td>
<td>6,006.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st supplementary Budget (June 2011)</td>
<td>6,028.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd supplementary Budget (February 2012)</td>
<td>6,170.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Budget 2012 (December 2011)</td>
<td>6,028.3</td>
<td>6,090.2</td>
<td>6,079.7</td>
<td>6,070.1</td>
<td></td>
</tr>
<tr>
<td>1st supplementary Budget (June 2012)</td>
<td>6,146.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd supplementary Budget (February 2013)</td>
<td>6,160.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Budget 2013</td>
<td>6,146.8</td>
<td>6,108.7</td>
<td>6,110.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Change (Last budget minus first budget announcement) (£000) | 351.2 | 130.5 | 70 | 29 | 40.4 |
| (%) | 5.9% | 2.2% | 1.1% | 0.5% | 0.7% |

**Key**
- Baseline
- Final budget
- Indicative final budget
- Final budget restated
- 1st supplementary budget (June)
- 2nd supplementary budget (February)

**Sources:** National Assembly for Wales (2011a, 2011b, 2012, 2013a, 2013b)

**Notes:** 1: Includes: NHS Delivery, health central budgets and public health and prevention (revenue + capital)

As can be seen, in 2010/11 the difference between the Final Budget plan and the second supplementary budget amounted to £351 million - a 5.9% increase. There were also in-year additional funds in 2011/12 of £131 million (2.2%) and in 2012/13 of £70 million (1.1%). There are also additions for this year of £29 million - although this is based on the indicative plan published last year.

Taking into account the revised spending plans for 2011/12 and 2012/13 following two supplementary budget changes, figure 11 shows that health spending in Wales between 2010/11 and 2014/15 is planned to reduce in real terms by around 6.6%. Compared to the historic trend in real spending from 1999/2000 to 2010/11 of increases of around 5% per annum, spending on health in Wales in 2014/15 will be around 31% (£1.8 billion at 2010/11 prices) lower than if the historic trend had continued.
Figure 11: Total NHS spending: Wales: Current and 2010/11 prices: 1999/2000-2014/15

The annual real reductions in health spending (calculated on the basis of GDP deflator figures published by the Treasury in March 2013, and not NHS-specific inflation) for the spending review period to 2014/15 are shown in figure 12.

Figure 12: Year to year percentage changes in health spending: 2010/11 prices: 1999/2000-2014/15
While the policy decision in Wales has been to reduce health spending in real terms, in Scotland and Northern Ireland spending has been broadly maintained in real terms - with just enough cash to cover inflation. Meanwhile, the decision in England to ‘ringfence’ health spending has, on the latest - and reduced - GDP deflator figures, produce a real increase in spending of 7% by 2014/15 (figure 13). Some caution is needed with these comparisons as the baseline figure for 2010/11 is drawn from the Treasury PESA data set whereas the budget/planned figures are drawn from each country’s budget/spending review plans. Actual increases are somewhat less than these comparisons suggest.

**Figure 13: UK regions’ health spending: 2010/11 prices: 1999/2000-2014/15**

![Graph showing health spending for UK regions](image)


The effect of these alternative spending plans on health spending per head to 2014/15 are evident from figures 14 and 15. For Wales, health spending per head this financial year (2013/14) dips below that for England for the first time since 1999/2000. By 2014/15, spending per head in Wales could be 6% less than for England.
Figure 14: Spending per head: 2010/11 prices: UK regions relative to England: Index, 1999/00-2014/15

Conclusion

2010/11 was a turning point in health funding across the UK - and particularly in Wales - bringing to an end one of the longest runs of increased funding in many decades. By 2014/15, overall health spending in Wales will be back to spending levels of 2008/9, representing a smaller share of national wealth and will be over 30% less in real terms compared to the level of spending that would have occurred if trend increases had carried on to 2014/15.
4. Health system performance

While the focus of this review is on funding, the important context (and indeed reason) for this concerns the instrumental use of this input in terms of the health of the population and the performance of the health system. This section therefore provides some brief descriptions of the physical resources available to the health services, key hospital outputs and activities and the population’s health in Wales. It also presents some crude, but indicative, measures of comparative labour productivity and trends in a key performance measure - hospital waiting times.

Hospital resources

Beds

Although the last decade has seen significant increases in financial resources in Wales, as in England (and indeed in most countries), Wales has experienced a reduction in the number of NHS beds over the last decade. Though difficult to compare, over the decade from 2000/01 to 2009/10 the average number of available beds of all specialties fell by 12% in Wales compared to 15% in England. Since then bed numbers have continued to decrease in Wales.

Falling bed numbers (and the consequent more intensive use of beds) is a long term trend reflecting changes in medical practice and falling lengths of stay as well as deliberate policy action. While numbers of beds have declined in absolute terms, they have also declined relative to population changes as well by over 20% since 2000 (see figure 16). Nevertheless, by 2009/10 Wales had around 40% more beds per 1000 population than England.

Figure 16: Trends in beds per 1000 population: England and Wales: 2000/1 to 2011/12

![Figure 16: Trends in beds per 1000 population: England and Wales: 2000/1 to 2011/12](image)

Sources: Data: Stats Wales (2013a), NHS England (2013)

NB: beds data for 2010/11 and 2011/12 for England not included due to a break in the data series
Workforce

More money over the last ten years has enabled the NHS workforce in Wales to grow significantly however. The total number of whole time equivalent staff directly employed by the NHS has grown by over 16,000 (29%) over the decade from 2000. Definition issues aside, the English NHS hospital and community health service workforce has grown by 32% over the same period.

Medical and dental staff have increased by 49%; nursing, midwifery and health visitor by 15%; scientific, therapeutic and technical by 58%; administration and estates by 31% and others by 32%.

The number of full-time equivalent medical and dental staff (excluding GPs) per 1,000 population in Wales was the same as England in 2010 but lower than Northern Ireland (-8%) and Scotland (-17%) - figure 17. In 2011 the number of medical and dental staff per 1,000 population increased in Wales, Scotland and Northern Ireland but remained the same for England.

Figure 17: Total HCHS medical and dental staff (FTE) per 1,000 population, UK constituent countries, 2010 – 2011

Source: Office of Manpower Economics (2013a); ONS (2013b); GRO Scotland (2012) and Northern Ireland Neighbourhood Information Service (2012).
NB Because of changes made in 2010 to the way in which headcount staff in Hospital and Community Health Services are counted in England – effectively removing instances of double counting – data from 2010 are not comparable with previous years.

Wales has a higher number of full-time equivalent non-medical workforce (nurses, allied health professionals, etc) per 1,000 population than England (+22%), but a lower ratio than Scotland (-5%) and Northern Ireland (-22%) - figure 18.
General practitioners

The number of general practitioners in Wales has grown by 12% since the millennium, an increase of 220 in total (excluding GP registrars, retainers and locums) (see figure 19). Over the same time period in England there was an increase in headcount numbers of general practitioners of 28%. The number of GPs in Wales per 10,000 population compared to the rest of the UK is similar to that in England and Northern Ireland whilst Scotland has historically had a higher number than the other regions.
Hospital activity

With increased funding and staff it is not surprising that activity has grown too. For example, the general trend in the total number of outpatient attendances (excluding A&E outpatients) in Wales has been upward over the last decade, though in the past two years has steadied somewhat. Since the millennium outpatient attendances have grow by 13% from around 2.7 million to 3.1 million in 2011/12. Comparison with changes in attendances (a large increase of around 70% in a decade) in England is difficult due some particular statistical and policy factors. For example, the summary report for English Hospital Episode Statistic outpatient data for 2011/12 offers this explanation for the large rise: “Changes to the figures over time need to be interpreted in the context of both improvements in data quality and coverage and changes in activity. The introduction of Payment by Results, increased private sector involvement in the delivery of secondary care and some changes in clinical practice...will have all affected trends” (HES (2012) Hospital Outpatient Activity 2011/12). Using 2008/09 as a benchmark, the year that the English outpatient HES data was adopted as a national statistic, outpatient attendances in England have grown by 20% whereas attendances in Wales decreased by less than one per cent (-0.22%).

While the number of inpatient admissions in Wales has grown by 17% since 2000/01 (and in England by 34%), there have been erratic changes year on year. In 2001/02 and 2002/03 for example there were successive decreases and there was also a decrease in 2007/08. Since 2007/08 numbers have risen year-on-year. Inpatient admissions in 2011/12 increased again to over 675,000 episodes.

Although the number of day cases in Wales declined from 2000/01 to 2004/05, since then there has had a period of sustained growth – figures for 2011/12 are now 74% (an increase of over 100,000) higher than 2000/01. Over the same time period as the longer Welsh trend (2000/01 to 2011/12) there was a 64% increase in the number of day cases in England.

The number of accident and emergency attendances in Wales decreased between 2007/08 and 2011/12 by 1%, though there were some data changes over this period that might not make the numbers completely comparable. Attendances in 2011/12 were up on figures in 2010/11 by less than one per cent, totalling around 990,000 attendances in the year. Over the same period (2007/08 to 2011/12) A&E attendances in England rose by 3%.

Productivity indicators

While staff numbers and activity have grown over the last decade, how has - albeit crude (and unadjusted for quality) - measures of labour productivity changed over the same period?

Figures 20 and 21 show trends in the number of inpatients per head of qualified nursing staff from 2000 to 2011 for Wales and England. Overall, there has been little change in the activity staffing ratio for Wales between 2000 and 2011, although following a dip early in the period, numbers increased from 2007 to 2011. However, of note is first the much higher ratio in England and also the larger increase over time - 8% vs 2% for Wales. Secondly, there
is a large gap between England and Wales on this crude labour productivity measure which has widened over time.

Figure 20: Inpatients per head of nursing staff: Wales and England: 2000-2011

Figure 21 shows the same activity ratio for HCHS medical and dental staff. Here the trend is downward in both countries and the ratio looks comparable.

Figure 21: Inpatients per head of HCHS medical and dental staff: Wales and England: 2000-2011

Expressed as an index, figure 22 shows the increasing productivity in nursing in England relative to Wales and, although also declining over time, the smaller reduction in medical and dental productivity in England relative to Wales.
In comparison with other regions of the UK, as Figure 23 shows, English HCHS staff were more productive than other regions of the UK across all types of hospital activity. However, productivity in Wales was higher than Scotland and Northern Ireland for inpatient and outpatient activity. Nevertheless, and data qualifications aside, the gap with England is noticeable, with 25% fewer A&E attendances per head of staff, a third fewer outpatient attendances, 40% fewer day cases and half the number of inpatient cases (figure 24).


In comparison with other regions of the UK, as Figure 23 shows, English HCHS staff were more productive than other regions of the UK across all types of hospital activity. However, productivity in Wales was higher than Scotland and Northern Ireland for inpatient and outpatient activity. Nevertheless, and data qualifications aside, the gap with England is noticeable, with 25% fewer A&E attendances per head of staff, a third fewer outpatient attendances, 40% fewer day cases and half the number of inpatient cases (figure 24).


In comparison with other regions of the UK, as Figure 23 shows, English HCHS staff were more productive than other regions of the UK across all types of hospital activity. However, productivity in Wales was higher than Scotland and Northern Ireland for inpatient and outpatient activity. Nevertheless, and data qualifications aside, the gap with England is noticeable, with 25% fewer A&E attendances per head of staff, a third fewer outpatient attendances, 40% fewer day cases and half the number of inpatient cases (figure 24).


In comparison with other regions of the UK, as Figure 23 shows, English HCHS staff were more productive than other regions of the UK across all types of hospital activity. However, productivity in Wales was higher than Scotland and Northern Ireland for inpatient and outpatient activity. Nevertheless, and data qualifications aside, the gap with England is noticeable, with 25% fewer A&E attendances per head of staff, a third fewer outpatient attendances, 40% fewer day cases and half the number of inpatient cases (figure 24).

As the number of beds has declined (cf figure 16 above) and activity increased, the use of beds will have become more intensive over time. Figure 25 shows that the number of inpatients per available bed in Wales has indeed increased since 2000/1 - from around 40 to 57 (43%). However, it is interesting to note that over a period of comparable data (from 2000/1 to 2009/10) in England inpatients per bed have increased from 47 to 72 - a 54% increase compared to an increase in Wales of 28%.

Figure 25: Inpatients per available bed: England and Wales: 2000/1 to 2011/12


NB: beds data for 2010/11 and 2011/12 for England not included due to a break in the data series
Waiting times

Key performance measures of particular public concern are hospital waiting times. The referral to treatment (RTT) waiting times in Wales cover all waits from GP referral to hospital for appointments, tests, scans and procedures. The current RTT target measures the following for patients waiting to start treatment:

- 95 per cent of patients waiting less than 26 weeks from referral to treatment
- 100 per cent of patients - not treated within 26 weeks - treated within a maximum of 36 weeks.

Figure 26 below shows the proportion of patients in Wales waiting longer than 26 and 36 weeks to start treatment from October 2009 to March 2013. Since October 2009 the percentage of patients waiting over 26 weeks to start treatment has increased from 3.6% to 8.5%. The reported numbers show that there were 5,200 patients waiting between 26 and 36 weeks to start treatment in October 2009 and over 27,500 in March 2013.

The number of patients waiting over 36 weeks to start treatment increased from 2,800 to 5,400 between October 2009 and March 2013. This represents 1.3% to 1.4% of those people still on waiting lists.

Figure 26: All patients waiting to start treatment waiting more than 26/36 weeks, Wales, October 2009 to March 2013

Figure 27 shows the proportion of patients treated in Wales having waited over 26 and 36 weeks for treatment. Between October 2009 and March 2013 the proportion of patients treated having waited over 26 weeks increased substantially - from around 1 in 20 (5.4%) to nearly 1 in 5 (19.5%). This represents an increase in the number of patients having waited over 26 weeks for treatment from 3,500 to over 15,400.

Source: StatWales (2013c)
The number of patients having waited over 36 weeks for treatment increased from 1,055 to 4,290 between October 2009 and March 2013, an increase from 1.6% to 5.4%.

**Figure 27: All patients treated having waited over 26/36 weeks, Wales, October 2009 to March 2013**

There has been a similar deterioration in diagnostic waiting times. There is an operational standard for diagnostic tests that has a maximum waiting time of 8 weeks. Between October 2009 and March 2013 the number of patients waiting longer than this increased from 1,500 to 19,500. Compared to the total number of patients waiting for a diagnostic test, the proportion of patients waiting over 8 weeks increased from less than 1 in 20 (4%) to more than 1 in 4 (26.8%).

**General health trends**

Life expectancy at birth since the early 1990s has grown by over four years for men and almost three years for women. The latest life expectancy estimates show that Wales has the second highest in the UK, second to England (table 2).

**Table 2: Population and health statistics, UK constituent countries**

<table>
<thead>
<tr>
<th></th>
<th>Population mid-2011 (Thousands)</th>
<th>Total population growth 2001 to 2011 (%)</th>
<th>Population aged under 16 mid-2011 (%)</th>
<th>Population aged 65 and over mid-2011 (%)</th>
<th>Male life expectancy at birth, 2008 to 2010 (Years)</th>
<th>Female life expectancy at birth, 2008 to 2010 (Years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>England</td>
<td>53,107.2</td>
<td>7.4</td>
<td>18.9</td>
<td>16.4</td>
<td>78.4</td>
<td>82.4</td>
</tr>
<tr>
<td>Wales</td>
<td>3,063.8</td>
<td>5.3</td>
<td>18.1</td>
<td>18.5</td>
<td>77.5</td>
<td>81.7</td>
</tr>
<tr>
<td>Scotland</td>
<td>5,254.8</td>
<td>3.8</td>
<td>17.4</td>
<td>17.0</td>
<td>75.8</td>
<td>80.3</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>1,806.9</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>77.0</td>
<td>81.4</td>
</tr>
</tbody>
</table>

– not available

Source: ONS (2013c)
However, another aspect of life expectancy, and general health overall, shows there is room for improvement. Though impressive reductions have taken place over the last decade, rates of avoidable mortality in Wales continue to be higher for both males and females compared to England. Numbers for Wales in table 3 below were significantly higher than England in 2011, though in particular this is thought to be because of higher rates of cardiovascular disease in Wales (ONS Avoidable mortality in England and Wales, 2011).

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2001</td>
<td>2011</td>
</tr>
<tr>
<td>England</td>
<td>309.8</td>
<td>218.4</td>
</tr>
<tr>
<td>Wales</td>
<td>335.0</td>
<td>246.0</td>
</tr>
</tbody>
</table>

Source: ONS (2011)

Conclusions

Increased funding over the last decade has allowed the Welsh NHS to employ more staff and in general to produce more activity. However, it should not be surprising that with a real rise in funding of nearly 80% since 1999/2000 to 2010/11 that labour inputs and activity outputs have increased. There is a question however of the degree to which additional resources have been used productively.

On two crude measures of productivity - hospital activity per head of staff and inpatient activity per bed - it would seem that inputs have risen faster than outputs in the case of the former measure for medical staff, and remained fairly constant for nursing staff.

In terms of bed use, while Wales has increased the number of inpatients treated per bed by 28% between 2000/1 and 2009/10, in England the increase has been 54%.

Performance on waiting times has deteriorated over the last three and a half years. In 2009, less than 1% of those ‘waiting to start treatment’ had waited over 26 weeks. By February of this year this had reached 8.5%. And for those patients who were treated, while 1 in 20 patients waited over 26 weeks in 2009, by February this year around 1 in 5 waited over 26 weeks.
5. The current fiscal position: 2013/14

On the basis of last November’s Final Budget settlement for the current financial year, there is a planned real cut in total health spending of around 3.1% compared to 2012/13 (table 4). Within this, the main budget - NHS Delivery revenue allocation - is set to reduce by 3.5% in real terms.

Table 4: Financial allocations 2012/13 and 2013/14

<table>
<thead>
<tr>
<th></th>
<th>2012/13 £000</th>
<th>2013/14 £000</th>
<th>Cash change (%)</th>
<th>Real change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHS Delivery (revenue)</td>
<td>5,565</td>
<td>5,495</td>
<td>-1.3</td>
<td>-3.5</td>
</tr>
<tr>
<td>NHS Delivery (capital)</td>
<td>216</td>
<td>217</td>
<td>0.0</td>
<td>-2.3</td>
</tr>
<tr>
<td>Other revenue and capital budgets</td>
<td>380</td>
<td>397</td>
<td>+4.5</td>
<td>+2.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6,161</strong></td>
<td><strong>6,109</strong></td>
<td><strong>-0.8</strong></td>
<td><strong>-3.1</strong></td>
</tr>
</tbody>
</table>

NB: Figures refer to revenue and capital DEL and are based on most recent budget data. Figures exclude: Social services and CAFCASS Cymru.
Real change based on UK GDP deflator for 2013/14 (=2.3%)
2012/13 spending based on 2nd Supplementary Budget (February 2013) (National Assembly for Wales, 2013)
2013/14 allocations based on Final Budget (November 2012) (National Assembly for Wales (2012))

Given the history of additional allocations in year following subsequent budget allocations (see table 1, above), these real reductions may be - to some extent - reduced. However, on the basis of the most recent budget figures the overall reduction of around 3.1% in real terms is the largest fall in real allocations in recent times.

At the time of compiling this report (June 2013) trusts and health boards have, by and large, ended 2012/13 at breakeven or with very small surpluses (with some brokering money to the Welsh Government to be return this financial year)\(^1\). However, it is noticeable that breakeven for (at least) five organisations was achieved via additional financial support from within the total NHS Wales budget; from board papers we identified around £85 million support monies for five organisations.

The national plan of essentially ‘flat cash’ allocations for 2013/14 in turn means that trust and health board financial plans for this current financial year are going to be tough. As table 5 shows, coupled with hang overs from last year, the combined estimated gap between breakeven and additional cost and other financial pressures this year amount to around £350 million to £400 million. This is in line with an estimated gap between actual and projected spending (based on population change and inflation at GDP deflator rates) in 2013/14 of £341 million (see section 5 below).

---
\(^1\) Final figures for 2012/13 show that in fact breakeven for all seven health Boards was achieved with additional financial support of £92 million from within the NHS Wales budget.
Table 5: Financial situation in 2012/13 and estimates for 2013/14 across trusts and health boards in Wales

<table>
<thead>
<tr>
<th>Trust</th>
<th>2012/13</th>
<th>2013/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Betsi Cadwaladr University Health Board</td>
<td>Breakeven (£5,000): £17.201m additional support</td>
<td>“The current most likely year-end forecast is a deficit of £29m... hence the need for urgent delivery plans to ensure the Health Board achieves statutory duty. This is of serious concern to the Health Board and the Welsh Government.”</td>
</tr>
<tr>
<td>Cardiff and Vale University Health Board</td>
<td>Breakeven: £26.388m additional support</td>
<td>“In total we have identified a need to deliver £89.2m of cost reduction if we are to break even in 2013/14. Of this £46.1m and £10.6m growth avoidance (5.6%) has been identified and is in savings plans, with the remainder (£32.5m; 3.1%) currently a planned deficit which the UHB will recover over a three year period. Non recurrent costs of £33m are being incurred in 2013/14 to support a three year change programme.”</td>
</tr>
<tr>
<td>Velindre NHS Trust</td>
<td>Surplus (£51,000) + £0.4m brokered to Welsh Government for return in 2013/14</td>
<td>“The impact and risk from these factors [on additional costs] varies across the Trust, however, the impact [in 2013/14] is likely to be in the range of £4,213k to £4,573k dependent on the rate of non-pay inflation... This represents a financial pressure of between 6.94% and 7.54% on the budgets which are managed directly by the Trust.”</td>
</tr>
<tr>
<td>Aneurin Bevan Health Board</td>
<td>Breakeven + £2m brokered to Welsh Government for return in 2013/14. Additional support of £11.694m</td>
<td>At month 1: “...cost pressures £44.8m, identified savings plans of £20m and further cost avoidance schemes of £5.8m, resulting in a current potential over commitment within the plan of £19m.”</td>
</tr>
<tr>
<td>Abertawe Bro Morgannwg University Health Board</td>
<td>Surplus (£141,000) + £2.48m brokered to Welsh Government for return in 2013/14. £11.522m additional support</td>
<td>“..the Health Board needs to achieve a savings level of some £37m to offset the anticipated new cost pressures and key investment areas in 2013/14. In addition... initial work has calculated a £20m underlying deficit arising from demand and service pressures... which will be carried forward into 2013/14, increasing the cost pressure in the year to £57m. To date savings schemes amounting to £18m have been identified and are being evaluated...It is estimated that of the £57m identified above, the unavoidable expenditure component is some £46m at the commencement of the year, against which £18m of savings has been identified at this stage. This leaves a starting deficit of some £28m for the 2013/14 financial year.” [An additional £4m is planned to be spent this year to meet additional unscheduled care demand. This means the starting deficit of £28m will increase to £32m]</td>
</tr>
<tr>
<td>Cwm Taf Health Board</td>
<td>Breakeven Additional support of £10.861m plus £0.36m brokered to other LHBs.</td>
<td>“The Health Board’s financial plan provides details of the plans to address the estimated financial challenge for 2013/14 of £40.5m on a full year basis.” The planned savings in the budget total £19.7m, leaving a financial gap of £20.8m. Actual deficit to month 3 is greater than planned at £7.8m. However, year end projection at month 3 remains a deficit of £20.8m. The Welsh Government expectation of Cwm Taf is a year end deficit of £19.3m.”</td>
</tr>
</tbody>
</table>
**Table 5 (continued) Financial situation in 2012/13 and estimates for 2013/14 across trusts and health boards in Wales**

<table>
<thead>
<tr>
<th>Trust/Board</th>
<th>2012/13</th>
<th>2013/14</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hywel Dda Health Board</strong></td>
<td>Surplus (£56,000): Additional support of £9.123m plus £2.3m NHS brokerage</td>
<td>£56m savings needed (8% of total costs) to breakeven in 2013/14. Savings of £28m (4%) identified and evaluated. However, these will prove challenging to deliver given the non-recurring nature of savings in 2012/13. This leaves a projected residual deficit of £28m.</td>
</tr>
<tr>
<td><strong>Welsh Ambulance Services Trust</strong></td>
<td>Surplus (£49,000). “Whilst the Trust achieved all of its statutory financial responsibilities for 2012/13, it was placed in a vulnerable position as many of the solutions to make breakeven were non-recurrent in nature” Additional support of £1m</td>
<td>“‘Flat cash’ has been confirmed for the health economy... The continuing increase in activity poses a risk to the Trust of being able to meet its required performance targets within the resources available. This is a significant risk to the Trust if the trend continues... The Trust is forecasting a year end deficit of £7.5m.”</td>
</tr>
<tr>
<td><strong>Powys teaching Health Board</strong></td>
<td>Breakeven. Brokerage of £4.2m repayable in 2013/13. Additional support of £4.391m</td>
<td>Month 3 forecast end of year position is an overspend of £17.1m.</td>
</tr>
<tr>
<td><strong>Public Health Trust</strong></td>
<td>Surplus (£10,000)</td>
<td>“The 2013/14 financial strategy includes savings plans of £1.3m which are currently on target to be achieved, resulting in a year-end forecast of breakeven. However, this is also dependent on confirmation of funding for additional digital mammography costs of £230k.”</td>
</tr>
</tbody>
</table>

Sources: Board/Trust papers

While individual trusts and boards will of course know the task that lies ahead this year in meeting their breakeven requirements - while of course not just maintaining service volumes and quality, but meeting new demands - the similarity of the financial challenge across organisations is clearly evident. This challenge follows a number of years of similar efforts to close the gap between budget allocations and rising costs and, as figure 28 shows at a national level over the last three years, despite a failure to meet planned targets, cumulative savings of £741 million - equivalent to around 4.2% of the revenue and capital NHS Delivery budget per annum.
At an individual trust/board level, as figure 29 shows, there was significant variation across years and between organisations in the proportion of planned savings actually realised.

In an update to their July 2012 health finances report, the Wales Audit Office (2012) reported on savings to September 2012 and described a gap to make breakeven of around
£67 million - similar to their previous report. In the event, as noted in table 5, breakeven was achieved - but with significant financial support from the Welsh Government.

An obvious concern about the need to make savings in the face of a number of years when funding has reduced in real terms is the possible impact on patient care. Encouragingly, of the seven organisations that responded to a short survey carried out as part of this review, five thought that in terms of patient care the NHS had remained the same over the last year and two thought it had got better.

**Savings in 2013/14**

Analysis of recent board papers shows - as noted in table 5- that 2013/14 will be a further challenging year. For example, from returns from the seven organisations to the short survey carried out as part of this review the average level of savings being sought this year amounts to around 5.6% of total budgets. Over the four years from 2010/11 this means that cumulatively planned savings will amount to nearly 25% of budgets. Confidence among the organisations responding to our survey in meeting this year’s savings targets is mixed: two were ‘very confident’, three ‘uncertain’ and two ‘fairly concerned’ and ‘very concerned’.

Asked what they felt about the state of their local health and care economy over the next twelve months there was a bit more pessimism. While two felt ‘fairly optimistic’, one ‘neutral’, three were ‘fairly pessimistic’ and one ‘very pessimistic’.

**Conclusions**

With the start of a fourth consecutive year of reduced real funding - and on current budget figures, the largest reduction over the whole period - there are evident and continuing financial pressures across the health system as a whole and across all health organisations. Although all organisations will (or are expected to have) achieved a breakeven position in 2012/13, this was through a combination of recurrent and non-recurrent savings, brokerage and significant financial support from the Welsh Government.

Analysis of board papers for health organisations suggests a gap this financial year between allocations and cost and other pressures amounting to between £350 and £400 million. Currently, around half this sum remains to be identified in savings plans.

Comments from chief executives from our survey for this review - see below - suggest an increasingly difficult challenge in extracting further savings and productivity improvements over time.

We are a “can do” organisation and have delivered far greater savings in the last 4 years than we would ever have envisaged. However, some of our imminent decisions are tipping points, and may impact more adversely on quality. (King’s Fund survey, 2013)

I …am confident about our financial health at the moment even though the position is challenging. We will break even again this year, but the pressures building in the organization over several years will inevitably impact significantly at some point; maybe not this year, but possibly next. We are preparing for this eventuality in order to minimize the impact on quality of care. I am however concerned about service quality and financial health in the NHS as a whole. (King’s Fund survey, 2013)
We have confidence that we can deliver significant year on year savings but it is getting harder and we are still working through actions that would deliver this fully. (King’s Fund survey, 2013)
6. Short to medium term outlook: The next five to ten years

In the short term - to 2014/15 - spending plans have been made by the Welsh Government and are set out in its latest budget plans and which are detailed previously in section 3. On current economy-wide inflation measures (the GDP deflator) and the latest budget adjustments, the NHS in Wales will see a real cut in funding by 2014/15 of around 6.6%. In fact, the real reduction will be less as NHS-specific inflation has almost certainly been slightly less than the GDP deflator measure given the pay freeze since 2011/12 and the current 1% pay cap. Nevertheless, it is clear that total resources are severely constrained to 2014/15.

What path spending will take beyond 2014/15 (up to 2023/4) and how this compares to estimates of spending to meet changing needs, demands and other pressures on health spending are examined in this section. First we look at a number of possible projections for spending pressures and then compare these with a suggested sustainable future spending path.

Spending projections: 2010 to 2023/4

Demographic pressures

A key pressure on future health spending will be changes in the size and composition of the population. Between 2010/11 and 2023/4 latest population projections suggest that the Welsh population will grow by just over 7% - from just over 3 million to 3.22 million. The age composition of the population will also change. The number of people aged over 75 is projected to increase by over 100,000 by 2023/4 - from 262,000 in 2010/11 to 368,000. And the proportion of people aged over 85 years is projected to increase from 2.5% to 3.5% of the population.

How these population changes could translate into future health spending needs is shown in figure 30. All figures are on a current prices basis. The projection from 2010/11 to 2023/4 applies estimates of NHS costs by age group to population projections. In particular, it is assumed that demographic changes apply only to the ‘NHS Delivery’ revenue budget. Other parts of the health budget are added back in afterwards. In the absence of Welsh-specific data, the age-cost data used in the projections is taken from calculations used to allocate PCT budgets in England (Department of Health, 2011). The projections include an uplift for inflation (HMT estimates of the GDP deflator to 2017/18 and our assumptions to 2023/4) to produce cash figures.
Figure 30: Spending pressure projections: 2010/11 to 2023/4 (current prices): Baseline demographic projection


Figure 30 also shows historic spending based on HMT PESA data. The differing data sources pre and post 2010/11 account for the break in the spending lines. However, the general trends pre and post 210/11 are reasonably comparable.

Overall, all other things being equal, changes in population size, age composition and estimates of future births suggest an increase in spending by 2023/24 of just about £870 million at 2010/11 prices - from £6.334 bn in 2010/11 to £7.207 bn. This represents an average annual real increase of around 0.9%.

The red line on the figure shows outturn and planned (cash) spending as reported in various Welsh Government budget plans. Over the four years from 2010/11 it can be seen that spending plans fall short of demographic spending pressures - by over £745m by 2014/15 in cash terms

‘Five year framework’ spending projections

An alternative set of projections for NHS spending in Wales was produced by the Welsh Government in 2010 (Welsh Assembly Government). The projections modelled future NHS activity and input prices from 2010/11 to 2014/15 under two scenarios - low and high growth in input prices. Change in NHS activity was a combination of historic trends (around +2.2% per annum in monetary terms) and demographic pressures (+0.8% in monetary terms). Input prices were assumed to grow at around 4% in the high growth scenario and 2.6% in the low growth scenario. No assumptions were made about NHS productivity.

Figure 31 shows the combined effects of these pressures as applied to the 2010/11 NHS Delivery budget spend (as for the demographic model above) with other health spending
added in afterwards. The Five year framework projections have been extended here to 2023/4 on the assumption of annual real growth of 2.6% for the low growth scenario and 4.1% for the high growth scenario.

**Figure 31: Spending pressure projection: 2010/11 to 2023/4 (current prices): ‘Five Year Framework’ estimates extended**

An update of the Five Year Framework projections was produced by the Wales Audit Office in 2012 using currently available spending figures for the NHS Delivery budget line (Wales Audit Office, 2012). This showed that the gap between planned spending and the low/high cost growth projections would amount to around £377 million to £570 million by 2013/14. Our update suggests the gap would now be between £452 million and £651 million - largely due to a higher baseline start position for 2010/11 arising from in-year additions to the 2010/11 budget. Our extension of the Five Year Framework projections to 2014/15 suggests a gap of between £612 million to £909 million.

**Office for Budgetary Responsibility: Fiscal Sustainability Report projections**

A third set of spending projections is based on analysis carried out by the OBR for their annual Fiscal sustainability report (OBR, 2012). These project health (ie NHS) spending to 2061/62 on the basis of nine alternative assumptions plus a central projection. For the period 2010/11 to 2016/17 the projections are based in part on spending plans across the UK and all models produce the same spending path. From 2017/18 different assumptions, for example, about future health status of the population, the impact of ageing and alternative views about NHS productivity, produce different projections. The OBR projections assume that there is no change to government policy.
Figure 32 takes the OBR’s health projections from 2010/11 to 2023/4 and applies the change in the proportion of GDP spent on health projected by the OBR to the total Welsh health baseline spend in 2010/11 (ie £6,061 million). The projections assume that Welsh health spending remains at a constant proportion of UK health spending (ie 5%) across the whole period.

Figure 32: Spending pressure projections: 2010/11 to 2023/4 (current prices): Office for Budget Responsibility UK projections adapted to Wales

On this basis, as the figure shows, for the period from 2010/11 to 2014/15, the OBR’s projection suggest a gap compared to planned spending in 2014/15 of around £644 million in cash terms. For the two years to 2016/16 the OBR analysis projects a further fall in spending in cash terms of around £110 million. From 2017/18 onwards projections diverge. Here we show only the lowest and highest projections (all the others fall near the low projection path). Broadly, up to 2023/4, the high projection implies average annual real spending increases of around 1.9% and the lowest projection around 1.2%.

The Holtham review of relative needs

Finally, it is worth noting Gerald Holtham’s 2010 review of alternative options to funding public services in Wales, in particular the review’s modelling of relative funding needs between Wales and England (Holtham Commission, 2010). The review estimated per capita public funding for Wales if it were treated as a region of England and based on a formula combining various needs factors such as per capita income and health status of the population. Overall, the review estimated that Wales needed 15% more per capita in public spending than England. The two main drivers of this difference were health (accounting for
around 7 ppts) and income (accounting for around 8 ppts - the ethnicity factor contributed a negative amount more or less equivalent to the positive amount accorded to ‘sparcity’).

It is hard to make a direct application of this differential, but indicatively, if health spending in Wales were to follow the review’s needs formula between 2011/12 to 2014/15, then on the basis of England’s per capita health spending, total spending in Wales by 2014/15 would be 22% (£1.36 billion) higher than currently planned in cash terms (and 14% in real terms) compared to 2010/11. We cannot project these to 2023/4 without making some assumptions about the future path of health spending in England.

**Actual future spending**

The forgoing suggests that meeting additional demands arising from population changes plus demands arising from changes in population health status would require some real growth in health spending of between 2% to 3% per year. Improving quality - the major driver of additional spending modelled by Wanless for example (2002) would require additional real increases of a similar magnitude. Some of this could be offset (as in some of the OBR models) by higher productivity.

While it would be helpful to be more precise about how funding should change in future to enable the NHS to meet changing needs and improve quality, the nature and level of uncertainty in the variables driving spending pressures do not allow for pinpoint precision. At best and what future spending projection analyses both in the UK and in other countries can do is set out a number of future spending paths based on various assumptions.

Bearing this in mind, how do the various projections detailed above compare to a likely future, sustainable level of actual spending?

Two assumptions are made about future actual spending. First, it is assumed that spending for the three years beyond the current planning period - to 2017/18 - will see spending constant in cash terms (and hence decreasing in real terms). This is based on the March Budget’s fiscal assumption that total public spending would fall at the same rate to 2017/18 as over the 2010 spending review period. In effect a real cut of around 1% to 2%. With continuing ring fencing for the NHS in England and for some other areas of spending, there will be greater pressure on other departmental spending - including the block grants to Wales, Scotland and Northern Ireland. No assumptions have been made about any Welsh Government spending decisions in the light of a further real cut in its block grant.

The second assumption for actual spending is that from 2017/18 onwards real growth will match real growth in GDP (and hence spending will stay constant as a proportion of GDP).

Taking these two assumptions together produces the projection (dotted red line) in figure 33 relative to the demographic pressures spend projection detailed earlier. For comparison, health spending growth at 1% above the real growth in GDP is also included (the red dashed line).
On these actual spend assumptions, demand from demographic changes outstrips funding for all of the period from 2010/11 to 2023/4. Although the gap starts to close from 2018/19 onwards, the average gap from 2010/11 to 2023/4 at current prices is between £890 million and £1,000 million - between 13% and 15% of actual spend each year. For the current financial year (2013/14) the gap amounts to £341 million - around 5.5% of the total budget.

A comparison between possible future actual spending and the spending paths derived from the estimates produced by the Five Year Framework analysis (figure 34) shows a considerable gap between the former and the later over the next decade. By 2014/15 and in cash terms, the shortfall ranges between £612 million and £909 million. By 2023/4, the gap ranges from the gap being closed to a shortfall of £1,900 million depending on the ‘low’ or ‘high cost growth’ assumptions and whether actual spending grows at the rate of GDP growth or 1% this rate.
The OBR high and low projections for health spending (as applied here to Wales) suggest a possible funding gap by 2023/4 of between £800 million and £2.2 billion (figure 35).
Summary and conclusion

Three alternative estimates of future NHS spending pressures in Wales - a baseline demographic model, estimates derived from the Five year framework and projections for UK health spending by the OBR and applied to Wales - suggest a range of pressure to increase spending over the next decade.

Table 6 summarises the various projections as well as assumptions about actual future spending, showing spending up to 2023/4 in 2010/11 prices. It also shows the average annual real percentage increases implied by each spending path over the period 2010/11 to 2023/4. However, as is clear from the foregoing figures, many of the trajectories - especially for actual spending - are not linear, with no or slow growth up to 2017/18 followed by some acceleration to 2023/4.

Table 6: Summary of spending projections and assumptions for actual spending (2010/11 prices)

<table>
<thead>
<tr>
<th></th>
<th>2010/11 baseline</th>
<th>2011/12</th>
<th>2014/15</th>
<th>2023/4</th>
<th>Avg. %age annual change 2010-2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographic model</td>
<td>6,334</td>
<td>6,395</td>
<td>6,361</td>
<td>7,207</td>
<td>1.0</td>
</tr>
<tr>
<td>Five year framework: Low cost</td>
<td>6,334</td>
<td>6,192</td>
<td>6,237</td>
<td>6,659</td>
<td>0.4</td>
</tr>
<tr>
<td>Five year framework: High cost</td>
<td>6,334</td>
<td>6,229</td>
<td>6,513</td>
<td>7,818</td>
<td>1.6</td>
</tr>
<tr>
<td>OBR: low projection</td>
<td>6,334</td>
<td>6,288</td>
<td>6,267</td>
<td>7,354</td>
<td>1.2</td>
</tr>
<tr>
<td>OBR: high projection</td>
<td>6,334</td>
<td>6,288</td>
<td>6,267</td>
<td>8,079</td>
<td>1.9</td>
</tr>
<tr>
<td>Holtham review</td>
<td>6,334</td>
<td>6,728</td>
<td>6,930</td>
<td>No data</td>
<td></td>
</tr>
<tr>
<td>Projected actual (matching GDP growth)</td>
<td>6,334</td>
<td>6,045</td>
<td>5,669</td>
<td>6,355</td>
<td>0.3</td>
</tr>
<tr>
<td>Projected actual (1% higher than GDP growth)</td>
<td>6,334</td>
<td>6,045</td>
<td>5,669</td>
<td>6,735</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Figure 36 illustrates the nature of the gap between projected spending pressure paths and actual spending projections - which also include two further actual spending paths of +2% and +3% on top of annual real GDP growth.
Figure 36: Summary: Spending pressures vs actual spending

The scale of these gaps is evident from table 7 which averages actual spend over the period 2010/11 to 2023/4 and subtracts the average annual spending projections and expresses the difference as an annual percentage of actual spend. To see how these change with different assumptions about actual spend, we included two of the additional actual spend scenarios from figure 36 – ‘GDP growth + 2%’ and ‘GDP growth + 3%’ (in effect, real annual increases of 4.8% and 5.8% respectively).
Table 7: Actual spend minus spending pressure projections: Average annual percentage of actual spend 2010/11 to 2023/4

<table>
<thead>
<tr>
<th>Spending pressure</th>
<th>Projected actual spending</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Base year: 2010/11</td>
</tr>
<tr>
<td>Demographic model</td>
<td>-15%</td>
</tr>
<tr>
<td>Five year framework: Low cost</td>
<td>-11%</td>
</tr>
<tr>
<td>Five year framework: High cost</td>
<td>-21%</td>
</tr>
<tr>
<td>OBR: low projection</td>
<td>-12%</td>
</tr>
<tr>
<td>OBR: high projection</td>
<td>-16%</td>
</tr>
</tbody>
</table>

While allowing for the uncertainties of the various projections on spending pressures, these annual average gaps (some years will be larger, some smaller) are significant. Even on the assumption of around 6% real annual health spending growth, the average annual spending gap over the period from 2010 to 2023 ranges from -5% to -14% depending on the various projections of alternative models.

The preceding analysis for projections of spending pressures and actual spending used 2010/11 as the base year for projections. However, results are sensitive to which year is chosen as the starting point for the analysis. For example, rebasing all the projections on 2014/15 on the basis that spending is effectively already determined up to 2014/15 significantly changes the gap analysis of table 7 above - as is evident from table 8 below.

Table 8: Actual spend minus spending pressure projections: Average annual percentage of actual spend 2015/16 to 2023/4

<table>
<thead>
<tr>
<th>Spending pressure</th>
<th>Projected actual spending</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Base year: 2014/15</td>
</tr>
<tr>
<td>Demographic model</td>
<td>-4%</td>
</tr>
<tr>
<td>Five year framework: Low cost</td>
<td>-1%</td>
</tr>
<tr>
<td>Five year framework: High cost</td>
<td>-8%</td>
</tr>
<tr>
<td>OBR: low projection</td>
<td>-9%</td>
</tr>
<tr>
<td>OBR: high projection</td>
<td>-14%</td>
</tr>
</tbody>
</table>

While rebasing in this way reduces the funding gap it still means that actual funding would need to increase at a real rate of around 4% to 6% per year to cover all but the OBR’s highest projections for spending pressures. Moreover, by definition it ignores the funding gaps accumulated between 2010/11 and 2014/15.
7. Meeting the funding challenge

As we note above, regardless of the assumptions and models, the scale of the gap between actual spending and future spending pressures is extremely large. Even on the assumption that health spending from 2018/19 onwards returns to positive real growth of just under 4% per year, for example, the average spending gap each year from 2010/11 to 2023/4 will total between 9% and 14% of actual spending depending on projection models and assumptions. Rebasing to 2014/15 (and in essence writing off shortfalls before that date) reduces these gaps to +2% to 12%.

In the face of this financial challenge the four main policy options - and their consequences - look daunting:

- ‘Do nothing’
- Increase funding
- Reprioritise services within projected budgets
- Improve productivity

‘Do nothing’ would of course have major implications for service delivery and quality and it is impossible to see the consequent deterioration in services - from increased waiting times to negative impacts on health outcomes - being seen as acceptable by the public.

Increasing funding raises a fundamental problem of where the extra money is to come from. As noted earlier, the UK government have effectively set the overall spending envelope to 2017/18 and this involves a further real cut in funding. How this will affect the block grant and then, in turn, what this means for decisions on health spending in Wales is difficult to say precisely. However, finding enough money from other budgets in Wales to meet increases in input prices as well as, say, changes in demands arising from changes in demography for the three years beyond the current spending round (and assuming no catch up for the funding gap between 2010/11 and 2014/15) would require a cash increase of around £540 million over the three years to 2017/18 - equivalent to an increase of 9% in cash spending. Funding this increase from non-health spending in Wales would require annual cuts in all other non-health care spending of around 2.0% on average (equivalent to real annual cuts of around 4.0%). This would be in addition to annual real reductions in budgets of around 2% as a result of real cuts in the block grant.

Beyond 2017/18, and assuming the funding gap was closed between 2014/15 and 2017/18, meeting the funding needs under the baseline demographic projection (plus inflation) would require annual cash increases of around 3.5% and, if funded entirely from other public spending budgets in Wales, would require cash cuts in other budgets of around 2.5% (broadly equivalent to just under 5% real reductions each year to 2023/4). Some or all of this could be offset through equivalent real increases in the block grant from 2018/19 onwards coupled with local decisions to increase health spending as a consequence.

In the absence of further increases in funding to match projected spending pressures, an alternative option would be to examine how services might be reprioritised within projected budgets. The scope for supporting frontline budgets within the total spend is,
however, limited. The NHS Delivery revenue budget, for example, accounts for around 90% of total NHS spend. The remainder - around £614 million in 2013/14 - includes capital (4% of total health spend), central health budgets (4%) and public health (2%). Redirecting part of these budgets would go some way to filling the funding gap but this could only be a very short term measure given the gap to be filled. For example, meeting the annual gap between the NHS Delivery revenue budget projection based on changes in population and demographic structure (and uplifted for inflation) would require around 130% of all capital spending each year (where capital budgets are assumed to take a constant proportion of projected actual spending up to 2023/4).

Beyond transfers between capital and revenue (which is in effect what is already happening with much larger reductions in capital spending than in revenue) or greater priority given to ‘front of house’ rather than ‘back office’ functions, reprioritising between clinical services with the aim of improving value subject to a global budget cap raises difficult technical and ethical rationing questions. Investing a greater proportion of the health care budget in preventative services may be one way to generate greater value for patients while also making budgets stretch further for instance. But like any other health care intervention choice about such investment depends on evidence of cost effectiveness and some assessment of the acceptability of the distributional consequences of prioritising such a use of scarce resources over other uses. What health care is provided, when, how and to whom are fundamental decisions which are bounded by the resources available. The extent to which it becomes increasingly necessary to seek a new (and more explicit) agreement about these decisions given the estimates of the gap between actual funding and spending pressures is hard to say.

Alternatively - or in addition - improving productivity could, through a combination of reducing costs and improving outputs per pound spent, in part help meet fiscal breakeven rules, and meet additional/changing demands and improve quality (partly through reinvestment in higher-value services from cash releasing activities and partly through changes in service delivery/organisation etc). The obvious question however is the capacity of the system to generate the sort of productivity improvements - including actual cost reductions (at least in the medium term to meet higher input costs with a flat cash budget) - that the analysis of the funding gap in section 6 suggests. The sorts of productivity improvements that, alone, would be needed to fill the funding gap over such an extended period would be historically unprecedented. However, the somewhat limited labour productivity evidence in this review suggests that relative to England there should be scope for further improvements in productivity. But such evidence needs more detailed verification and, if differences persist, investigation of the reasons for these.

Even when funding is more generous, there is always an obligation on public services to spend the public’s money as efficiently and as productively as possible. This means that while productivity gains will, over time, become harder to achieve, effort still needs to be devoted to the task. However, there also needs to be a realistic view about how close the system is, and individual organisations are, to their theoretical maximum output given the inputs at their disposal.
Overall, there is no doubt that the NHS across Wales faces a very difficult financial time not just at present but over the next half decade. In the absence of a significant financial boost over the next few years, improving productivity and the value that every health care pound can buy has to be the main policy response. However, the size of the funding gap identified in this review suggests that there needs to be a step change in traditional approaches to improving productivity; small incremental changes at the margin will not suffice. But to meet the transformational challenge required, the NHS in Wales will need support and backing to think and act more radically if services are to meet the future needs and expectations of patients and the public.
References

Board/trust meetings references

Abertawe Bro Morgannwg University Health Board (2013) May Board meeting: Agenda item 1 (VII): Chief Executive’s Report

Abertawe Bro Morgannwg University Health Board (2013) March Board meeting: Agenda item iii: Annual plan for 2013/14

Aneurin Bevan Health Board (2013) Financial Performance Month One 2013/14
http://www.wales.nhs.uk/sitesplus/documents/866/3.5%20Finance%20Month%201.pdf

Betsi Cadwaladr University Health Board (2013) Board Paper 23.5.13 Item 13/87.3


Cwm Taf Health Board (2013) June Board meeting: Month 1 Finance Report

Cwm Taf Health Board (2013) June Board meeting: Chief Executive’s Report


http://www.wales.nhs.uk/sitesplus/972/page/55106

Other references

Appleby (2011) Rapid review of Northern Ireland Health and Social Care funding needs and the productivity challenge: 2011/12 - 2014/15

http://www.ifs.org.uk/publications/6562

General Register Office for Scotland (2012) Mid-year population estimates


http://www.hscic.gov.uk/article/2021/Website-Search?productid=9161&q=inpatients&sort=Relevance&size=10&page=1&area=both#top

HSCIC (2012b) NHS staff 2001-2011 overview
http://www.hscic.gov.uk/article/2021/Website-Search?productid=4889&q=general+practice&sort=Title&size=100&page=10&area=both#top

http://niesr.ac.uk/press/prospects-uk-economy-11283#.Ubm4dNiz7xU

National Assembly for Wales (2011a) Final Budget 2012-13 December 2011
http://www.assemblywales.org/11-070.pdf

National Assembly for Wales (2011b) Supplementary Budget 2010-11 (Laid February 2011)
http://www.assemblywales.org/11-015.pdf
National Assembly for Wales (2012) Final Budget, November 2012

National Assembly for Wales (2013a) Second Supplementary Budget 2012-13 (February 2013)

National Assembly for Wales (2013b) Supplementary Budget 2013-14


NHS Wales (2013) Together for health: South Wales programme
http://www.wales.nhs.uk/SWP/home

NHS Wales Informatics Service (2013) Annual PEDW data tables

http://www.northernireland.gov.uk/revised_budget_-_website_version.pdf

http://www.ninis2.nisra.gov.uk/public/Theme.aspx?themeNumber=74&themeName=Population


http://cdn.budgetresponsibility.independent.gov.uk/FSR2012WEB.pdf

Office of Manpower Economics (2013a) Review body on Doctors’ and Dentists’ remuneration, 41st report 2013

Office for Manpower Economics (2013b) NHS pay review body 27th report 2013

ONS (2013a) Quarterly National Accounts Data Tables, Q4 2012

ONS (2013b) Population Estimates for England and Wales, Mid-2002 to Mid-2010 Revised (Subnational)
ONS (2013c) Regional and country profiles, Key statistics 10th April 2013

ONS (2013d) Regional Gross Value Added (Income Approach).

ONS (2011) Avoidable mortality in England and Wales, 2011
http://www.ons.gov.uk/ons/dcp171778_311826.pdf

PwC (2013) UK Economic Outlook March 2013: Summary report
http://www.pwc.co.uk/the-economy/publications/uk-economic-outlook/ukeo-summary-march13.jhtml

http://www.scotland.gov.uk/Publications/2011/10/04153155/10

http://www.scotland.gov.uk/Publications/2012/09/7829/5

Stats Wales (2013a) NHS beds summary data by year

Stats Wales (2013b) UK comparisons of general practitioners workforce by year
https://statswales.wales.gov.uk/Catalogue/Health-and-Social-Care/General-Medical-Services/UKComparisonsOfGPWorkforce-by-Year

Stats Wales (2013c) referral to treatment waiting times

Wales Audit Office (2011) A Picture of Public Services 2011: The key financial challenges facing Welsh public services. Wales Audit Office, Cardiff

Wales Audit Office (2012) Health finances. WAO, Cardiff

Wales Audit Office (2012) Health Finances: Update. WAO, Cardiff
http://www.wao.gov.uk/assets/englishdocuments/574A2012_Health_Finances_Update_Report_FINAL.pdf

http://www.hm-treasury.gov.uk/consult_wanless_final.htm

