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# The Economics of Health in Wales

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How health services should be provided, and the extent of resources required, have been among the most contentious political issues in the relatively short history of the Welsh Assembly Government, and indeed for virtually all governments in the developed world. This paper aims to assess the health of the people of Wales in relation to the health of the Welsh economy, and highlights the need for joined-up policy making by the Welsh Assembly Government. The adoption of a policy framework, which recognises the correspondence between the economic prosperity of a nation and the wider health and social benefits that emerge as a result, is advocated. This would mean that in addition to achieving direct targets, such as raising economic activity rates, improvements in the health of communities and reducing poverty would also emerge from the policy initiatives.

At the inception of the NHS, there was a belief that the provision of health care services, free at the point of entry, would secure significant improvements in the health of the general population, and would also go a long way to reducing the inequalities in health which had existed prior to the establishment of a national health service. With the benefit of hindsight that view seems naïve, and we have witnessed an exponential increase in demand for health care services against a background, in the past twenty-five

years or so, of restrictions in resources with which to provide services. The nature of the 'health care dilemma' (Phillips, 1997; Phillips and Prowle, 1992), which confronts virtually all health care systems, is modelled in figure 1.

The increase in demand for healthcare services, (depicted by the arrows from the demand ellipse) is occurring at the same time as pressures on governments and funding agencies to carefully manage the volume of resources available for healthcare services (depicted by arrows moving towards the supply ellipse) are becoming increasingly evident.

Improvements in healthcare and lifestyles have contributed to the increased life expectancy of people in Wales, which at 79 years for women and 74 years for men is five years longer than in the early 1970s<sup>1</sup>, and yet the demands placed on healthcare services continue to grow. The factors contributing to these increases in demand are many, but significant among them are:

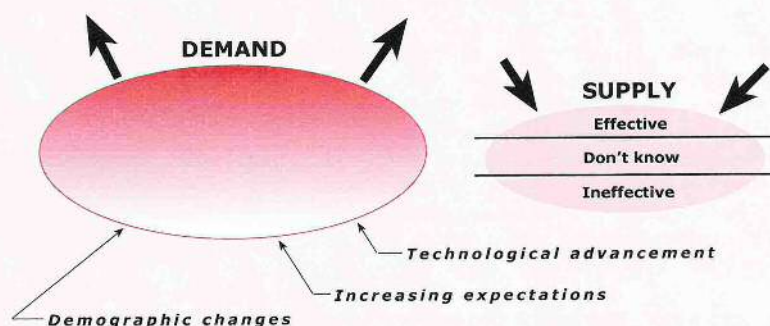
- Demographic changes – the health system has been a victim of its own success, and the fact that people are living longer puts additional pressure on healthcare services. The percentage of the population aged 65 or over in Wales is projected to increase to 20.1 per

cent in 2016 from 17.3 per cent in 1999, but the percentage aged under 5 will show a slight decrease from 5.8 per cent over the same period as birth rates decline. The population aged 75 or over in Wales is expected to increase at a greater rate than that in England during the next twenty years or so<sup>2</sup>.

- Technological advancements – medical science and computer technology have advanced dramatically over recent decades, resulting in the development of new techniques and procedures, which have major implications for the delivery of patient care. For example, developments in surgical techniques have resulted in the proportion of day-cases increasing from 10 per cent of hospital admissions in 1980 to 42 per cent in 1997-98<sup>2</sup>. However, waiting lists and waiting-times for elective surgical procedures are generally regarded as excessively long.
- Increasing expectations – diseases which would have resulted in death or severe debilitation are now treatable and, in many cases, preventable owing to the advancements in knowledge and changing practices. Despite these developments, utilisation rates for health services continue to increase, based on perceptions that healthcare services can meet a greater proportion of our needs; for example, in a 1998 survey (Office of Health Economics, 2000: Table 1.23), around 14 per cent of people had consulted a GP in the previous 14 days, compared to around 11 per cent in 1975.

The constraints in the supply of resources available for healthcare services are compounded by the fact that while some healthcare interventions work effectively, others fail to deliver improvements in health, and it is not known whether the remainder are effective or not. What is also unknown is the actual percentage each category represents. For example, it has been estimated that 10-15% of health care interventions generate health improvements, while a similar

Figure 1: The healthcare dilemma



<sup>1</sup> <http://www.wales.gov.uk/keypubstatisticsforwales/content/publication/compedia/1999/fow/focwalch5.pdf>

<sup>2</sup> <http://www.wales.gov.uk/keypubstatisticsforwales/content/publication/compedia/1999/fow/focwalch5.pdf>



percentage result in a reduction in health status (Warner and Evans, 1993), while others have suggested that up to one quarter of all health services currently provided may be unnecessary (Borowitz and Sheldon, 1993).

## The health status of the Welsh population

The indicators of the health of people in Wales are not pleasant reading. While the overall physical and mental health scores for Wales remained largely unchanged between 1995 and 1998, and there was an improvement in the male physical health score (National Assembly for Wales, 1999), around 1 in 6 people in Wales report that they have a limiting long-term illness – a higher proportion than any other region in Great Britain<sup>3</sup>.

Around 14,400 new cases of malignant cancer are registered each year in Wales, with the most common being lung, colorectal, breast and prostate cancers (together accounting for half of all new cases)<sup>4</sup> (National Assembly for Wales, 1999). Cancer is the cause of 1 in 4 deaths in Wales<sup>5</sup>, with 1 in 20 adults having received treatment (National Assembly for Wales, 1999).

In 1999, the occurrence of circulatory diseases in Wales, at 425 per 100,000 of population is higher than the UK average of 399 per 100,000, despite initiatives and programmes over the past fifteen years or so to reduce their impact (Regional Trends, 2001). One in five adults reported having had heart disease (including high blood pressure), and more than one in four deaths were attributed to it (National Assembly for Wales, 1999). In the same study, one in four adults reported that they were currently being treated for arthritis, one in seven adults reported that they were currently being treated for mental illness and one in four adults and over half of children aged under 5 visit their GPs due to respiratory illness (National Assembly for Wales, 1999).

Official figures also point to relatively high levels of tooth decay among 5-year olds in Wales (an average of 2.5 filled<sup>6</sup>, missing or decayed teeth compared to 1.8 in the UK as a whole (Nugent and Pitts, 1997)), while levels of oral health among adults are also relatively poor<sup>7</sup>.

These relatively poor levels of health in Wales are reflected in the number of prescriptions dispensed – 38 million prescriptions were issued in 1998 compared to 27 million in 1988 – a rate of 13 per head of population in Wales compared to 10 per capita in England (Office of Health Economics, 2000: Table 4.28).

However, while health in Wales compares unfavourably to that in the rest of the UK, there are major inequalities in health within Wales. Information provided by the Welsh Assembly Government in its Welsh Index of Multiple Deprivation, 2000 (National Assembly for Wales, 2000) and the Welsh Health Survey, 1998 (National Assembly for Wales, 1999) highlight the extent of the problem. For example, the percentage of the population in Wales who stated that they had long-term illness, as reported in the Welsh Health Survey, was 34.1%. However, across Wales this percentage ranged from under 30% in Flintshire, Cardiff and Monmouthshire to over 40% in Caerphilly, Blaenau Gwent and Merthyr Tydfil.

Variations in the health of communities are also demonstrated in the *health deprivation and disability domain* of the Welsh Index of Multiple Deprivation, 2000 (National Assembly for Wales, 2000) which can be viewed at <http://www.wales.gov.uk/keypubstatistics/cs>. The indicators that together comprise the health deprivation and disability domain are:

- Age and sex standardised mortality ratios for people under 65 for 1995-98
- People receiving attendance allowance or disability living allowance for 1998
- People (aged 16-59) receiving incapacity benefit for 1998 or severe disablement allowance for 1999
- Age and sex standardised ratio of limiting long-term illness (1991 Census)
- Proportion of births of low birth-weight (<2,500g) for 1993-97

Sixteen of the worst 20 electoral wards, 40 of the worst 50 and 72 of the worst 100, in terms of health status, are to be found in old mining areas in South Wales. It is these areas which also have the lowest life expectancies (for

example, males born in Merthyr Tydfil can expect to live 5 years less than males born in Ceredigion<sup>8</sup>), and above average age-standardised mortality ratios.

## Recent Health Policy Developments in Wales

The Welsh Assembly Government has committed itself to redressing the inequalities in health that exist within Wales. One of the priorities within its Strategic Plan is to

*"improve health and reduce health inequalities by tackling the underlying causes of ill health and improving access"*.

This has been refined into a mission statement in its Plan for Wales 2001 where

*"our vision for a sustainable, inclusive and equal Wales is of a healthier people, with less variation in life expectancy between rich and poor; a place where no-one is, or feels, denied services or the ability to enjoy better health; where the elderly can live full lives in their own homes; and where looked after children can expect the same life opportunities as other children"*<sup>9</sup>.

The development of health services in Wales over the next ten years was documented in the Assembly's NHS Plan – *Improving health in Wales – a plan for the NHS with its partners*<sup>10</sup>; an ambitious set of proposals designed to improve the health of the people of Wales. The implementation of this project is based around ten Task and Finish Groups, each with a specific remit, one of which – Structures Task and Finish Group – led to a series of recommendations to change the organisational structure of the NHS in Wales. The five health authorities in Wales will be abolished and their functions transferred to Local Health Boards, which will be responsible for commissioning, securing and delivering healthcare services in their respective localities. They will be directly accountable to the National Assembly as will be the NHS Trusts, which will essentially be responsible for acute sector provision, while the responsibility for community services is still to be determined.

<sup>3</sup> <http://www.wales.gov.uk/keypubstatisticsforwales/content/publication/compendia/1999/fow/focwalch5.pdf>

<sup>4</sup> <http://www.wales.gov.uk/keypubstatisticsforwales/content/publication/health/2002/hsw2001/hsw2001-ch3/hsw2001-ch3.htm>

<sup>5</sup> <http://www.wales.gov.uk/keypubstatisticsforwales/content/publication/compendia/1999/fow/focwalch5.pdf>

<sup>6</sup> <http://www.wales.gov.uk/keypubstatisticsforwales/content/publication/compendia/1999/fow/focwalch5.pdf>

<sup>7</sup> <http://www.wales.gov.uk/keypubstatisticsforwales/content/publication/compendia/2002/dwlas2002/dwlas2002-ch1/dwlas2002-ch1.htm>

<sup>8</sup> <http://www.wales.gov.uk/themesbetterwales/content/performance/health-e.htm>

<sup>9</sup> [http://www.planforwales.wales.gov.uk/healthcare\\_services/index.htm](http://www.planforwales.wales.gov.uk/healthcare_services/index.htm)



Another feature of health policies emanating from the Welsh Assembly Government is the focus on collaboration and co-operation across agencies, through formal and informal alliances. The very nature of the title of the 10-year plan hints at partnership while the First Minister and Minister for Health and Social Services also pay particular attention to the importance of collaborative ventures:

*"The Plan is rooted in a set of partnerships. These involve public bodies planning, implementing and working on policies in a joined-up way."*

(Foreword by First Minister<sup>10</sup>)

*".....improving the health of the nation poses challenges that no one organisation can meet. Strong partnerships between the NHS, local government, communities and the voluntary sector are at the heart of our new and inclusive approach to health."*

(Foreword by Minister for Health and Social Services<sup>11</sup>)

A variety of innovative multi-agency projects have been developed in Wales during recent years involving collaboration between statutory, voluntary and independent providers. However, there is limited awareness among providers about a number of these initiatives. Wider dissemination of good practice, and the removal of other barriers to partnership working between health and social care agencies needs to be secured if appropriate patient-centred care is to be delivered (Phillips et al, 2000; Phillips et al, 1999). It is our view that patients have for too long been regarded as bed-blockers, as referrals, as units of account and as pawns for scoring political points, rather than individuals deserving of high quality care at all stages of the health care process.

The vision of a seamless system of health-care commissioning and delivery has been advocated as an antidote to the recent experiences of patients moving through a complex maze of inter-organisational, inter-agency, inter-professional and inter-budgetary organisations, all with competing interests and objectives, to receive their various care components. While there is evidence of changes in policy direction, with the advent of local health boards, expenditure plans announced by the Welsh Assembly Government in recent months do not necessarily reflect a

move towards this different mode of thinking in relation to improving the health of the people of Wales. Emphasis in resource allocation firmly remains on traditional budgetary areas.

## Expenditure on health in Wales

In the year 2000-01, the National Assembly for Wales allocated over 37% of total expenditure (£2.95 billion) to health and social services<sup>11</sup>, and expenditure on health and social services is planned to increase to around £4 billion by 2003-04<sup>12</sup>. Spending on health and social services constitutes 9.6% of Welsh gross domestic product<sup>13</sup>, while in the UK as a whole, £56 billion was spent on the NHS, roughly 6% of GDP (Office of Health Economics, 2000: Table 2.1). Excluding expenditure on social services in Wales (which constitutes less than 4% of total expenditure on health and social services) the proportion of Welsh GDP spent on health amounts to 9.25%. However, the relationship between health care expenditure and health status is not necessarily directly proportional, with a number of factors contributing to the underlying health of a population and the needs that emerge as a result.

By far the largest element of expenditure on health by the Welsh Assembly Government is allocated to health authorities and NHS Trusts. In 2000-01 81% of expenditure (£2.39 billion) was spent on treatments, compared to health promotion, for example, where less than 0.1% (£2.3 million) was spent. Expenditure plans for the years up to 2003-04 indicate that there will be no significant change in respective allocations, when 79% will be allocated to the treatment budgets and 0.14% allocated to health promotion.

We have suggested above that there is evidence that scarce resources may not be utilised in the most effective and efficient ways (Warner and Evans, 1993; Borowitz and Sheldon, 1993) and there are other examples of a lack of a joined-up approach to decision-making.

Adverse reactions to medicines and medication errors currently cost the NHS in England and Wales £0.5 billion each year, (Audit Commission, 2001) while 10% of patients in hospital have hospital-acquired infection which costs the NHS in England alone around £1 billion per year (Plowman et al, 1999). The Audit Commission highlighted the

lack of joined-up approach to decision-making and criticised the emphasis on a narrow budgetary focus in relation to expenditure on drugs:

*"In recent years, these cost pressures have been driven by the introduction of new medicines.....These cost pressures are cause for concern for many Trust boards, but they need to be viewed as part of the overall package of patient care. For some conditions, medicines expenditure should be rising because it would be a cost-effective way of increasing the health gain for the population".* (Audit Commission, 2001).

As indicated above, the relationship between expenditure on health care services and health status is not direct. Indeed, historical evidence suggests that the health of the nation cannot be improved, and health inequalities reduced simply by channelling more resources into health. Furthermore, the USA is one of the least healthy of the wealthy nations of the world despite spending some 14% of its GDP on health care, while Japan, which spends about 7% of its GDP on health care, is one of the healthiest (Office of Health Economics, 2000: Table 2.3).

## The economic health of Wales

Since Adam Smith published *The Wealth of Nations* in 1776, the relationship between economic productivity and the health of society has been recognised. Wales's GDP per head is on average 80% of that of the UK<sup>14</sup> and as low as 64% in Merthyr Tydfil and Anglesey, and this prosperity gap is widening. With the exception of the North East of England, Wales is the poorest region of the UK. Household income and earnings are lower in Wales than in Scotland and England<sup>15</sup>, with 53% of households in Wales having incomes of less than £10,000 per year – in Merthyr Tydfil nearly two-thirds of households fall into this category<sup>16</sup>.

Wales has the lowest economic activity rate in the UK at 72.4% apart from Northern Ireland, and the lowest rate of all amongst males at 77.5%, while Merthyr Tydfil, Neath and Port Talbot and Blaenau Gwent rates fall below 60%<sup>17</sup>. If Wales had the same workforce participation rate as England, there would be an additional 100,000 people in employment; GDP per head would be much closer to the UK average (Welsh Assembly Government, 2001) and the

<sup>10</sup> [http://www.wales.gov.uk/healthplanonline/health\\_plan/content/nhsplan-e.pdf](http://www.wales.gov.uk/healthplanonline/health_plan/content/nhsplan-e.pdf)

<sup>11</sup> <http://www.wales.gov.uk/subieconomics/content/performance/report2000-01/chapter5-e.htm>

<sup>12</sup> [http://www.wales.gov.uk/themesbudgetandstrategic/content/budget2001/final\\_Proposals-e.pdf](http://www.wales.gov.uk/themesbudgetandstrategic/content/budget2001/final_Proposals-e.pdf)

<sup>13</sup> [http://www.wales.gov.uk/themesbudgetandstrategic/content/budget2000/supbud\\_e1.pdf](http://www.wales.gov.uk/themesbudgetandstrategic/content/budget2000/supbud_e1.pdf)



health status of Welsh people would, in all probability, more closely mirror that of our wealthier neighbour.

The Index of Multiple Deprivation (National Assembly for Wales, 2000) identifies a strong positive correlation between employment deprivation and health deprivation.

Large-scale steel redundancies across Wales are likely to deplete both the wealth and health of affected families (Fairbrother, 2001). Hence, people made redundant could place greater demands upon already stretched health care services, and levels of depression are likely to increase as incomes fall. These problems might be expected to intensify with the duration of unemployment.

There is uncertainty regarding the degree to which ill-health is exacerbated by unemployment, with a building body of evidence that it has an impact on mortality rates, physical and mental ill-health and is related to greater use of health services (Mathers and Schofield, 1998; Claussen, 1999; Beale and Nethercott, 1985).

The Assembly's recently launched economic policy document, *A Winning Wales* (Welsh Assembly Government, 2001), aims to increase the proportion of the workforce who are economically active, both employed and self-employed, through the creation of 135,000 jobs by 2010. While these intentions are commendable, the question still has to be asked whether sufficient resources are being made available. In 2000-01 the Assembly spent £256.4 million on economic development, less than 9% of spend on health and social services. The question is whether additional resources, to improve job prospects and reduce poverty, would also result in greater health care improvements than will be gained from the additional expenditure commitments announced by the Welsh Assembly Government for health and social services over the next three years or so.

## Conclusions

Joined-up policy from the Assembly is therefore advocated, which will provide integrated health and economic policy initiatives having long-term prospects of improving the 'health' of the Welsh economy, and thereby contributing to a reduction of current health inequalities. This is shown in Figure 2.

A health care policy which embraces, through additional NHS resources, workplace health promotion, assistance to stop people smoking and encourage them to adopt healthier lifestyles would

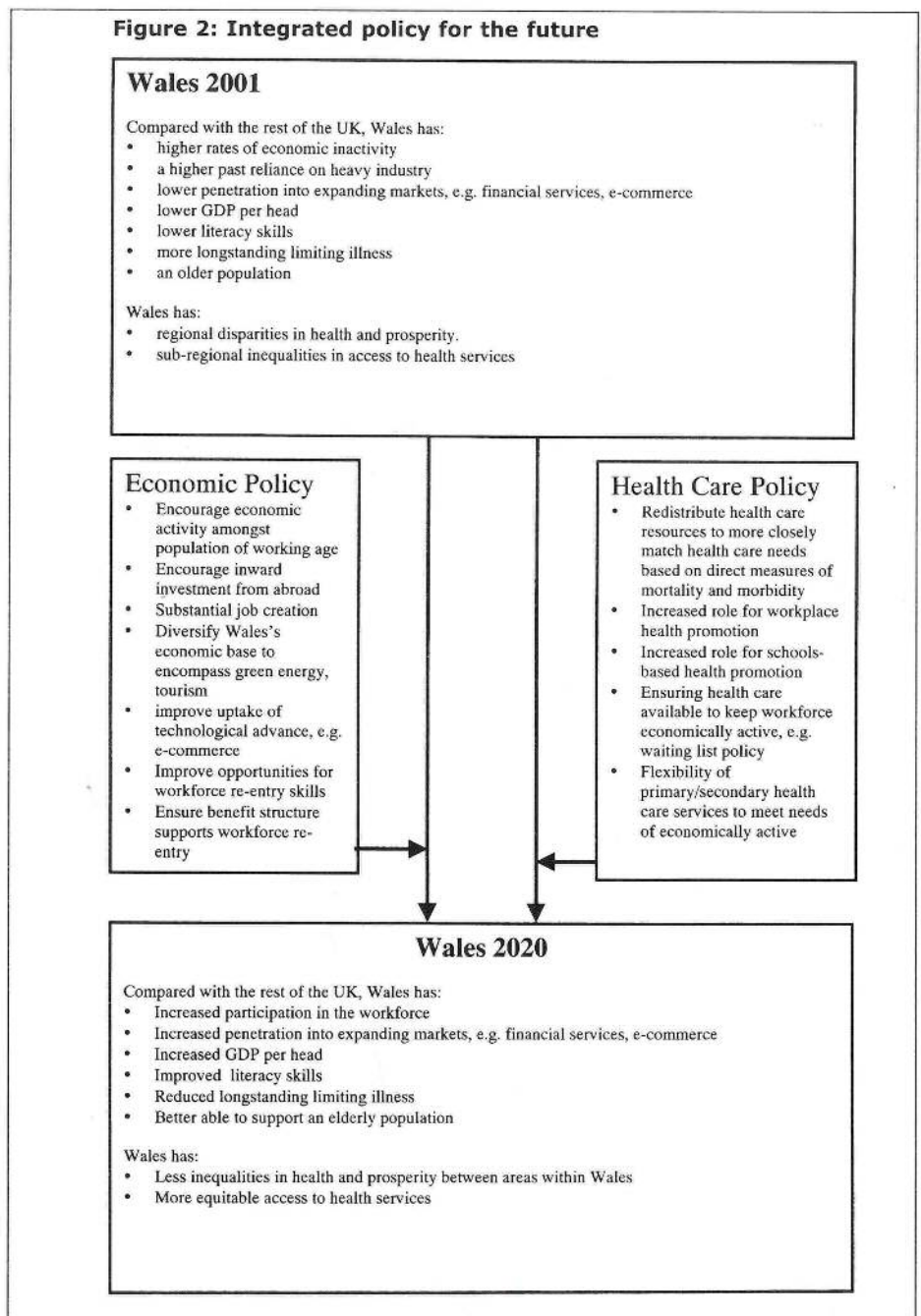
be welcome, explicitly recognising the positive relationship between health and work.

The Assembly aims to create 135,000 jobs by 2010. Meanwhile Wales can no longer rely on employment in heavy industry, and must embrace opportunities for economic growth in green energy, tourism, finance and e-commerce, with an attendant commitment to the principle of sustainability to protect the needs of future generations. This commitment must be extended to health concerns, enabling Welsh society to be sufficiently economically productive to finance a reasonable provision of public health care for all citizens; and also to ensure

that present generations can finance their old age and to pass on to future generations the endowment of health gained from leading productive and fulfilling lives. A healthier and wealthier workforce now will result in healthier and wealthier pensioners in the future. The current pressures on over-stretched public services will continue to dominate media attention and government think-tanks until governments commit themselves to joined-up policy making on both paper and in practice.

Moving money around the NHS will not deliver. We need to *work* our way today to ensure a healthier Wales in the future.

**Figure 2: Integrated policy for the future**



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<sup>14</sup> <http://www.statistics.gov.uk/pdfdir/rgdp0201.pdf>

<sup>15</sup> [http://www.wales.gov.uk/keypubstatisticsforwales/content/publication/compendia/2001/Comparative\\_Indicators\\_2000.pdf](http://www.wales.gov.uk/keypubstatisticsforwales/content/publication/compendia/2001/Comparative_Indicators_2000.pdf)

<sup>16</sup> [http://www.wales.gov.uk/keypubstatisticsforwales/content/publication/social/2000/mappingsocialexclusion/incomes/e41\\_less\\_10k\\_income.pdf](http://www.wales.gov.uk/keypubstatisticsforwales/content/publication/social/2000/mappingsocialexclusion/incomes/e41_less_10k_income.pdf)

<sup>17</sup> <http://www.statistics.gov.uk/nsbase/ukinfigs/labour.asp#economic>