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Appendix 1

Welsh Health Survey

Introduction

The Welsh Health Surveys (WHS) in 1995 and 1998 obtained detailed information on the health of approximately 1,000 adults in each Unitary Authority area. These two surveys are a unique resource for morbidity data which is available in Wales but not in other UK countries. The suggestion by the research team that some of the morbidity information collected in the WHS could be used as part of a resource allocation formula has caused some controversy, therefore, this Appendix examines the advantages and problems with using these data.

Further research into the accuracy and precision of the 1998 WHS data has been commissioned and is currently being undertaken by John Charlton and his colleagues who are experts in survey error measurement at the Office for National Statistics in London.

Representativeness of WHS 1998

The WHS is a large postal survey and is therefore known to suffer from a number of problems that are inherent in surveys of this kind (see Chapter 4 for discussion). Postal surveys like the WHS are also know to suffer from a number of systematic biases, in particular they generally have lower response rates amongst:

- the very elderly
- the very sick
- the poorest and most deprived
- ethnic minority respondents (particularly where English is a second language)
- the functionally illiterate
- people with certain disabilities (*eg* learning, seeing, hearing, etc)
- young single people (particularly young men)

An estimate of the size of these systematic response biases can be determined by examining the raw (un-weighted) counts of those who returned the WHS. Table A1 compares these WHS raw counts with the 1998 population figures in each Unitary Authority, also showing the population in each age band divided by the WHS count.

	Age group							
	25-34	35-44	45-54	55-64	65-74	75+		
Anglesey	65.3	53.8	49.7	45.0	43.4	59.0		
Gwynedd	94.7	81.2	64.7	64.8	63.2	82.9		
Conwy	119.7	84.6	81.7	78.8	65.4	91.3		
Denbighshire	102.5	69.2	67.2	65.2	64.3	72.5		
Flintshire	103.6	80.7	80.0	71.1	65.6	79.7		
Wrexham	108.9	95.1	92.1	101.6	77.6	99.0		
Powys	108.2	97.7	70.9	61.7	66.5	73.9		
Ceredigion	60.0	65.5	54.9	55.3	45.2	60.7		
Pembrokeshire	119.2	78.6	77.1	61.6	58.3	89.3		
Carmarthenshire	104.5	101.8	88.0	87.1	83.1	97.6		
Swansea	104.9	81.0	71.2	68.9	63.6	77.6		
Neath & Port Talbot	100.0	90.6	70.5	68.8	60.2	74.2		
Bridgend	104.1	83.4	78.2	69.3	68.2	99.0		
Vale of Glamorgan	108.8	85.2	79.3	70.7	71.6	71.1		
Cardiff	89.6	90.6	73.4	70.0	66.0	70.7		
Rhondda, Cynon, Taff	105.8	88.7	75.5	66.4	69.6	85.6		
Merthyr Tydfil	74.3	57.0	47.1	32.6	35.7	45.1		
Caerphilly	100.0	91.1	77.7	75.4	65.3	91.6		
Blaenau Gwent	67.1	62.7	47.4	53.9	50.8	52.8		
Torfaen	94.6	82.5	59.8	51.1	59.7	84.2		
Monmouthshire	120.6	65.5	64.1	68.5	58.7	88.9		
Newport	111.1	97.0	79.1	65.3	77.6	87.6		

Table A1: Representativeness of the un-weighted 1998 WHS data by age group

The figures range from 32.6 up to 120.6, which is a substantial disparity. This means that, in the 55-64 age range in Merthyr Tydfil, one respondent 'represents' 32.6 people, whereas in the 25-34 age group in Monmouthshire, one respondent 'represents' 120.6 people, almost a four-fold difference.

The high figures are to be found in the youngest age group here, where ill-health should be much less prominent. Additionally, the better ratios are in Merthyr and Blaenau, which are relatively deprived. However, Ceredigion also has a good ratio and this is not a deprived area.

Welsh Health Survey: health conditions

The WHS records a range of information on morbidity and health need much of which is not available from other sources. Table A2 below gives the prevalence rates (percent) for different health conditions in 1998 in the WHS and the number of respondents in the survey who had these conditions (out of 29,874 respondents in total).

Health Condition	Percent	Number
Teeth (fewer than 20)	31	9,634
Back Pain	30	9,132
Arthritis	25	7,872
Respiratory Illness	23	6,842
Heart (ever)	21	6,488
Food Poisoning (last 3 months)	21	5,670
Mental Illness	14	4,055
Hearing	13	3,882
Varicose Veins	11	3,427
Seeing	8	2,419
Accidents (last 3 months)	8	2,072
Cancer (ever)	5	1,614
Diabetes	4	1,166
Stroke	1	380
Epilepsy	1	251
Parkinson's Disease	*	76
Pressure Sores	*	71

 Table A2: Prevalence of health conditions: 1998 Welsh Health Survey

The most prevalent health condition was teeth problems (fewer than 20 teeth) which affected almost a third of respondents, followed by back pain (30%) and arthritis (25%). By contrast, less than 1% currently suffered from Parkinson's Disease or pressure sores. However, it must be noted that not all of these health conditions were measured over the same time period. In most cases, the rates are based on respondents who had the health condition at the time of the survey. However, in the case of Cancer and Heart Disease, respondents were asked if they had ever 'been treated for' these diseases. Respondents were also asked if they had had an accident or suffered from the effects of food poisoning during the three months prior to the survey.

Face Validity

The health condition measures available from the WHS have a very high degree of face validity. Anastasi (1988) describes the concept of face validity as follows:

"Content validity should not be confused with face validity. The latter is not validity in the technical sense; it refers, not to what the test actually measures, but to what it appears superficially to measure. Face validity pertains to whether the test "looks valid" to the examinees who take it, the administrative personnel who decide on its use, and other technically untrained observers (p.144)."

Therefore, face validity is concerned with how a measure or procedure appears. Unlike content validity, face validity does not depend on established theories for support (Fink, 1995). The WHS attempts to measure a wide range of common health complaints such as Heart Disease, Arthritis, Back Pain and Respiratory Illness (see Table A1). It appears likely that an individual who suffers from these conditions may have a need for medical treatment and health resources. Conversely, resource allocation formulas that are based on death rates

suffer from a lack of face validity since people who have died are unlikely to have further need of medical treatment. Similarly, many health needs that require treatment and resources do not usually result in death. To summarise, death rates have little face validity as measures of the need for health resources whereas illness rates have a much greater degree of face validity.

Criterion validity

Criterion-related validity, which is sometimes known as instrumental validity, is used to demonstrate the accuracy of a measure by comparing it with another measure which has been demonstrated to be valid. Table A3 shows the results of a criterion validity exercise at the individual level. Both limiting long term illness and respondents who rate their health as only 'fair' or 'poor' on the General Health Question have been shown to be valid indicators of health need which have been used in Britain for more than 30 years (Bowler, 1997). Column two in Table A3 shows the relative risk ratios (odds) of a respondent who has one or more of the 17 health condition measures in the WHS also considering that they have a limiting long term illness. Column three shows the relative risk ratios (odds) of a respondent who has one or more of the 17 health condition measures in the WHS also rating their health as only 'fair' or 'poor' on the General Health Question.

Health condition	Limiting long term	Health 'fair' or 'poor'
	illness	
Parkinson's Disease	65.7	17.0
Stroke	38.0	10.3
Pressure Sores	20.0	21.0
Epilepsy	9.4	4.5
Diabetes	7.4	4.6
Arthritis	5.3	3.4
Heart (ever)	4.4	3.3
Mental Illness	3.6	3.9
Hearing	3.4	3.0
Respiratory Illness	3.0	3.0
Cancer (ever)	3.0	2.6
Seeing	2.8	3.1
Teeth (fewer than 20)	2.7	2.5
Back Pain	2.5	2.2
Varicose Veins	2.2	1.9
Accidents (last 3 months)	1.4	1.3
Food Poisoning (last 3 months)	1.1	1.2

 Table A3: Relative risk of suffering from a limiting long term illness or of having 'fair' or 'poor' health by WHS health condition

The risk ratios are all significant at the 5% level.

Reliability at Local Health Group Area level

All measurement is subject to error which can take the form of either random variations or systematic bias. (Stanley (1971) lists many causes of bias). Random errors of measurement can never be completely eliminated. However, if the error is only small relative to size of the phenomena being studied, then the measurement will be reliable. Reliable measurements are repeatable, they have a high degree of precision.

The theory of measurement error has been developed mainly by psychologists and educationalists and its origins can be traced to the work of Spearman (1904). The most widely used model is the Domain-Sampling Model, although many of the key equations can be derived from other models based on different assumptions (see Nunnally, 1981, Chapters 5-9, for detailed discussion). The Domain-Sampling Model assumes that there is an infinite number of questions (or, at least, a large number of questions) that could be asked about health need. If you had an infinite amount of time, patience and research grant, you could ask every person/household all of these questions and then you would know everything about their level of health need, *ie* you would know their 'true' health need score. The 17 questions used in the WHS 1998 can be considered to be a subset of this larger group (domain) of all possible questions about health.

Some questions will obviously be better at measuring health need than others, however, all of the questions that measure health will have some common core. If they do not, they are not measuring health need by definition. Therefore, all the questions that measure health should be intercorrelated such that the sum (or average) of all the correlations of one question, with all the others, will be the same for all questions (Nunnally, 1981). If this assumption is correct, then by measuring the average intercorrelation between the answers to the set of health questions, it is possible to calculate both:

- 1 an estimate of the correlation between the set of questions and the 'true' scores that would be obtained if the infinite set of all possible health questions had been asked; and
- 2 the average correlation between the set of questions asked (the health need index) and all other possible sets of health questions (health need indices) of equal length (equal number of questions).

Both these correlations can be derived from Cronbach's Coefficient Alpha which, when transformed for use with dichotomous questions, is known as KR-20, short for Kurder-Richardson Formula 20 (Cronbach, 1951 and 1976; Cronbach *et al*, 1971; Kurder, 1970).

Cronbach's Coefficient Alpha is 0.9233 for the 17 items used in the WHS 1998. This is the average correlation between these 17 questions and all the other possible sets of 17 questions that could be used to measure health need. The estimated correlation between the 17 WHS questions and the 'true' scores, from the infinite possible number of health questions, is the square root of Coefficient Alpha, *ie* 0.96.

Nunnally (1981) has argued that:

"in the early stages of research ... one saves time and energy by working with instruments that have modest reliability, for which purpose reliabilities of 0.70 or

higher will suffice ... for basic research, it can be argued that increasing reliabilities much beyond 0.80 is often wasteful of time and funds, at that level correlations are attenuated very little by measurement error."

Therefore, the Alpha Coefficient score of 0.92 for the WHS questions indicates that they have a very high degree of reliability at Local Health Group Area level and also that effectively similar results would have been obtained if any other reliable set of 17 health questions had been asked instead.

Coefficient alpha can also be used to test the reliability of individual questions and Table A5 shows how the Alpha Coefficient would change if any single question was deleted from the deprivation index. There are six questions (highlighted in bold) which would yield an increase in Alpha if they were removed and this increase would be in the third decimal place only.

Health condition	Corrected item	Alpha if item		
	total correlation	deleted		
Arthritis	.9417	.9086		
Respiratory Illness	.9120	.9095		
Hearing	.8990	.9099		
Mental Illness	.8920	.9104		
Seeing	.8632	.9127		
Back Pain	.8590	.9115		
Teeth (fewer than 20)	.8369	.9144		
Heart (ever)	.8351	.9134		
Diabetes	.8270	.9195		
Accidents (last 3 months)	.7336	.9189		
Epilepsy	.5059	.9254		
Food Poisoning (last 3	.4615	.9230		
months)				
Stroke	.3906	.9253		
Varicose Veins	.3423	.9246		
Parkinson's Disease	.2630	.9264		
Cancer (ever)	.1283	.9289		
Pressure Sores	.1090	.9268		
Coefficients	Alpha for the 17 items 0.9	233		

Table A4: Reliability of the WHS health condition questions at Local Health Group Area level

Despite the very high reliability of the WHS questions, it is instructive to examine if any of the six items that would increase Alpha if deleted should be dropped. In the case of Stroke, Epilepsy, Parkinson's Disease and Pressure Sores, the reason for their relative 'unreliability' is that they affected only 1% or fewer respondents (see Table A1). Having ever been treated for cancer affected only 5% of respondents. Like heart disease, it is measured on a different basis (*eg* 'ever treated' rather than 'having now') from most of the other health conditions. The reason why having Varicose Veins is a relatively unreliable is less clear. Nevertheless,

little would be gained from removing any of these six items from the resource allocation analysis since (as discussed above) they all appear to be valid measures of health need and a trade off always has to be made between increasing reliability and increasing validity when trying to measure any phenomena.

The exception that can be made is that, since contemporary and reliable cancer statistics are available from the Cancer Registry, then this would appear to be a better source of evidence than the WHS for this health need. Similarly, contemporary food poisoning prevalences are available from the Notifiable Disease statistics and these have also been used in preference to the food poisoning measure in the WHS. Both Pressure Sores and Parkinson's Disease have been dropped from the analysis as they have very low prevalence rates (less than 1%) in the WHS.

Comparison with the 1991 Census

It is possible to try to estimate the reliability of the WHS at Local Health Group/Unitary Authority level by comparing the results with those from the 1991 Census and other surveys. Some researchers have expressed worries about comparing 1998 survey data with Census data collected seven years previously and the possibility of changes in health need over time must be acknowledged. However, recent work by members of the Poverty Research Centre at Bristol has shown that the detrimental effects of neighbourhood poverty on health can persist for over 100 years. Poverty can cause ill health at area level long after the death of all the people who originally lived in poverty in that area.

Figure A1 below illustrates the long term detrimental effects of neighbourhood poverty. Despite all the changes that have occurred in London over the past century, *eg* slum clearance, bombing, gentrification, industrial restructuring, etc, the areas that Charles Booth found to be poor in 1896 were, in general, still deprived in 1991 and still contained people who were more likely to die prematurely.



This analysis of the persistence of poverty and poor health provides a reasonable justification for assuming that, in Wales, at Local Health Group Area level, it is probably valid to use 1991 Census data to assess the reliability of the 1998 WHS.

The 1991 Census asked questions about any 'limiting long-term illness' (LLTI) suffered by a member of the household¹. Limiting long-term illness and disability are different concepts but there is a considerable degree of overlap between them (Pearce and Thomas, 1990; Charlton *et al*, 1994). However, there is evidence that the 1991 Census probably underestimated the prevalence of limiting long-term illness particularly amongst the elderly (Forrest and Gordon, 1993). In Britain, in the Census, 12% of adults were enumerated as having a limiting long-term illness whereas the 1991 Census Validation Survey found a rate of 14% (Heady, Smith and Avery, 1996). Similarly, interviews conducted in the 1989 Post-Enumeration Survey (the Census test) also discovered an adult prevalence rate of 14% (Pearce and Thomas, 1990) and the 1987 Autumn Wording Test of the Census Questions found an adult prevalence rate of 16% (Pearce *et al*, 1988; Thomas, 1989).

One reason for this underestimate in the Census is that the Limiting Long Term Illness question is known to be context-sensitive. If the question is asked as part of a health survey, along with many other questions of health, then respondents are more likely to claim to have a limiting long term illness compared with respondents to a survey or Census containing just a single question on health.

Nevertheless, useful comparisons can be made between the 1991 Census and 1998 WHS by examining the percentage distribution of LLTI at Local Health Group Area level within Wales as a whole. This comparison should, in part, compensate for the low LLTI prevalence rates in the 1991 Census. Table A5 shows this comparison.

¹ Question 12 in the Census asked if any member of the household had a 'long-standing illness, health problem or handicap' which limited their work or daily activities.

	Percentage distribution of	Percentage distribution of
Local Authority	LLTI in Wales	LLTI in Wales
	(WHS 1998)	(1991 Census)
Isle of Anglesey	2	2
Blaenau Gwent	3	3
Bridgend	5	5
Caerphilly	7	7
Cardiff	9	8
Carmarthenshire	6	7
Ceredigion	2	2
Conwy	4	4
Denbighshire	3	3
Flintshire	4	4
Gwynedd	4	3
Merthyr Tydfil	2	3
Monmouthshire	3	2
Neath Port Talbot	5	6
Newport	5	4
Pembrokeshire	4	3
Powys	4	3
Rhondda, Cynon, Taff	9	11
Swansea	8	8
Torfaen	3	3
The Vale of Glamorgan	4	3
Wrexham	4	4
Total	100	100

Table A5: Comparison of the distribution of LLTI in Wales in the 1991 Census and 1998 WHS

In 21 out of 22 Local Health Group Areas, the 1998 WHS results are either identical or differ by 1% or less from the 1991 Census prevalence rates. Only in the Rhondda, Cynon, Taff does the WHS prevalence estimate differ by 2%. This pattern is as expected given the sample size of the WHS and the number of comparisons that are made in Table A5. These results confirm once again a relatively reasonable reliability of the WHS data for measuring health need at Local Health Group Area level.

Conclusion

Fears that the 1998 WHS data may be too invalid and unreliable to provide robust information for health resource allocation appear to be unduly pessimistic. The WHS health condition indicators in aggregate can provide both valid and reasonably reliable measures of health need, partially if they are supplemented with health conditions data from other sources.

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Appendix 2

Resource allocation calculations (TRF 2 and prescribing)

Summary (1) Medical, Surgical and Other hospital In-patient and Day-patient Allocations excluding paediatrics and psychiatrics – based upon 13 health need indicators

Hospital In-Patient and Day Patient TFR 2 Totals					
98-99 for adults (minus Paediatrics & Psychiatric)					
A. Medical	£312,319,818				
B. Surgical	£329,306,770				
E. Other Specialities:					
a. General Practice	£34,820,916				
b. Radiotherapy	£12,869,868				
c. Pathological					
specialities & Radiology	£83,482				
d. Anaesthetics	£1,625,539				
Total	£691,026,391				

UA Name

UA Maille								
	Heart Disease	Cancer	Respiratory Disease	Arthritis	Back Pain	Epilepsy	Stroke	Accidents
Isle of Anglesey	£2,419,180	£2,503,743	£1,218,694	£402,677	£83,965	£57,728	£548,977	£1,184,082
Gwynedd	£3,816,977	£4,338,233	£2,073,895	£748,555	£142,797	£33,576	£638,880	£2,477,158
Conwy	£4,142,492	£4,704,264	£2,007,776	£769,234	£151,223	£89,591	£638,525	£2,662,945
Denbighshire	£2,949,993	£3,807,595	£1,554,612	£629,417	£122,719	£76,509	£896,255	£1,527,195
Flintshire	£4,585,580	£4,273,257	£2,371,303	£892,526	£191,540	£101,549	£541,447	£3,206,848
Wrexham	£4,117,246	£4,069,665	£2,208,743	£819,297	£160,384	£114,788	£421,180	£2,409,379
Powys	£4,132,372	£4,299,247	£1,972,839	£701,887	£163,721	£109,480	£702,366	£1,986,619
Ceredigion	£2,344,693	£2,544,894	£1,260,517	£423,258	£94,522	£52,879	£271,547	£1,074,676
Pembrokeshire	£4,150,718	£4,073,997	£1,904,178	£736,318	£145,978	£56,510	£595,753	£2,094,711
Carmarthenshire	£6,558,350	£6,320,002	£3,255,639	£1,210,155	£233,247	£95,928	£1,395,134	£4,086,174
Swansea	£7,345,055	£8,455,547	£4,485,422	£1,636,558	£311,355	£136,384	£1,302,292	£4,651,453
Neath Port Talbot	£5,328,206	£4,860,207	£3,231,964	£1,108,105	£222,978	£127,463	£647,167	£3,050,569
Bridgend	£4,800,296	£4,173,627	£2,664,286	£908,842	£179,644	£73,483	£621,970	£2,499,882
Vale of Glamorgan	£3,576,750	£3,660,316	£1,917,917	£724,652	£151,418	£58,091	£787,588	£2,295,585
Cardiff	£9,422,635	£8,819,413	£5,805,060	£1,840,550	£361,012	£267,581	£2,335,496	£5,876,686
Rhondda, Cynon, Taff	£8,792,618	£7,736,479	£5,114,515	£1,885,408	£342,317	£239,434	£1,736,769	£5,689,554
Merthyr Tydfil	£2,148,429	£1,925,456	£1,363,263	£496,640	£83,717	£56,507	£496,314	£1,425,358
Caerphilly	£6,399,547	£4,938,178	£3,889,470	£1,382,304	£236,481	£114,045	£958,213	£3,727,935
Blaenau Gwent	£2,982,475	£2,395,450	£1,679,445	£606,965	£114,225	£96,398	£542,624	£1,603,414
Torfaen	£3,384,055	£2,858,945	£1,789,048	£615,002	£122,380	£85,284	£1,012,729	£2,271,914
Monmouthshire	£2,591,842	£2,514,572	£1,397,655	£488,822	£102,813	£64,046	£290,427	£1,205,107
Newport	£4,317,037	£4,249,432	£2,669,121	£972,169	£194,205	£165,955	£714,004	£2,659,826
Wales	£100,306,547	£97,522,519	£55,835,362	£19,999,342	£3,912,641	£2,273,209	£18,095,659	£59,667,070

Summary (1) Medical, Surgical and Other hospital In-patient and Day-patient Allocations excluding paediatrics and psychiatrics – based upon 13 health need indicators (continued)

UA Name	Diabetes	Varicose Veins	Hearing impairment	Dental health	Food Poisoning	Total Needs Based Allocation for 13 Health Indicators	Total Allocation adjusted to 98-99 control total
Isle of Anglesey	£127,678	£60,184	£6,705	£99,572	£3,709	£8,716,894	£16,166,356
Gwynedd	£301,119	£115,747	£10,582	£152,339	£6,381	£14,856,237	£27,552,387
Conwy	£310,459	£124,151	£10,633	£201,307	£7,108	£15,819,708	£29,339,240
Denbighshire	£208,899	£86,047	£8,275	£153,465	£5,846	£12,026,826	£22,304,960
Flintshire	£314,056	£128,712	£11,832	£210,056	£7,656	£16,836,362	£31,224,727
Wrexham	£269,311	£112,316	£15,729	£203,087	£6,239	£14,927,365	£27,684,300
Powys	£279,132	£127,262	£9,994	£203,541	£2,492	£14,690,954	£27,245,852
Ceredigion	£95,507	£64,597	£5,582	£113,805	£1,577	£8,348,054	£15,482,306
Pembrokeshire	£264,714	£110,796	£10,193	£192,753	£4,063	£14,340,682	£26,596,237
Carmarthenshire	£480,014	£157,518	£19,893	£318,545	£3,136	£24,133,733	£44,758,436
Swansea	£613,027	£216,107	£23,945	£378,295	£13,013	£29,568,453	£54,837,671
Neath Port Talbot	£460,986	£147,249	£17,559	£266,999	£5,524	£19,474,977	£36,118,304
Bridgend	£269,336	£117,041	£15,190	£212,849	£6,040	£16,542,487	£30,679,707
Vale of Glamorgan	£183,301	£96,972	£10,765	£163,255	£9,349	£13,635,959	£25,289,259
Cardiff	£645,716	£237,203	£28,776	£394,184	£22,085	£36,056,397	£66,870,217
Rhondda, Cynon, Taff	£693,727	£208,495	£30,118	£422,784	£9,201	£32,901,420	£61,018,995
Merthyr Tydfil	£159,092	£55,412	£8,959	£105,063	£2,376	£8,326,584	£15,442,488
Caerphilly	£491,932	£162,532	£24,760	£305,851	£8,860	£22,640,108	£41,988,358
Blaenau Gwent	£272,286	£71,902	£10,305	£140,808	£1,861	£10,518,157	£19,506,981
Torfaen	£266,167	£89,320	£11,186	£162,061	£3,825	£12,671,916	£23,501,343
Monmouthshire	£118,886	£88,605	£7,945	£121,483	£4,159	£8,996,364	£16,684,662
Newport	£276,533	£114,753	£13,432	£219,242	£5,840	£16,571,550	£30,733,607
Wales	£7,101,878	£2,692,921	£312,357	£4,741,344	£140,338	£372,601,187	£691,026,391

Summary (2) Children's Health, Maternity, Psychiatric and A&E Costs

UA Name	A & E Total	Total Children's Health Costs	Total Maternity Costs	Total Psychiatric Allocation	Outpatient Allocations (Medical, Surgical & Other)	Total (Summary 2)
Isle of Anglesey	£899,263	£1,851,860	£1,540,466	£4,016,480	£3,653,100	£11,961,169
Gwynedd	£1,881,303	£3,230,161	£2,672,548	£7,937,536	£6,170,649	£21,892,197
Conwy	£2,022,401	£2,794,001	£2,359,553	£8,907,990	£6,750,858	£22,834,803
Denbighshire	£1,159,843	£2,433,289	£2,026,354	£5,507,337	£5,184,515	£16,311,338
Flintshire	£2,435,473	£4,105,169	£3,516,807	£9,444,688	£7,617,471	£27,119,608
Wrexham	£1,829,827	£3,588,472	£2,949,441	£8,692,287	£7,179,159	£24,239,186
Powys	£1,508,758	£3,364,234	£2,633,797	£8,672,679	£6,583,008	£22,762,476
Ceredigion	£816,173	£1,743,267	£1,303,319	£5,493,248	£3,779,432	£13,135,439
Pembrokeshire	£1,590,849	£3,264,535	£2,567,223	£8,183,866	£6,425,558	£22,032,031
Carmarthenshire	£3,103,286	£4,531,568	£3,622,795	£14,078,371	£10,478,538	£35,814,558
Swansea	£3,532,593	£6,139,865	£5,067,210	£18,852,933	£13,470,832	£47,063,433
Neath Port Talbot	£2,316,785	£3,990,951	£3,059,073	£12,822,057	£9,425,663	£31,614,529
Bridgend	£1,898,561	£3,783,087	£3,188,908	£10,213,377	£7,833,540	£26,917,473
Vale of Glamorgan	£1,743,405	£3,480,800	£2,885,518	£6,894,839	£6,173,336	£21,177,898
Cardiff	£4,463,108	£9,351,251	£8,103,760	£23,961,358	£16,362,399	£62,241,876
Rhondda, Cynon, Taff	£4,320,989	£6,969,712	£5,759,774	£21,978,672	£15,334,177	£54,363,324
Merthyr Tydfil	£1,082,502	£1,833,122	£1,499,396	£6,110,761	£3,905,940	£14,431,721
Caerphilly	£2,831,218	£5,387,574	£4,335,232	£16,442,359	£11,178,767	£40,175,150
Blaenau Gwent	£1,217,729	£2,339,991	£1,731,244	£7,652,914	£5,117,033	£18,058,911
Torfaen	£1,725,428	£2,886,552	£2,347,630	£9,227,639	£5,622,974	£21,810,223
Monmouthshire	£915,230	£2,389,145	£1,797,155	£4,622,097	£4,381,527	£14,105,154
Newport	£2,020,032	£4,275,488	£3,605,241	£10,950,177	£7,920,396	£28,771,334
Wales	£45,314,758	£83,584,614	£68,572,443	£230,663,665	£170,548,870	£598,684,350

Resource Allocation: Children's Health Maternity, Psychiatric, A&E and Outpatients

Summary (3) GP, Community Nursing and Chiropody

Resource Allocation: notional GMS, Community Nursing and Chiropody

UA Name		Total Community	Total Chiropody	Total Summary 3
	Total GMS allocation	Nurse Allocation	Anocation	
Isle of Anglesey	£3,936,208	£1,270,306	£144,623	£5,351,137
Gwynedd	£6,789,420	£2,144,708	£244,700	£9,178,828
Conwy	£7,414,572	£2,338,350	£267,968	£10,020,890
Denbighshire	£5,575,410	£1,804,282	£206,373	£7,586,065
Flintshire	£8,424,861	£2,638,630	£299,876	£11,363,367
Wrexham	£7,798,858	£2,496,691	£282,997	£10,578,546
Powys	£7,138,658	£2,286,983	£262,191	£9,687,832
Ceredigion	£4,123,668	£1,309,982	£148,209	£5,581,859
Pembrokeshire	£7,009,582	£2,229,846	£256,211	£9,495,639
Carmarthenshire	£11,511,956	£3,648,557	£420,851	£15,581,364
Swansea	£14,749,173	£4,684,690	£533,374	£19,967,237
Neath Port Talbot	£10,284,422	£3,272,294	£375,628	£13,932,344
Bridgend	£8,532,037	£2,731,317	£309,320	£11,572,674
Vale of Glamorgan	£6,695,806	£2,151,889	£241,605	£9,089,300
Cardiff	£18,113,943	£5,726,169	£637,082	£24,477,194
Rhondda, Cynon, Taff	£16,909,468	£5,343,548	£610,474	£22,863,490
Merthyr Tydfil	£4,336,723	£1,364,154	£156,379	£5,857,256
Caerphilly	£12,332,251	£3,888,593	£445,234	£16,666,078
Blaenau Gwent	£5,640,124	£1,783,596	£204,614	£7,628,334
Torfaen	£6,304,093	£1,973,678	£224,658	£8,502,429
Monmouthshire	£4,645,291	£1,521,798	£172,339	£6,339,428
Newport	£8,667,477	£2,743,105	£309,908	£11,720,490
Wales	£186,934,000	£59,353,168	£6,754,612	£253,041,780

1). Hospital In-patient and day-patient cost allocation for Heart & Circulatory Disease

Heart Disease Cost

Disease Area	Total Wales (Activity)	Total Wales (Cost)	Outside Wales (Activity)	Outside Wales (Cost)	Total Cost	Average cost per activity (In & Outside Wales)
Heart & Circulatory Disease	76737	£98,532,532	1410	£1,774,015	£100,306,547	£1,284

Heart Disease Resource Allocation

UA Name	Heart Number	Heart rate	% of Welsh Total	Needs Based Cost	Cost adjusted to control total
Isle of Anglesey	143	21	2	£184,101	£2,419,180
Gwynedd	226	19	4	£290,474	£3,816,977
Conwy	246	21	4	£315,246	£4,142,492
Denbighshire	175	19	3	£224,496	£2,949,993
Flintshire	272	18	5	£348,965	£4,585,580
Wrexham	244	19	4	£313,325	£4,117,246
Powys	245	19	4	£314,476	£4,132,372
Ceredigion	139	18	2	£178,432	£2,344,693
Pembrokeshire	246	21	4	£315,872	£4,150,718
Carmarthenshire	389	22	7	£499,094	£6,558,350
Swansea	435	18	7	£558,963	£7,345,055
Neath Port Talbot	316	22	5	£405,479	£5,328,206
Bridgend	285	21	5	£365,305	£4,800,296
Vale of Glamorgan	212	18	4	£272,193	£3,576,750
Cardiff	559	17	9	£717,068	£9,422,635
Rhondda, Cynon, Taff	521	21	9	£669,123	£8,792,618
Merthyr Tydfil	127	23	2	£163,497	£2,148,429
Caerphilly	379	23	6	£487,009	£6,399,547
Blaenau Gwent	177	24	3	£226,968	£2,982,475
Torfaen	201	22	3	£257,528	£3,384,055
Monmouthshire	154	17	3	£197,241	£2,591,842
Newport	256	19	4	£328,529	£4,317,037
Wales	5947	20	100	£7,633,384	£100,306,547

2) Hospital In-patient and day-patient cost allocation for Cancer

<i>Cancer costs</i> Disease Area	Total Wales (Activity)	Total Wales (Cost)	Outside Wales (Activity)	Outside Wales (Cost)	Total Cost	Average cost per activity (In & Outside Wales)
2. Cancer Total	96,063	£96,542,846	958	£979,673	£97,522,519	£1,005

Cancer Resource Allocation

UA Name	All Malignancies 95-97 average number	Cancer rate per 1000	% of Welsh Total	Needs Based Cost	Cost adjusted to control total
Isle of Anglesey	385	6	3	£387,325	£2,503,743
Gwynedd	668	6	4	£671,118	£4,338,233
Conwy	724	6	5	£727,742	£4,704,264
Denbighshire	586	6	4	£589,029	£3,807,595
Flintshire	658	4	4	£661,066	£4,273,257
Wrexham	626	5	4	£629,571	£4,069,665
Powys	662	5	4	£665,087	£4,299,247
Ceredigion	392	6	3	£393,691	£2,544,894
Pembrokeshire	627	6	4	£630,241	£4,073,997
Carmarthenshire	973	6	6	£977,695	£6,320,002
Swansea	1301	6	9	£1,308,060	£8,455,547
Neath Port Talbot	748	5	5	£751,867	£4,860,207
Bridgend	642	5	4	£645,654	£4,173,627
Vale of Glamorgan	563	5	4	£566,245	£3,660,316
Cardiff	1357	4	9	£1,364,350	£8,819,413
Rhondda, Cynon, Taff	1191	5	8	£1,196,821	£7,736,479
Merthyr Tydfil	296	5	2	£297,865	£1,925,456
Caerphilly	760	4	5	£763,929	£4,938,178
Blaenau Gwent	369	5	2	£370,572	£2,395,450
Torfaen	440	5	3	£442,274	£2,858,945
Monmouthshire	387	4	3	£389,000	£2,514,572
Newport	654	5	4	£657,381	£4,249,432
Wales	15009	5	100	£15,086,584	£97,522,519

3). Hospital In-patient and day-patient cost allocation for Respiratory Disease

Respiratory Illness Costs

Disease Area	Total Wales (Activity)	Total Wales (Cost)	Outside Wales (Activity)	Outside Wales (Cost)	Total Cost	Average cost per activity
						Outside Wales)
3. Respiratory Illness Total	56,173	£54,849,642	1,010	£985,720	£55,835,362	£976

Respiratory Illness Resource Allocation

UA Name	Respiratory Disease	Respiratory	% of Welsh Total	Needs Based Cost	Cost adjusted to
Isle of Anglesev	145	21	2	£141.150	£1.218.694
Gwvnedd	246	20	4	£240.199	£2.073.895
Conwv	238	20	4	£232,541	£2.007.776
Denbighshire	184	20	3	£180,056	£1,554,612
Flintshire	281	19	4	£274,645	£2,371,303
Wrexham	262	21	4	£255,818	£2,208,743
Powys	234	18	4	£228,495	£1,972,839
Ceredigion	150	20	2	£145,994	£1,260,517
Pembrokeshire	226	20	3	£220,543	£1,904,178
Carmarthenshire	386	22	6	£377,070	£3,255,639
Swansea	532	22	8	£519,504	£4,485,422
Neath Port Talbot	383	27	6	£374,327	£3,231,964
Bridgend	316	24	5	£308,579	£2,664,286
Vale of Glamorgan	227	19	3	£222,134	£1,917,917
Cardiff	689	21	10	£672,345	£5,805,060
Rhondda, Cynon, Taff	607	25	9	£592,365	£5,114,515
Merthyr Tydfil	162	29	2	£157,894	£1,363,263
Caerphilly	461	27	7	£450,480	£3,889,470
Blaenau Gwent	199	27	3	£194,514	£1,679,445
Torfaen	212	23	3	£207,208	£1,789,048
Monmouthshire	166	19	3	£161,877	£1,397,655
Newport	317	23	5	£309,139	£2,669,121
Wales	6623	22	100	£6,466,876	£55,835,362

4). Hospital In-patient and day-patient cost allocation for Mental Illness

Mental Illness Costs

Disease Area	Total Wales (Activity)	Total Wales (Cost)	Outside Wales (Activity)	Outside Wales (Cost)	Total Cost	Average cost per activity (In & Outside Wales)	
4. Mental Illness Total	15,576	£39,011,868	218	£460,542	£39,472,410	£2,499	

Mental Illness Resource Allocation

UA Name	Mental Illness Number	Mental Illness rate	% of Welsh Total	Needs - based cost	Cost adjusted to control total
Isle of Anglesey	63	9	2	£157,052	£636,554
Gwynedd	116	10	3	£289,382	£1,172,910
Conwy	146	12	4	£364,478	£1,477,286
Denbighshire	105	11	3	£262,517	£1,064,022
Flintshire	161	11	4	£402,788	£1,632,560
Wrexham	156	12	4	£390,093	£1,581,106
Powys	127	10	3	£316,675	£1,283,531
Ceredigion	89	12	2	£223,612	£906,334
Pembrokeshire	143	12	4	£358,602	£1,453,470
Carmarthenshire	229	13	6	£572,050	£2,318,608
Swansea	303	13	8	£757,768	£3,071,351
Neath Port Talbot	201	14	5	£502,085	£2,035,026
Bridgend	166	12	4	£414,831	£1,681,373
Vale of Glamorgan	120	10	3	£299,143	£1,212,471
Cardiff	429	13	11	£1,073,150	£4,349,643
Rhondda, Cynon, Taff	373	15	10	£932,524	£3,779,665
Merthyr Tydfil	116	21	3	£289,510	£1,173,427
Caerphilly	302	18	8	£754,023	£3,056,172
Blaenau Gwent	132	18	3	£330,892	£1,341,157
Torfaen	161	18	4	£403,126	£1,633,932
Monmouthshire	70	8	2	£175,930	£713,072
Newport	187	14	5	£468,460	£1,898,741
Wales	3897	13	100	£9,738,692	£39,472,410

5) Hospital In-patient and day-patient cost allocation for Arthritis

Arthritis costs

Disease Area	Total Wales (Activity)	Total Wales (Cost)	Outside Wales (Activity)	Outside Wales (Cost)	Total Cost	Average cost per activity (In & Outside Wales)
7. Arthritis Total	11,893	£19,749,412	103	£249,930	£19,999,342	£1,667

Arthritis Resource Allocation

UA Name			% of Welsh		Cost adjusted to
	Arthritis Number	Arthritis rate	Total	Needs Based Cost	control total
Isle of Anglesey	146	22	2	£242,899	£402,677
Gwynedd	271	22	4	£451,536	£748,555
Conwy	278	24	4	£464,010	£769,234
Denbighshire	228	24	3	£379,671	£629,417
Flintshire	323	22	4	£538,381	£892,526
Wrexham	296	23	4	£494,208	£819,297
Powys	254	20	4	£423,386	£701,887
Ceredigion	153	20	2	£255,314	£423,258
Pembrokeshire	266	23	4	£444,154	£736,318
Carmarthenshire	438	25	6	£729,978	£1,210,155
Swansea	592	25	8	£987,189	£1,636,558
Neath Port Talbot	401	28	6	£668,420	£1,108,105
Bridgend	329	25	5	£548,223	£908,842
Vale of Glamorgan	262	22	4	£437,118	£724,652
Cardiff	666	21	9	£1,110,238	£1,840,550
Rhondda, Cynon, Taff	682	28	9	£1,137,298	£1,885,408
Merthyr Tydfil	180	32	2	£299,578	£496,640
Caerphilly	500	30	7	£833,820	£1,382,304
Blaenau Gwent	220	30	3	£366,127	£606,965
Torfaen	223	25	3	£370,976	£615,002
Monmouthshire	177	20	2	£294,862	£488,822
Newport	352	26	5	£586,423	£972,169
Wales	7236	24	100	£12,063,806	£19,999,342

6). Hospital In-patient and day-patient cost allocation for Diabetes

Diabetes costs

Disease Area	Total Wales (Activity)	Total Wales (Cost)	Outside Wales (Activity)	Outside Wales (Cost)	Total Cost	Average cost per activity (In & Outside Wales)
5. Diabetes Total	7,460	£6,969,481	125	£132,398	£7,101,878	£936

Diabetes Resource Allocation

UA Name	Diabetes number	Diabetes rate	% of Welsh Total	Needs Based Cost	Cost adjusted to control total
Isle of Anglesey	19	3	2	£17,782	£127,678
Gwynedd	45	4	4	£41,937	£301,119
Conwy	46	4	4	£43,238	£310,459
Denbighshire	31	3	3	£29,094	£208,899
Flintshire	47	3	4	£43,739	£314,056
Wrexham	40	3	4	£37,507	£269,311
Powys	42	3	4	£38,875	£279,132
Ceredigion	14	2	1	£13,301	£95,507
Pembrokeshire	39	3	4	£36,867	£264,714
Carmarthenshire	71	4	7	£66,852	£480,014
Swansea	91	4	9	£85,377	£613,027
Neath Port Talbot	69	5	6	£64,202	£460,986
Bridgend	40	3	4	£37,511	£269,336
Vale of Glamorgan	27	2	3	£25,529	£183,301
Cardiff	96	3	9	£89,930	£645,716
Rhondda, Cynon, Taff	103	4	10	£96,616	£693,727
Merthyr Tydfil	24	4	2	£22,157	£159,092
Caerphilly	73	4	7	£68,512	£491,932
Blaenau Gwent	41	5	4	£37,922	£272,286
Torfaen	40	4	4	£37,070	£266,167
Monmouthshire	18	2	2	£16,557	£118,886
Newport	41	3	4	£38,513	£276,533
Wales	1056	4	100	£989,089	£7,101,878

7) Hospital In-patient and day-patient cost allocation for Back Pain

Back Pain costs

Disease Area	Total Wales (Activity)	Total Wales (Cost)	Outside Wales (Activity)	Outside Wales (Cost)	Total Cost	Average cost per activity (In & Outside Wales)
6. Back Pain Total	6,399	£3,815,240	111	£97,401	£3,912,641	£601

Back Pain Resource Allocation

UA Name	Back Pain number	Back pain rate	% of Welsh Total	Needs Based Cost	Cost adjusted to control total
Isle of Anglesey	189	28	2	£113,709	£83,965
Gwynedd	322	26	4	£193,382	£142,797
Conwy	341	29	4	£204,793	£151,223
Denbighshire	277	30	3	£166,192	£122,719
Flintshire	432	29	5	£259,393	£191,540
Wrexham	361	28	4	£217,199	£160,384
Powys	369	28	4	£221,718	£163,721
Ceredigion	213	28	2	£128,006	£94,522
Pembrokeshire	329	29	4	£197,690	£145,978
Carmarthenshire	526	30	6	£315,874	£233,247
Swansea	702	30	8	£421,652	£311,355
Neath Port Talbot	502	35	6	£301,968	£222,978
Bridgend	405	30	5	£243,283	£179,644
Vale of Glamorgan	341	28	4	£205,058	£151,418
Cardiff	813	25	9	£488,900	£361,012
Rhondda, Cynon, Taff	771	32	9	£463,582	£342,317
Merthyr Tydfil	189	34	2	£113,373	£83,717
Caerphilly	533	32	6	£320,254	£236,481
Blaenau Gwent	257	35	3	£154,690	£114,225
Torfaen	276	30	3	£165,733	£122,380
Monmouthshire	232	26	3	£139,235	£102,813
Newport	438	32	5	£263,001	£194,205
Wales	8816	30	100	£5,298,683	£3,912,641

8). Hospital In-patient and day-patient cost allocation for Epilepsy

Epilepsy costs

Disease Area	Total Wales (Activity)	Total Wales (Cost)	Outside Wales (Activity)	Outside Wales (Cost)	Total Cost	Average cost per activity (In & Outside Wales)
10. Epilepsy Total	3,424	£2,205,540	101	£67,670	£2,273,209	£645

Epilepsy Resource Allocation

UA Name	Epilepsy number	Epilepsy rate	% of Welsh Total	Needs Based Cost	Cost adjusted to control total
Isle of Anglesey	6	1	3	£4,179	£57,728
Gwynedd	4	0	1	£2,430	£33,576
Conwy	10	1	4	£6,485	£89,591
Denbighshire	9	1	3	£5,538	£76,509
Flintshire	11	1	4	£7,351	£101,549
Wrexham	13	1	5	£8,309	£114,788
Powys	12	1	5	£7,925	£109,480
Ceredigion	6	1	2	£3,828	£52,879
Pembrokeshire	6	1	2	£4,090	£56,510
Carmarthenshire	11	1	4	£6,944	£95,928
Swansea	15	1	6	£9,872	£136,384
Neath Port Talbot	14	1	6	£9,226	£127,463
Bridgend	8	1	3	£5,319	£73,483
Vale of Glamorgan	7	1	3	£4,205	£58,091
Cardiff	30	1	12	£19,369	£267,581
Rhondda, Cynon, Taff	27	1	11	£17,331	£239,434
Merthyr Tydfil	6	1	2	£4,090	£56,507
Caerphilly	13	1	5	£8,255	£114,045
Blaenau Gwent	11	1	4	£6,978	£96,398
Torfaen	10	1	4	£6,173	£85,284
Monmouthshire	7	1	3	£4,636	£64,046
Newport	19	1	7	£12,012	£165,955
Wales	255	1	100	£164,544	£2,273,209

9). Hospital In-patient and day-patient cost allocation for Stroke

Stroke costs

			Outside			Average cost per activity (In &
Disease Area	Total Wales (Activity)	Total Wales (Cost)	Wales (Activity)	Outside Wales (Cost)	Total Cost	Outside Wales)
9. Stroke Total	9,736	£17,650,813	251	£444,845	£18,095,659	£1,812

Stroke Resource Allocation

UA Name	Stroke number	Stroke rate	% of Welsh Total	Needs Based Cost	Cost adjusted to control total
Isle of Anglesey	11	2	3	£19,200	£548,977
Gwynedd	12	1	4	£22,344	£638,880
Conwy	12	1	4	£22,332	£638,525
Denbighshire	17	2	5	£31,345	£896,255
Flintshire	10	1	3	£18,936	£541,447
Wrexham	8	1	2	£14,730	£421,180
Powys	14	1	4	£24,564	£702,366
Ceredigion	5	1	2	£9,497	£271,547
Pembrokeshire	11	1	3	£20,836	£595,753
Carmarthenshire	27	2	8	£48,793	£1,395,134
Swansea	25	1	7	£45,546	£1,302,292
Neath Port Talbot	12	1	4	£22,634	£647,167
Bridgend	12	1	3	£21,753	£621,970
Vale of Glamorgan	15	1	4	£27,545	£787,588
Cardiff	45	1	13	£81,681	£2,335,496
Rhondda, Cynon, Taff	34	1	10	£60,741	£1,736,769
Merthyr Tydfil	10	2	3	£17,358	£496,314
Caerphilly	18	1	5	£33,512	£958,213
Blaenau Gwent	10	1	3	£18,978	£542,624
Torfaen	20	2	6	£35,419	£1,012,729
Monmouthshire	6	1	2	£10,157	£290,427
Newport	14	1	4	£24,971	£714,004
Wales	349	1	100	£632,875	£18,095,659

10) Hospital In-patient and day-patient cost allocation for Varicose Veins

Varicose Veins costs

			Outside			Average cost per activity (In &
Disease Area	Total Wales (Activity)	Total Wales (Cost)	Wales (Activity)	Outside Wales (Cost)	Total Cost	Outside Wales)
8. Varicose Veins Total	2,576	£2,670,893	26	£22,028	£2,692,921	£1,035

Varicose Veins Resource Allocation

UA Name	Varicose Veins number	Varicose Veins rate	% of Welsh Total	Needs Based Cost	Cost adjusted to control total
Isle of Anglesey	70	10	2	£72,656	£60,184
Gwynedd	135	11	4	£139,733	£115,747
Conwy	145	12	5	£149,879	£124,151
Denbighshire	100	11	3	£103,879	£86,047
Flintshire	150	10	5	£155,385	£128,712
Wrexham	131	10	4	£135,592	£112,316
Powys	148	11	5	£153,635	£127,262
Ceredigion	75	10	2	£77,984	£64,597
Pembrokeshire	129	11	4	£133,757	£110,796
Carmarthenshire	184	10	6	£190,161	£157,518
Swansea	252	11	8	£260,891	£216,107
Neath Port Talbot	172	12	5	£177,764	£147,249
Bridgend	137	10	4	£141,296	£117,041
Vale of Glamorgan	113	9	4	£117,068	£96,972
Cardiff	277	9	9	£286,360	£237,203
Rhondda, Cynon, Taff	243	10	8	£251,703	£208,495
Merthyr Tydfil	65	12	2	£66,895	£55,412
Caerphilly	190	11	6	£196,215	£162,532
Blaenau Gwent	84	11	3	£86,802	£71,902
Torfaen	104	11	3	£107,830	£89,320
Monmouthshire	103	12	3	£106,967	£88,605
Newport	134	10	4	£138,533	£114,753
Wales	3141	11	100	£3,250,985	£2,692,921

11). Hospital In-patient, day-patient and outpatient cost allocation for injury in accident

Injury in accident DRG costs

Disease Area	Total Wales (Activity)	Total Wales (Cost)	Outside Wales (Activity)	Outside Wales (Cost)	Total Cost	Average cost per activity (In & Outside Wales)
14. Injury in Accidents Total	44,099	£57,573,947	1,557	£2,093,122	£59,667,070	£1,307
TFR 2 1998-99	In Patient	Out Pa	tient	Total		
E. OTHER SPECIALTIES						
e. A & E	1,693,07	0 1,936	5,983	3,630,053		
Other Patient Groups						
Patients using accident and emer	gency services	41,684	1,705	41,684,705		
Total A & E				45,314,758		

Accident Resource Allocation

					Cost adjusted to
Accident number	Accident rate	% of Welsh Total	Needs Based Cost	Cost adjusted to DRG control total	TRF2 control total
43	6	2	£56,712	£1,184,082	£899,263
91	7	4	£118,644	£2,477,158	£1,881,303
98	8	4	£127,543	£2,662,945	£2,022,401
56	6	3	£73,145	£1,527,195	£1,159,843
118	8	5	£153,593	£3,206,848	£2,435,473
88	7	4	£115,398	£2,409,379	£1,829,827
73	6	3	£95,150	£1,986,619	£1,508,758
39	5	2	£51,472	£1,074,676	£816,173
77	7	4	£100,327	£2,094,711	£1,590,849
150	8	7	£195,709	£4,086,174	£3,103,286
170	7	8	£222,783	£4,651,453	£3,532,593
112	8	5	£146,108	£3,050,569	£2,316,785
92	7	4	£119,733	£2,499,882	£1,898,561
84	7	4	£109,948	£2,295,585	£1,743,405
215	7	10	£281,466	£5,876,686	£4,463,108
209	9	10	£272,503	£5,689,554	£4,320,989
52	9	2	£68,268	£1,425,358	£1,082,502
137	8	6	£178,551	£3,727,935	£2,831,218
59	8	3	£76,796	£1,603,414	£1,217,729
83	9	4	£108,814	£2,271,914	£1,725,428
44	5	2	£57,719	£1,205,107	£915,230
97	7	4	£127,393	£2,659,826	£2,020,032
2187	7	100	£2,857,774	£59,667,070	£45,314,758
	Accident number 43 91 98 56 118 88 73 39 77 150 170 112 92 84 215 209 52 137 59 83 44 97 2187	Accident numberAccident rate436917988566118888773639577715081707112892784721572099529137859883944597721877	Accident numberAccident rate% of Welsh Total436291749884566311885887473633952777415087170781128592748474209910529213786598383944452977421877100	Accident numberAccident rate% of Welsh TotalNeeds Based Cost4362£56,7129174£118,6449884£127,5435663£73,14511885£153,5938874£115,3987363£95,1503952£51,4727774£100,32715087£195,70917078£222,78311285£146,1089274£109,948215710£281,466209910£272,5035292£68,26813786£178,5515983£76,7968394£108,8144452£57,7199774£127,39321877100£2,857,774	Accident number Accident rate Yofal Needs Based Cost DRG control total 43 6 2 £56,712 £1,184,082 91 7 4 £118,644 £2,477,158 98 8 4 £127,543 £2,662,945 56 6 3 £73,145 £1,527,195 118 8 5 £153,593 £3,206,848 88 7 4 £115,398 £2,409,379 73 6 3 £95,150 £1,986,619 39 5 2 £51,472 £1,074,676 77 7 4 £100,327 £2,094,711 150 8 7 £195,709 £4,086,174 170 7 4 £100,327 £2,094,711 150 8 7 £1,986,619 £3,556 171 7 4 £100,327 £2,094,711 150 8 7 £1,986,619 £3,556 171

12) Hospital In-patient and day-patient cost allocation for Hearing Impairment

Hearing Impairment costs

			Outside			Average cost per activity (In &
Disease Area	Total Wales (Activity)	Total Wales (Cost)	Wales (Activity)	Outside Wales (Cost)	Total Cost	Outside Wales)
17. Hearing Impairment Total	447	£299,085	18	£13,272	£312,357	£672

Hearing Impairment Resource Allocation

UA Name	Hearing impairment number	Hearing impairment rate	% of Welsh Total	Needs Based Cost	Cost adjusted to control total
Isle of Anglesey	80	12	2	£53,506	£6,705
Gwynedd	126	10	3	£84,442	£10,582
Conwy	126	11	3	£84,850	£10,633
Denbighshire	98	11	3	£66,034	£8,275
Flintshire	141	9	4	£94,420	£11,832
Wrexham	187	15	5	£125,512	£15,729
Powys	119	9	3	£79,753	£9,994
Ceredigion	66	9	2	£44,540	£5,582
Pembrokeshire	121	11	3	£81,339	£10,193
Carmarthenshire	236	13	6	£158,740	£19,893
Swansea	284	12	8	£191,078	£23,945
Neath Port Talbot	209	15	6	£140,115	£17,559
Bridgend	180	14	5	£121,215	£15,190
Vale of Glamorgan	128	11	3	£85,906	£10,765
Cardiff	342	11	9	£229,629	£28,776
Rhondda, Cynon, Taff	358	15	10	£240,335	£30,118
Merthyr Tydfil	106	19	3	£71,492	£8,959
Caerphilly	294	17	8	£197,579	£24,760
Blaenau Gwent	122	17	3	£82,230	£10,305
Torfaen	133	15	4	£89,259	£11,186
Monmouthshire	94	11	3	£63,399	£7,945
Newport	160	12	4	£107,185	£13,432
Wales	3711	12	100	£2,492,558	£312,357

13) Hospital In-patient and day-patient cost allocation for Dental Health

Dental health costs

			Outside			Average cost per activity (In &
Disease Area	Total Wales (Activity)	Total Wales (Cost)	Wales (Activity)	Outside Wales (Cost)	Total Cost	Outside Wales)
15. Dental Health Total	10,473	£4,671,341	157	£70,002	£4,741,344	£446

Dental Health Resource Allocation

UA Name	Dental Health number	Dental Health rate	% of Welsh Total	Needs Based Cost	Cost adjusted to control total
Isle of Anglesey	185	27	2	£82,695	£99,572
Gwynedd	284	23	3	£126,518	£152,339
Conwy	375	32	4	£167,185	£201,307
Denbighshire	286	31	3	£127,453	£153,465
Flintshire	391	26	4	£174,452	£210,056
Wrexham	378	30	4	£168,664	£203,087
Powys	379	29	4	£169,041	£203,541
Ceredigion	212	28	2	£94,515	£113,805
Pembrokeshire	359	31	4	£160,081	£192,753
Carmarthenshire	593	34	7	£264,552	£318,545
Swansea	704	30	8	£314,175	£378,295
Neath Port Talbot	497	35	6	£221,743	£266,999
Bridgend	396	30	4	£176,772	£212,849
Vale of Glamorgan	304	25	3	£135,583	£163,255
Cardiff	734	23	8	£327,370	£394,184
Rhondda, Cynon, Taff	787	32	9	£351,123	£422,784
Merthyr Tydfil	196	35	2	£87,255	£105,063
Caerphilly	569	34	6	£254,009	£305,851
Blaenau Gwent	262	36	3	£116,941	£140,808
Torfaen	302	33	3	£134,592	£162,061
Monmouthshire	226	25	3	£100,892	£121,483
Newport	408	30	5	£182,081	£219,242
Wales	8828	30	100	£3,937,692	£4,741,344

14) Hospital In-patient and day-patient cost allocation for Food Poisoning

Food Poisoning costs

Disease Area	Total Wales (Activity)	Total Wales (Cost)	Outside Wales (Activity)	Outside Wales (Cost)	Total Cost	Average cost per activity (In & Outside Wales)
13. Food Poisoning Total	176	£129,375	11	£10,963	£140,338	£750

Food Poisoning Resource Allocation

UA Name	Food Poisoning	Food Poisoning			
	number 97-2000	1000	% of Welsh Total	Needs Based Cos	Cost adjusted to t control total
Isle of Anglesey	144	2	3	£108,068	£3,709
Gwynedd	248	8	5	£185,929	£6,381
Conwy	276	10	5	£207,130	£7,108
Denbighshire	227	10	4	£170,357	£5,846
Flintshire	297	8	5	£223,078	£7,656
Wrexham	242	8	4	£181,802	£6,239
Powys	97	3	2	£72,608	£2,492
Ceredigion	61	3	1	£45,966	£1,577
Pembrokeshire	158	6	3	£118,387	£4,063
Carmarthenshire	122	3	2	£91,370	£3,136
Swansea	505	9	9	£379,176	£13,013
Neath Port Talbot	215	6	4	£160,976	£5,524
Bridgend	235	7	4	£175,985	£6,040
Vale of Glamorgan	363	12	7	£272,421	£9,349
Cardiff	858	11	16	£643,529	£22,085
Rhondda, Cynon, Taff	357	6	7	£268,106	£9,201
Merthyr Tydfil	92	6	2	£69,231	£2,376
Caerphilly	344	8	6	£258,162	£8,860
Blaenau Gwent	72	4	1	£54,222	£1,861
Torfaen	149	7	3	£111,445	£3,825
Monmouthshire	162	7	3	£121,201	£4,159
Newport	227	7	4	£170,169	£5,840
Wales	5449	7	100	£4,089,317	£140,338

15) Hospital In-patient and day-patient additional cost allocation for Low Birth Weight and Normal Birth Weight Babies

Additional birth Costs

Health Condition	Total (Activity)	Total Cost	Average cost per activity
Paediatric cost of Normal Birth weight children	2,171	£3,779,948	£1,791
Paediatric cost of Low Birth weight children	432	£3,159,145	£7,320

Resource Allocation: Additional Birth Costs

UA Name	Average Births 1994- 1998	Births as a % of Welsh Total	Average LBW Number 1994- 1998	Average LBW 1994-1998 as a % of Wales total	Cost adjusted to control total: Normal Birth Weight	Cost adjusted to control total: Low Birth Weight
Isle of Anglesey	930	2	50	2	£85,456	£63,904
Gwynedd	1614	4	84	3	£148,583	£106,598
Conwy	1425	4	91	4	£129,538	£115,629
Denbighshire	1224	3	76	3	£111,448	£96,644
Flintshire	2124	5	115	5	£195,087	£145,944
Wrexham	1781	4	100	4	£163,216	£127,601
Powys	1590	4	83	3	£146,441	£104,888
Ceredigion	787	2	40	2	£72,563	£50,627
Pembrokeshire	1550	4	101	4	£140,773	£127,971
Carmarthenshire	2188	6	115	5	£201,298	£145,999
Swansea	3060	8	170	7	£280,638	£216,229
Neath Port Talbot	1847	5	119	5	£167,816	£151,539
Bridgend	1926	4	111	4	£176,201	£141,450
Vale of Glamorgan	1742	4	104	4	£159,163	£131,582
Cardiff	4893	11	325	13	£443,666	£413,131
Rhondda, Cynon, Taff	3478	8	221	9	£316,357	£280,289
Merthyr Tydfil	905	2	58	2	£82,271	£74,056
Caerphilly	2618	6	161	6	£238,597	£204,647
Blaenau Gwent	1045	2	77	3	£94,054	£97,787
Torfaen	1418	3	90	4	£128,927	£114,464
Monmouthshire	1085	3	57	2	£99,894	£71,956
Newport	2177	5	143	6	£197,522	£181,938
Wales	41407	100	2486	100	£3,779,948	£3,159,145

16) Hospital & Community Maternity cost allocation

Maternity Costs Source: NHS Trust annual accounts 1998-99 In-patients Out-patients Total £ £ **C. MATERNITY FUNCTION** £ £ a. Obstetrics 45,075,060 10,932,907 56,007,967 b. General practice 2,507,714 90,547 2,598,261 Sub-total 47,582,774 11,023,454 58,606,228 HEALTH PROGRAMME ANALYSIS Maternity services 9,966,215 9,966,215 **Total Maternity** 68,572,443

Resource Allocation: Maternity Costs

UA Name

	Average Births 1994-1998	Births as a % of Welsh Total	Hospital Maternity Costs	Community Maternity Costs	Total Maternity Costs
Isle of Anglesey	930	2	£1,316,577	£223,889	£1,540,466
Gwynedd	1614	4	£2,284,124	£388,424	£2,672,548
Conwy	1425	3	£2,016,619	£342,934	£2,359,553
Denbighshire	1224	3	£1,731,847	£294,507	£2,026,354
Flintshire	2124	5	£3,005,680	£511,127	£3,516,807
Wrexham	1781	4	£2,520,774	£428,667	£2,949,441
Powys	1590	4	£2,251,005	£382,792	£2,633,797
Ceredigion	787	2	£1,113,896	£189,422	£1,303,319
Pembrokeshire	1550	4	£2,194,107	£373,116	£2,567,223
Carmarthenshire	2188	5	£3,096,264	£526,532	£3,622,795
Swansea	3060	7	£4,330,749	£736,461	£5,067,210
Neath Port Talbot	1847	4	£2,614,472	£444,601	£3,059,073
Bridgend	1926	5	£2,725,437	£463,471	£3,188,908
Vale of Glamorgan	1742	4	£2,466,141	£419,377	£2,885,518
Cardiff	4893	12	£6,925,972	£1,177,788	£8,103,760
Rhondda, Cynon, Taff	3478	8	£4,922,657	£837,117	£5,759,774
Merthyr Tydfil	905	2	£1,281,476	£217,920	£1,499,396
Caerphilly	2618	6	£3,705,156	£630,076	£4,335,232
Blaenau Gwent	1045	3	£1,479,628	£251,616	£1,731,244
Torfaen	1418	3	£2,006,429	£341,201	£2,347,630
Monmouthshire	1085	3	£1,535,960	£261,196	£1,797,155
Newport	2177	5	£3,081,261	£523,980	£3,605,241
Wales	41407	100	£58,606,228	£9,966,215	£68,572,443

17) Psychiatric Hospital & Community cost allocation

Psychiatric costs

Source: NHS Trust annual accounts 1998-99

	In-patients	Out-patients	Total
D. PSYCHIATRIC SPECIALTIES	£	£	£
a. Mental handicap	37,036,256	903,781	37,940,037
b. Mental illness	59,003,877	6,193,075	65,196,952
c. Child and adolescent psychiatry	1,310,865	3,035,928	4,346,793
d. Forensic psychiatry	6,822,652	239,818	7,062,470
e. Psychotherapy	-	255,164	255,164
f. Old age psychiatry	52,745,522	1,037,698	53,783,221
Sub-total	156,919,172	11,665,464	168,584,636
Royal College Specialties and day care fun	ctions		
Mental handicap		913,882	
Mental illness			
- Alchoholism		146,072	
- General		12,014,289	
Child & adolescent psychiatry		1,726,574	
Old age psychiatry		8,339,791	
Sub-total		23,140,609	23,140,609
HEALTH PROGRAMME ANALYSIS			
Mental illness		26,331,479	
Mental handicap		12,606,941	
Sub-total		38,938,420	38,938,420
Total Mental Disability			51,460,860
Total Children			6,073,367
Total Mental Illness & Other			173,129,438
Total (all)			230,663,665

UA Name	Learning Disabilities 1999	Learning Disability rate per 1000	Learning Disability % of Welsh Total	Total Children with SEN (Jan 2000)	Children with SEN as a % of Welsh Total	Mental Illness
Isle of Anglesey	255	4	2	456	3	63
Gwynedd	593	5	5	908	5	116
Conwy	511	5	4	843	5	146
Denbighshire	141	2	1	709	4	105
Flintshire	460	3	4	1,033	6	161
Wrexham	332	3	3	1,050	6	156
Powys	657	5	5	862	5	127
Ceredigion	328	5	3	427	3	89
Pembrokeshire	380	3	3	635	4	143
Carmarthenshire	832	5	7	1,246	7	229
Swansea	1207	5	10	1,000	6	303
Neath Port Talbot	868	6	7	792	5	201
Bridgend	641	5	5	477	3	166
Vale of Glamorgan	332	3	3	545	3	120
Cardiff	1033	3	8	1,632	10	429
Rhondda, Cynon, Taff	1251	5	10	541	3	373
Merthyr Tydfil	209	4	2	263	2	116
Caerphilly	648	4	5	952	6	302
Blaenau Gwent	375	5	3	586	3	132
Torfaen	440	5	4	642	4	161
Monmouthshire	316	4	3	501	3	70
Newport	554	4	4	884	5	187
Wales	12363	4	100	16,984	100	3897

Resource Allocation: Psychiatric Specialties

17) Psychiatric Hospital & Community cost allocation

Resource Allocation: Psychiatric

UA Name	Mental Illness rate	% of Welsh Total	Mental Disability allocation	Child and adolescent psychiatry allocation	Mental Illness & Other Psychiatric Allocation	Total Psychiatric Allocation
Isle of Anglesey	9	2	£1,061,435	£163,063	£2,791,982	£4,016,480
Gwynedd	10	3	£2,468,356	£324,695	£5,144,485	£7,937,536
Conwy	12	4	£2,127,032	£301,451	£6,479,506	£8,907,990
Denbighshire	11	3	£586,911	£253,534	£4,666,892	£5,507,337
Flintshire	11	4	£1,914,745	£369,394	£7,160,549	£9,444,688
Wrexham	12	4	£1,381,947	£375,473	£6,934,867	£8,692,287
Powys	10	3	£2,734,756	£308,246	£5,629,678	£8,672,679
Ceredigion	12	2	£1,365,297	£152,692	£3,975,259	£5,493,248
Pembrokeshire	12	4	£1,581,746	£227,072	£6,375,048	£8,183,866
Carmarthenshire	13	6	£3,463,191	£445,561	£10,169,619	£14,078,371
Swansea	13	8	£5,024,125	£357,593	£13,471,214	£18,852,933
Neath Port Talbot	14	5	£3,613,041	£283,214	£8,925,802	£12,822,057
Bridgend	12	4	£2,668,156	£170,572	£7,374,649	£10,213,377
Vale of Glamorgan	10	3	£1,381,947	£194,888	£5,318,004	£6,894,839
Cardiff	13	11	£4,299,852	£583,592	£19,077,914	£23,961,358
Rhondda, Cynon, Taff	15	10	£5,207,275	£193,458	£16,577,939	£21,978,672
Merthyr Tydfil	21	3	£869,960	£94,047	£5,146,754	£6,110,761
Caerphilly	18	8	£2,697,293	£340,429	£13,404,637	£16,442,359
Blaenau Gwent	18	3	£1,560,934	£209,550	£5,882,431	£7,652,914
Torfaen	18	4	£1,831,495	£229,575	£7,166,568	£9,227,639
Monmouthshire	8	2	£1,315,347	£179,154	£3,127,596	£4,622,097
Newport	14	5	£2,306,019	£316,113	£8,328,045	£10,950,177
Wales	13	100	£51,460,860	£6,073,367	£173,129,438	£230,663,665

18) Children's Health Hospital & Community cost allocation

Children's Health Costs

Source: NHS Trust annual accounts 1998-99

	In-patients Out-p		Total
	£	£	
A. MEDICAL SPECIA	LTIES		
a Paediatrics	44 470 925	7 510 039	51 980 964
B. SURGICAL SPECIA	ALTIES	7,510,057	51,700,704
k. Paediatric surgery	3,022,327	154,408	3,176,735
Royal College Specialti	es and day care func	tions	
General medicine			
- Younger physically d	isabled		7,581
Paediatrics			389,545
HEALTH PROGRAM	ME ANALYSIS		
Paediatric community se	rvices		
- Assessment & develo	pment		14,658,552
- Vaccination and imm	unisation		2,558,918
- Dental			6,970,753
- Other professional ad	vice & support		3,841,566
Sub Total minus			

Dental, Disability &	
additional Birth costs	69,667,187
Total	83,584,614

18) Children's Health Hospital & Community cost allocation (Cont.)

Children's Health Information

UA Name	Total Population 1998 in Thousands	Children Under 16, 1998 in Thousands	Percentage children with dt > 0 (iesome decayed, missing o r filled teeth) 1998-99	Number of Children with some decayed and missing teeth 1998-99	Physical and profound multiple disabilities Jan 2000
Isle of Anglesey	65.4	13.4	4 27.1	3638	70
Gwynedd	117.5	22.9	34.4	7876	77
Conwy	111.9	20.4	4 21.8	4449	121
Denbighshire	90.5	17.9	20.3	3626	43
Flintshire	147.0	29.9	24.2	7250	57
Wrexham	125.2	25.3	3 35.5	8978	68
Powys	126.0	24	33.9	8128	84
Ceredigion	70.7	12.3	39.0	4791	35
Pembrokeshire	113.7	23.2	2 32.4	7520	83
Carmarthenshire	169.0	31.7	39.7	12570	126
Swansea	229.5	44.4	4 27.3	12111	135
Neath Port Talbot	138.8	27.9	38.7	10785	92
Bridgend	131.4	. 27	30.5	8224	54
Vale of Glamorgan	121.3	26	5 16.2	4200	90
Cardiff	320.9	69.4	4 15.4	10697	199
Rhondda, Cynon, Taff	240.4	50.2	26.9	13520	99
Merthyr Tydfil	57.0) 13	32.1	4167	33
Caerphilly	169.6	37.5	5 39.3	14736	90
Blaenau Gwent	72.0	15.5	5 56.3	8730	51
Torfaen	90.2	. 19.6	5 46.9	9190	57
Monmouthshire	86.3	16.9	37.7	6365	37
Newport	139.2	30.7	26.8	8 8228	96
Wales	2,933.3	599.1	29.4	176135	1797

18) Children's Health Hospital & Community cost allocation (Cont.)

Children's Health Resource Allocation

UA Name	Total Additional Non-maternity Hospital costs related to Birth	Dental cost allocation	Physical disability cost allocation	Other Children's health Costs	Total Children's Health Costs
Isle of Anglesey	£149,360	£143,967	£295	£1,558,238	£1,851,860
Gwynedd	£255,181	£311,697	£325	£2,662,959	£3,230,161
Conwy	£245,166	£176,082	£510	£2,372,243	£2,794,001
Denbighshire	£208,092	£143,489	£181	£2,081,527	£2,433,289
Flintshire	£341,031	£286,934	£240	£3,476,964	£4,105,169
Wrexham	£290,817	£355,322	£287	£2,942,046	£3,588,472
Powys	£251,329	£321,677	£354	£2,790,874	£3,364,234
Ceredigion	£123,190	£189,607	£148	£1,430,323	£1,743,267
Pembrokeshire	£268,744	£297,596	£350	£2,697,845	£3,264,535
Carmarthenshire	£347,297	£497,460	£532	£3,686,279	£4,531,568
Swansea	£496,867	£479,312	£570	£5,163,116	£6,139,865
Neath Port Talbot	£319,355	£426,817	£388	£3,244,391	£3,990,951
Bridgend	£317,651	£325,474	£228	£3,139,733	£3,783,087
Vale of Glamorgan	£290,745	£166,229	£380	£3,023,447	£3,480,800
Cardiff	£856,797	£423,338	£840	£8,070,277	£9,351,251
Rhondda, Cynon, Taff	£596,646	£535,071	£418	£5,837,578	£6,969,712
Merthyr Tydfil	£156,328	£164,932	£139	£1,511,723	£1,833,122
Caerphilly	£443,244	£583,210	£380	£4,360,740	£5,387,574
Blaenau Gwent	£191,842	£345,495	£215	£1,802,439	£2,339,991
Torfaen	£243,392	£363,706	£240	£2,279,214	£2,886,552
Monmouthshire	£171,849	£251,899	£156	£1,965,240	£2,389,145
Newport	£379,460	£325,630	£405	£3,569,993	£4,275,488
Wales	£6,939,093	£6,970,753	£7,581	£69,667,187	£83,584,614

19) Outpatient allocations for Medical, Surgical and Other specialities (not including Maternity and Psychiatric) – based on a volume measure from 13 Welsh Health Survey (1998) health conditions

Outpatient costs	
A. MEDICAL SPECIALTIES	Out-patients
	£
h Geriatrics	2 111 818
c Cardiology	1 171 348
d Dermatology	5 593 893
f Medical oncology	191 073
g Neurology	1 804 555
h. Rheumatology	3.961.060
i Gastroenterology	106 310
i Haematology	3 997 443
1 Thoracic medicine	1 301 003
m. Genito-urinary medicine	3.098.102
n Nephrology	467 310
o. Rehabilitation medicine	647.519
n Other medicine	24 157 468
Sub-total	48,608,902
	, ,
B. SURGICAL SPECIALTIES	
a. General surgery	14,222,355
b. Urology	3,917,337
c. Orthopaedics	22,107,394
d. ENT	8,207,704
e. Ophthalmology	10,559,921
f. Gynaecology	7,305,187
g. Dental specialities	7,678,627
h. Neuro-surgery	886,234
i. Plastic surgery	981,377
j. Cardiothoracic	521,473
Sub-total	76,387,608
E OTHER SPECIALTIES	
a. Conorol Proctico	2 076 102
h Dadiotherany	2,070,192
a. Dathological specialities and radiology	634,000
d. A postbation	1 082 600
d. Anaesthetics	1,082,009
Royal College Specialties and day care functions	
General Medicine	1,419,065
Geriatric	7,408,662
Other General	1,968,414
Health Programme Analysis	
Services to GPs under open access	24 432 224
	21,152,221

19) Outpatient allocations for Medical, Surgical and Other specialities (not including Maternity and Psychiatric) – based on a volume measure from 13 Welsh Health Survey (1998) health conditions. (Cont)

Percent of people attending hospital as an Out-patient during the past 12 months by health condition

Outpatients Attendance Rates
(%)
42
56
39
41
36
56
48
34
55
31
39
40
35

Out-patient Resource Allocation

UA Name	Total estimated Out- patient attendances during past 12 months	% of Welsh Total	Total Outpatient Allocation (Not including Maternity and Psychiatric)
Isle of Anglesey	456	2	£3,653,100
Gwynedd	771	4	£6,170,649
Conwy	843	4	£6,750,858
Denbighshire	648	3	£5,184,515
Flintshire	952	4	£7,617,471
Wrexham	897	4	£7,179,159
Powys	822	4	£6,583,008
Ceredigion	472	2	£3,779,432
Pembrokeshire	803	4	£6,425,558
Carmarthenshire	1309	6	£10,478,538
Swansea	1683	8	£13,470,832
Neath Port Talbot	1178	6	£9,425,663
Bridgend	979	5	£7,833,540
Vale of Glamorgan	771	4	£6,173,336
Cardiff	2044	10	£16,362,399
Rhondda, Cynon, Taff	1916	9	£15,334,177
Merthyr Tydfil	488	2	£3,905,940
Caerphilly	1397	7	£11,178,767
Blaenau Gwent	639	3	£5,117,033
Torfaen	702	3	£5,622,974
Monmouthshire	547	3	£4,381,527
Newport	989	5	£7,920,396
Wales	21306	100	£170,548,870

20) Community Nursing allocations – based on a volume measure from 13 Welsh Health Survey (1998) health conditions.

Nursing costsHEALTH PROGRAMME ANALYSISGeneral£- Nursing59,353,168

Percent of people receiving district nurse or health visitor service during the past 12 months by health condition

	District Nurse or Health Visitor Service Rates
Health Condition	(%)
Heart	15
Cancer	18
Respiratory	15
Arthritis	13
Back pain	12
Epilepsy	15
Stroke	35
Varicose veins	14
Diabetes	20
Food Poisoning	13
Hearing	15
Seeing	18
Teeth	13

Nursing Resource Allocation

	Total estimated District Nurse or Health Visitor service		Total Community Nurse Allocation
UA Name	during past 12 months	% of Welsh Total	
Isle of Anglesey	168	2	£1,270,306
Gwynedd	284	4	£2,144,708
Conwy	309	4	£2,338,350
Denbighshire	239	3	£1,804,282
Flintshire	349	4	£2,638,630
Wrexham	330	4	£2,496,691
Powys	303	4	£2,286,983
Ceredigion	173	2	£1,309,982
Pembrokeshire	295	4	£2,229,846
Carmarthenshire	483	6	£3,648,557
Swansea	620	8	£4,684,690
Neath Port Talbot	433	6	£3,272,294
Bridgend	361	5	£2,731,317
Vale of Glamorgan	285	4	£2,151,889
Cardiff	758	10	£5,726,169
Rhondda, Cynon, Taff	707	9	£5,343,548
Merthyr Tydfil	180	2	£1,364,154
Caerphilly	514	7	£3,888,593
Blaenau Gwent	236	3	£1,783,596

Torfaen	261	3	£1,973,678
Monmouthshire	201	3	£1,521,798
Newport	363	5	£2,743,105
Wales	7852	100	£59,353,168

21) Chiropody allocations – based on a volume measure from 13 Welsh Health Survey (1998) health conditions.

Chiropody costs

HEALTH PROGRAMME ANALYSIS			
General	£		
- Chiropody	6,754,612		

Percent of people receiving Chiropody service during the past 12 months by health condition

	Chiropody Service Rates
Health Condition	(%)
Heart	23
Cancer	20
Respiratory	16
Arthritis	22
Back pain	15
Epilepsy	15
Stroke	41
Varicose veins	20
Diabetes	46
Food Poisoning	10
Hearing	21
Seeing	23
Teeth	23

Chiropody Resource Allocation

	Total estimated Chiropody service during		Total Chiropody Allocation
UA Name	past 12 months	% of Welsh Total	
Isle of Anglesey	233	2	£144,623
Gwynedd	394	4	£244,700
Conwy	431	4	£267,968
Denbighshire	332	3	£206,373
Flintshire	483	4	£299,876
Wrexham	455	4	£282,997
Powys	422	4	£262,191
Ceredigion	239	2	£148,209
Pembrokeshire	412	4	£256,211
Carmarthenshire	677	6	£420,851
Swansea	858	8	£533,374
Neath Port Talbot	604	6	£375,628
Bridgend	498	5	£309,320

Vale of Glamorgan	389	4	£241,605
Cardiff	1025	9	£637,082
Rhondda, Cynon, Taff	982	9	£610,474
Merthyr Tydfil	252	2	£156,379
Caerphilly	716	7	£445,234
Blaenau Gwent	329	3	£204,614
Torfaen	362	3	£224,658
Monmouthshire	277	3	£172,339
Newport	499	5	£309,908
Wales	10870	100	£6,754,612

Unallocated NHS Expenditure from TRF 2

	In-patients	Out-patients	Total
	£	£	£
F. SUPRA DISTRICT SERVICES			
a. Renal dialysis (inc CAPD)	736,781	8,609,961	9,346,742
b. Renal transplant	2,229,276	-	2,229,276
c. Open heart surgery	-	-	-
Sub-total	2,966,057	8,609,961	11,576,018
G. SUPRA REGIONAL SERVICES			
Sub-total	5,378,319	11,854,071	17,232,390
Royal College Specialties and day care functions			
Other specialities			
- Drug abuse		669,897	
HEALTH PROGRAMME ANALYSIS			
		£	
General			
- Professional advice & support		2,067,740	
- Other paramedical		7,004,743	
- Screening		4,594,107	
- Home dialysis		1,190,090	
- Family planning		2,670,106	
Services for local authorities		107,005	
Health education and promotion		5,230,008	
Occupational therapy		1,478,882	
Palliative care		2,477,819	
Speech therapy		4,094,167	
Other services		31,686,008	

Total Unallocated

£92,078,980

Final NHS Resource Allocation for 1998-99 (TRF2 return)

UA Name					Total	Total Outpaitent	Total Community	Total	Total TRF2 Allocation
	Adult In-Patient and Day		Total Children's	Total Maternity	Psychiatric Allocation	Allocation (Not including maternaty	Nurse Allocation	Chiropody Allocation	
	Patient Allocation	A&E Total	Health Costs	Costs		and Psychiatric)			
Isle of Anglesey	£16,166,356	£899,263	£1,851,860	£1,540,466	£4,016,480	£3,653,100	£1,270,306	£144,623	£29,542,454
Gwynedd	£27,552,387	£1,881,303	£3,230,161	£2,672,548	£7,937,536	£6,170,649	£2,144,708	£244,700	£51,833,991
Conwy	£29,339,240	£2,022,401	£2,794,001	£2,359,553	£8,907,990	£6,750,858	£2,338,350	£267,968	£54,780,361
Denbighshire	£22,304,960	£1,159,843	£2,433,289	£2,026,354	£5,507,337	£5,184,515	£1,804,282	£206,373	£40,626,953
Flintshire	£31,224,727	£2,435,473	£4,105,169	£3,516,807	£9,444,688	£7,617,471	£2,638,630	£299,876	£61,282,841
Wrexham	£27,684,300	£1,829,827	£3,588,472	£2,949,441	£8,692,287	£7,179,159	£2,496,691	£282,997	£54,703,174
Powys	£27,245,852	£1,508,758	£3,364,234	£2,633,797	£8,672,679	£6,583,008	£2,286,983	£262,191	£52,557,501
Ceredigion	£15,482,306	£816,173	£1,743,267	£1,303,319	£5,493,248	£3,779,432	£1,309,982	£148,209	£30,075,936
Pembrokeshire	£26,596,237	£1,590,849	£3,264,535	£2,567,223	£8,183,866	£6,425,558	£2,229,846	£256,211	£51,114,325
Carmarthenshire	£44,758,436	£3,103,286	£4,531,568	£3,622,795	£14,078,371	£10,478,538	£3,648,557	£420,851	£84,642,402
Swansea	£54,837,671	£3,532,593	£6,139,865	£5,067,210	£18,852,933	£13,470,832	£4,684,690	£533,374	£107,119,168
Neath Port Talbot	£36,118,304	£2,316,785	£3,990,951	£3,059,073	£12,822,057	£9,425,663	£3,272,294	£375,628	£71,380,755
Bridgend	£30,679,707	£1,898,561	£3,783,087	£3,188,908	£10,213,377	£7,833,540	£2,731,317	£309,320	£60,637,817
Vale of Glamorgan	£25,289,259	£1,743,405	£3,480,800	£2,885,518	£6,894,839	£6,173,336	£2,151,889	£241,605	£48,860,650
Cardiff	£66,870,217	£4,463,108	£9,351,251	£8,103,760	£23,961,358	£16,362,399	£5,726,169	£637,082	£135,475,343
Rhondda, Cynon, Taff	£61,018,995	£4,320,989	£6,969,712	£5,759,774	£21,978,672	£15,334,177	£5,343,548	£610,474	£121,336,340
Merthyr Tydfil	£15,442,488	£1,082,502	£1,833,122	£1,499,396	£6,110,761	£3,905,940	£1,364,154	£156,379	£31,394,743
Caerphilly	£41,988,358	£2,831,218	£5,387,574	£4,335,232	£16,442,359	£11,178,767	£3,888,593	£445,234	£86,497,335
Blaenau Gwent	£19,506,981	£1,217,729	£2,339,991	£1,731,244	£7,652,914	£5,117,033	£1,783,596	£204,614	£39,554,102
Torfaen	£23,501,343	£1,725,428	£2,886,552	£2,347,630	£9,227,639	£5,622,974	£1,973,678	£224,658	£47,509,902
Monmouthshire	£16,684,662	£915,230	£2,389,145	£1,797,155	£4,622,097	£4,381,527	£1,521,798	£172,339	£32,483,953
Newport	£30,733,607	£2,020,032	£4,275,488	£3,605,241	£10,950,177	£7,920,396	£2,743,105	£309,908	£62,557,954
Wales	£691,026,391	£45,314,758	£83,584,614	£68,572,443	£230,663,665	£170,548,870	£59,353,168	£6,754,612	£1,355,818,521

Total allocatable = \$1,355,818,521Total unallocatable = \$92,078,980 which is approximately 6.4% of expenditure

Notional Prescription Drugs Allocation

UA Name

		02.	03.	04. Central			07. Obstetrics, Gvnae+Urinarv
	01. Gastro-Intestinal	Cardiovascular	Respiratory	Nervous		06. Endocrine	Tract
	System	System	System	System	05. Infections	System	Disorders
Isle of Anglesey	£968,505	£1,579,548	£952,537	£1,159,939	£303,824	£582,835	£140,013
Gwynedd	£1,691,407	£2,688,706	£1,645,155	£2,101,264	£519,748	£1,051,623	£247,053
Conwy	£1,813,044	£2,874,820	£1,660,113	£2,248,606	£520,267	£1,103,236	£260,793
Denbighshire	£1,330,433	£2,099,047	£1,258,143	£1,607,481	£398,328	£813,307	£190,245
Flintshire	£2,086,664	£3,251,942	£1,938,618	£2,641,625	£607,303	£1,256,204	£301,397
Wrexham	£1,860,790	£2,897,961	£1,782,182	£2,287,413	£563,593	£1,120,888	£267,133
Powys	£1,703,519	£2,738,866	£1,591,322	£2,032,731	£504,349	£1,021,148	£239,832
Ceredigion	£1,004,589	£1,579,752	£995,752	£1,202,363	£318,388	£590,149	£144,456
Pembrokeshire	£1,701,080	£2,746,810	£1,563,877	£2,027,985	£492,542	£1,021,034	£239,549
Carmarthenshire	£2,817,010	£4,519,828	£2,650,591	£3,487,780	£835,112	£1,721,966	£406,764
Swansea	£3,565,552	£5,505,380	£3,561,465	£4,444,102	£1,132,023	£2,228,716	£524,977
Neath Port Talbot	£2,471,410	£3,884,077	£2,529,678	£3,060,756	£807,683	£1,563,105	£365,214
Bridgend	£2,078,047	£3,285,146	£2,084,686	£2,514,234	£665,801	£1,253,167	£300,498
Vale of Glamorgan	£1,636,720	£2,534,625	£1,543,589	£2,032,674	£487,076	£968,582	£235,782
Cardiff	£4,470,797	£6,901,654	£4,578,081	£5,575,981	£1,453,583	£2,743,467	£665,791
Rhondda, Cynon, Taff	£4,131,579	£6,456,884	£4,096,417	£5,198,706	£1,295,289	£2,568,251	£607,920
Merthyr Tydfil	£1,058,811	£1,643,380	£1,090,522	£1,347,406	£345,227	£663,871	£159,371
Caerphilly	£3,002,196	£4,704,132	£3,083,349	£3,716,277	£980,672	£1,885,117	£445,719
Blaenau Gwent	£1,353,987	£2,144,809	£1,347,888	£1,661,127	£426,358	£852,393	£196,762
Torfaen	£1,540,891	£2,424,223	£1,473,315	£1,938,878	£461,869	£938,613	£225,022
Monmouthshire	£1,101,709	£1,744,426	£1,088,534	£1,311,636	£348,987	£656,967	£158,541
Newport	£2,114,068	£3,231,802	£2,120,299	£2,656,828	£673,402	£1,293,086	£312,092
Wales	£45,502,808	£71,437,818	£44,636,113	£56,255,791	£14,141,422	£27,897,725	£6,634,926

Notional Prescription Drugs Allocation (Cont).

UA Name

	08. Malignant Disease &	09. Nutrition	10. Musculoskeletal and Joint		12. Ear, Nose		
	Immunosuppression	and Blood	Disorders	11. Eye	and Oropharynx	13. Skin	Total
Isle of Anglesey	£245,674	£224,966	£322,741	£97,036	£66,539	£257,598	£6,901,757
Gwynedd	£411,633	£398,879	£577,873	£170,093	£112,877	£451,422	£12,067,735
Conwy	£475,272	£433,281	£618,332	£177,198	£117,369	£484,826	£12,787,157
Denbighshire	£344,678	£314,196	£483,127	£131,840	£89,133	£355,459	£9,415,417
Flintshire	£494,251	£501,863	£724,844	£202,995	£134,983	£549,204	£14,691,894
Wrexham	£443,696	£453,234	£649,767	£183,821	£124,948	£496,121	£13,131,548
Powys	£395,188	£398,246	£587,164	£165,001	£113,504	£453,988	£11,944,859
Ceredigion	£238,238	£238,666	£354,730	£100,370	£69,530	£271,756	£7,108,739
Pembrokeshire	£432,664	£394,591	£590,462	£165,738	£110,562	£453,073	£11,939,967
Carmarthenshire	£684,700	£658,943	£964,464	£277,999	£187,005	£747,595	£19,959,755
Swansea	£869,243	£863,310	£1,275,577	£364,398	£246,906	£966,623	£25,548,271
Neath Port Talbot	£581,427	£579,357	£878,742	£255,516	£175,592	£672,668	£17,825,225
Bridgend	£472,824	£495,365	£719,936	£209,581	£144,049	£554,788	£14,778,123
Vale of Glamorgan	£406,129	£400,960	£573,274	£160,045	£107,489	£429,060	£11,516,004
Cardiff	£1,111,631	£1,121,136	£1,528,178	£460,828	£308,525	£1,220,823	£32,140,475
Rhondda, Cynon, Taff	£965,371	£984,802	£1,467,377	£419,387	£282,401	£1,110,418	£29,584,802
Merthyr Tydfil	£250,140	£248,008	£387,739	£110,534	£74,146	£293,270	£7,672,425
Caerphilly	£733,830	£708,280	£1,076,252	£313,070	£211,058	£826,991	£21,686,942
Blaenau Gwent	£309,566	£317,990	£483,964	£137,834	£92,794	£367,503	£9,692,974
Torfaen	£349,875	£374,905	£525,319	£152,609	£101,626	£417,898	£10,925,042
Monmouthshire	£279,647	£260,022	£382,950	£110,370	£76,775	£297,443	£7,818,006
Newport	£519,079	£513,841	£768,671	£215,234	£146,448	£570,754	£15,135,604
Wales	£11,014,756	£10,884,842	£15,941,482	£4,581,497	£3,094,259	£12,249,282	£324,272,720

Allocated prescription drug costs = \pounds 324,272,720 Unallocated prescription drug costs = \pounds 23,498,814

Number and cost of prescription items for Wales: 1998-99

	Items	Net ingredient	Average NIC
	dispensed	cost (NIC)	per item (£)
Total	39,990,208	£347,771,534	8.70
01. Gastro-Intestinal System	3,290,637	£45,502,808	13.83
02. Cardiovascular System	9,074,212	£71,437,818	7.87
03. Respiratory System	3,669,246	£44,636,113	12.16
04. Central Nervous System	8,443,433	£56,255,791	6.66
05. Infections	2,895,626	£14,141,422	4.88
06. Endocrine System	2,537,728	£27,897,725	10.99
07. Obstetrics, Gynae+Urinary Tract Disorders	760,722	£6,634,926	8.72
08. Malignant Disease & Immunosuppression	225,647	£11,014,756	48.81
09. Nutrition and Blood	1,121,205	£10,884,842	9.71
10. Musculoskeletal and Joint Disorders	2,048,261	£15,941,482	7.78
11. Eye	930,371	£4,581,497	4.92
12. Ear, Nose and Oropharynx	611,867	£3,094,259	5.06
13. Skin	2,466,527	£12,249,282	4.97
14. Immunological Products and Vaccines	598,595	£5,024,890	8.39
15. Anaesthesia	51,528	£156,690	3.04
18. Preparations used in Diagnosis	21	£912	43.42
19. Other Drugs and Preparations	60,706	£412,571	6.80
20. Dressings	777,150	£6,630,227	8.53
21. Appliances	271,410	£3,047,206	11.23
22. Incontinence Appliances	58,232	£1,836,445	31.54
23. Stoma Appliances	97,084	£6,389,874	65.82

Notional General Medical Service (Allocation based on a volume measure from 15 Welsh Health Survey (1998) health conditions.)

GMS	Costs
UNID	CUSIS

General Medical Services (98-99)	£
(Source: Table 14.6 Health Statistics Wales 1999, p194)	
Cash Limited Expenditure	
GP Fund holders	£20,849,000
GP non-Fund holders	£32,552,000
Total Cash Limited	£53,401,000
Total Non Cash Limited Expenditure	£133,533,000
Total GMS	£186,934,000

GP consultation and service receipt rates by health condition from the GPMD and WHS

					WHS GP (%	
					of patients	GPMD
				Speech/OT	visiting a GP	Consultation
Attendance rates	Outpatients (%)	Nursing (%)	Chiropody (%)	(%)	in past year)	Rates
Heart	42	15	23	1	92	2.3
Cancer	56	18	20	1	88	1.4
Respiratory	39	15	16	2	89	1.8
arthritis	41	13	22	1	89	1.6
Back pain	36	12	15	1	85	1.5
epilepsy	56	15	15	4	93	1.8
Stroke	48	35	41	11	93	1.3
Varicose veins	34	14	20	1	84	1.3
Diabetes	55	20	46	1	94	3.3
Food Poisoning	31	13	10	1	81	1.2
Hearing	39	15	21	2	84	1.2
Seeing	40	18	23	1	84	1.2
Teeth	35	13	23	1	82	1.2
Mental	42	13	16	2	91	1.9
Accident	47	15	14	1	85	1.4

Estimated Relative number of GP consultations by health condition and LHG area

UA Name

	HEART	CANCER	RESPIRE	ARTHRIT	BACK	EPILEPSY	STROKE	VARICOSE
Isle of Anglesey	324	59	264	231	280	12	14	91
Gwynedd	511	86	450	429	476	7	16	175
Conwy	554	117	435	441	504	18	16	187
Denbighshire	395	79	337	361	409	16	23	130
Flintshire	614	95	514	512	638	21	14	194
Wrexham	551	82	479	470	534	24	11	169
Powys	553	76	428	403	545	23	18	192
Ceredigion	314	46	273	243	315	11	7	97
Pembrokeshire	556	100	413	422	486	12	15	167
Carmarthenshire	878	138	706	694	777	20	36	238
Swansea	983	164	973	938	1037	28	34	326
Neath Port Talbot	713	100	701	635	743	26	17	222
Bridgend	643	78	578	521	598	15	16	176
Vale of Glamorgan	479	87	416	416	504	12	20	146
Cardiff	1261	235	1259	1055	1202	55	60	358
Rhondda, Cynon, Taff	1177	158	1109	1081	1140	49	45	314
Merthyr Tydfil	288	37	296	285	279	12	13	84
Caerphilly	857	132	843	793	788	23	25	245
Blaenau Gwent	399	47	364	348	380	20	14	108
Torfaen	453	56	388	353	408	18	26	135
Monmouthshire	347	65	303	280	342	13	7	134
Newport	578	99	579	557	647	34	18	173
Wales	13427	2137	12107	11469	13032	468	466	4061

(Average number of GP consultations per patient per year by health condition from 33 Practices in the General Practice Morbidity Database multiplied through by WHS illness rates at LHG level)

Estimated Relative number	of GP consultations by health	n condition and LHG area (Cont)
UA Name		

								Total	% of Welsh
	DIABETES	FOOD	HEARING	SEEING	TEETH	ACCIDENT	MENTAL	Number	Total
Isle of Anglesey	62	129	97	52	220	84	86	2004	2
Gwynedd	147	246	152	93	336	176	158	3457	4
Conwy	151	284	153	80	444	189	199	3775	4
Denbighshire	102	205	119	73	339	109	143	2839	3
Flintshire	153	342	170	111	464	228	220	4290	5
Wrexham	131	344	226	117	448	171	213	3971	4
Powys	136	270	144	84	449	141	173	3635	4
Ceredigion	46	166	80	51	251	76	122	2100	2
Pembrokeshire	129	248	147	104	426	149	196	3569	4
Carmarthenshire	234	380	286	169	703	291	313	5862	6
Swansea	298	599	345	205	835	331	414	7510	8
Neath Port Talbot	224	348	253	174	589	217	274	5237	6
Bridgend	131	344	219	150	470	178	227	4344	5
Vale of Glamorgan	89	297	155	101	360	163	163	3409	4
Cardiff	314	863	414	271	870	418	586	9223	10
Rhondda, Cynon, Taff	338	620	434	298	933	405	509	8610	9
Merthyr Tydfil	77	131	129	87	232	101	158	2208	2
Caerphilly	239	423	357	202	675	265	412	6279	7
Blaenau Gwent	132	203	148	101	311	114	181	2872	3
Torfaen	130	258	161	86	358	162	220	3210	3
Monmouthshire	58	176	114	75	268	86	96	2365	2
Newport	135	356	193	114	484	189	256	4413	5
Wales	3456	7231	4498	2800	10467	4245	5320	95183	100

(Average number of GP consultations per patient per year by health condition from 33 Practices in the General Practice Morbidity Database multiplied through by WHS illness rates at LHG level)

Notional General Medical Service Allocation

UA Name	Total Non-cash								
	Total cash limited	limited GMS	Total GMS						
	GMS allocation	allocation	allocation						
Isle of Anglesey	£1,124,447	£2,811,760	£3,936,208						
Gwynedd	£1,939,518	£4,849,902	£6,789,420						
Conwy	£2,118,103	£5,296,468	£7,414,572						
Denbighshire	£1,592,714	£3,982,696	£5,575,410						
Flintshire	£2,406,710	£6,018,151	£8,424,861						
Wrexham	£2,227,882	£5,570,976	£7,798,858						
Powys	£2,039,284	£5,099,374	£7,138,658						
Ceredigion	£1,177,999	£2,945,670	£4,123,668						
Pembrokeshire	£2,002,411	£5,007,171	£7,009,582						
Carmarthenshire	£3,288,594	£8,223,363	£11,511,956						
Swansea	£4,213,362	£10,535,811	£14,749,173						
Neath Port Talbot	£2,937,927	£7,346,495	£10,284,422						
Bridgend	£2,437,327	£6,094,710	£8,532,037						
Vale of Glamorgan	£1,912,775	£4,783,031	£6,695,806						
Cardiff	£5,174,568	£12,939,375	£18,113,943						
Rhondda, Cynon, Taff	£4,830,488	£12,078,980	£16,909,468						
Merthyr Tydfil	£1,238,861	£3,097,861	£4,336,723						
Caerphilly	£3,522,925	£8,809,325	£12,332,251						
Blaenau Gwent	£1,611,201	£4,028,923	£5,640,124						
Torfaen	£1,800,875	£4,503,217	£6,304,093						
Monmouthshire	£1,327,009	£3,318,281	£4,645,291						
Newport	£2,476,018	£6,191,459	£8,667,477						
Wales	£53,401,000	£133,533,000	£186,934,000						