

HEALTH ENGLAND
the national reference group for health and wellbeing

Public Health and Prevention Expenditure in England



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Public Health and Prevention Expenditure in England

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ABSTRACT

Objective: to provide robust estimations of prevention expenditure in England, using OECD *System of Health Accounts* definitions, to make estimates internationally comparable.

Background: the report takes forward some of the conclusions and recommendations made in *Health England Report No. 1: Definitions and Measures of Preventative Health Spending*¹, providing an estimate of prevention expenditure in England, and considering some comparisons of expenditure on prevention at the Primary Care Trust level.

Methods: an analysis of available data to identify areas of prevention expenditure in England in 2006/07, and an update of the ONS *Experimental Health Accounts*² (estimates available until 2002) to provide a total health expenditure estimate in 2006/07, both for England and for the UK.

Results: prevention expenditure in England in 2006/07 is estimated to be £3.7 billion, using OECD *System of Health Accounts* definitions (i.e. excluding expenditure on preventative pharmaceuticals and including expenditures only on activities that can be classed as organised social programmes). As a percentage of estimated total health expenditure in England over the same period, we conclude that prevention expenditure in 2006/07 was 4.0% of total health expenditure.

Conclusions:

Prevention expenditure in England: Prevention expenditure, as a share of total health expenditure, in England in 2006/07 was above the OECD average of 2.8%. It is difficult to make comparisons of prevention expenditure in England over time due to differences in how data sources are compiled and changes in policy over the years. However, taking into consideration these difficulties, England has probably seen a substantial increase in spend on prevention since data were last compiled by ONS for 1999/00.

PCT prevention expenditure comparisons: Due to lack of data at the PCT level, only two sub-categories of prevention expenditure have been considered at a PCT level: that on maternal and child health and preventative pharmaceuticals. There is a great deal of stability in expenditure on preventative pharmaceuticals by PCTs over time, with less stability over time in expenditure on prevention in maternal and child health. The majority of PCTs spend approximately 2-5% of total expenditure on preventative pharmaceuticals and 1-2% of total expenditure on prevention in maternal and child health. There appear, however, to be substantial differences in expenditure between the PCTs spending the highest proportion of total expenditure and the PCTs spending the lowest proportion in both categories of preventative expenditure considered.

Total health care expenditure in England and the UK: Total health expenditure in the UK has continued to rise year on year since figures were last produced by ONS in 2002 (using the OECD definitions). Between 2006 and 2007, total health expenditure in the UK rose by 5.5% to reach £118 billion. Total health expenditure in England in 2006/07 is estimated to have been £93.5 billion.

Recommendations:

If the English health care system continues to undertake this calculation of prevention expenditure and total health expenditure, those estimations should continue to use the definitions as set out by the OECD's *System of Health Accounts* in order to make international comparisons possible.

There is the potential to do more work to understand the causes of consistencies and disparities among PCTs in expenditure on prevention.

Key Words

Prevention
Public Health
Health expenditures
Health accounts
International comparisons

CONTENTS

1. CONTEXT	1
2. OBJECTIVES	5
2.1. QUESTION TO BE ADDRESSED	5
2.2. OBJECTIVES	5
2.3. OUTLINE	5
3. PREVENTION AND PUBLIC HEALTH EXPENDITURE	6
3.1. A SUMMARY OF TOTAL PREVENTION AND PUBLIC HEALTH EXPENDITURE	6
3.2. MAIN AREAS OF PREVENTION EXPENDITURE BY OECD CATEGORY, 2006/07	8
3.2.1. HC.6.4 Prevention of non-communicable diseases	10
3.2.2. HC.6.1 Maternal and child health; family planning and counselling	11
3.2.3. HC.6.3 Prevention of communicable diseases	12
3.2.4. HC.6.2 School health services	12
3.2.5. HC.6.5 Occupational Health Care	12
3.2.6. HC.6.9 All other miscellaneous public health services	12
3.2.7. HC.R Health-related functions	12
3.3. MAIN AREAS OF PREVENTION EXPENDITURE BY PRIMARY / SECONDARY, 2006/07	13
3.4. OTHER METHODS AND SOURCES	13
4. A TIME SERIES OF PREVENTION EXPENDITURE	15
4.1. A SUMMARY OF PREVENTION EXPENDITURE, 2000/01-2006/07	15
4.2. MAIN AREAS OF PREVENTION EXPENDITURE BY OECD CATEGORY, 2000/01-2006/07	17
4.2.1. HC.6.4 Prevention of non-communicable diseases	18
4.2.2. HC.6.1 Maternal and child health; family planning and counselling	19
4.2.3. HC.6.3 Prevention of communicable diseases	19
4.2.4. HC.6.2 School health services	19
4.2.5. HC.6.9 All other miscellaneous public health services	19
5. A COMPARISON OF EXPENDITURE ON PREVENTION AND PUBLIC HEALTH SERVICES IN PRIMARY CARE TRUSTS (PCTS)	21
5.1. SOURCES AND METHODS IN ESTIMATIONS	21
5.2. RESULTS	22
5.2.1. Pharmaceuticals	22
5.2.2. Maternal and Child Health	26
5.3. DISCUSSION OF RESULTS	27
6. TOTAL HEALTH EXPENDITURE	29
6.1. NATIONAL ACCOUNTS PUBLIC HEALTH EXPENDITURE VERSUS THE OECD DEFINITION OF TOTAL HEALTH EXPENDITURE	29
6.2. ADDITIONS AND SUBTRACTIONS IN THE ESTIMATION OF TOTAL HEALTH EXPENDITURE	31
6.2.1. Armed forces healthcare expenditure	31
6.2.2. Prisons healthcare expenditure	31
6.2.3. Research & Development expenditure	31
6.2.4. Education & Training	32
6.2.5. Payments by private individuals	32
6.2.6. Non Profit Institutions Serving Households (NPISH) sector	33
6.2.7. COMPONENTS OMITTED	33
6.3. TOTAL HEALTH EXPENDITURE IN THE UK	33

ANNEX A. CALCULATING EXPENDITURE ON PREVENTION AND PUBLIC HEALTH IN ENGLAND	36
ANNEX B: CALCULATING TOTAL EXPENDITURE ON HEALTH.....	53
ANNEX C. SUGGESTED CATEGORIES IN PREVENTION FOR OECD'S SYSTEM OF HEALTH ACCOUNTS VERSION 2.0	59
ANNEX D. PRIMARY CARE TRUSTS NAMES AND CODES, 2007.....	62

FIGURES

FIGURE 1: EXPENDITURE ON PREVENTION AND PUBLIC HEALTH (% OF TOTAL HEALTH EXPENDITURE), 1999	3
FIGURE 2: EXPENDITURE ON PREVENTION AND PUBLIC HEALTH (% OF TOTAL HEALTH EXPENDITURE), 2006	4
FIGURE 3: EXPENDITURE ON PREVENTION AND PUBLIC HEALTH, EXCLUDING EXPENDITURE ON PREVENTATIVE PHARMACEUTICALS, 2000/01-2006/07.....	17
FIGURE 4: EXPENDITURE ON PREVENTATIVE PHARMACEUTICALS (% OF TOTAL RESOURCE ALLOCATION), 2003/04 AND 2006/07	23
FIGURE 5: EXPENDITURE ON PREVENTATIVE PHARMACEUTICALS (% OF TOTAL RESOURCE ALLOCATION), 2004/05 AND 2005/06	23
FIGURE 6: EXPENDITURE ON PREVENTATIVE PHARMACEUTICALS (PER STAR-PU), 2003/04 AND 2006/07	24
FIGURE 7: EXPENDITURE ON PREVENTATIVE PHARMACEUTICALS (PER STAR-PU), 2004/05 AND 2005/06	25
FIGURE 8: EXPENDITURE ON PREVENTION IN MATERNAL AND CHILD HEALTH (% OF TOTAL RESOURCE ALLOCATION), 2003/04 AND 2006/07	26
FIGURE 9: EXPENDITURE ON PREVENTION IN MATERNAL AND CHILD HEALTH (% OF TOTAL RESOURCE ALLOCATION), 2004/05 AND 2005/06	27
FIGURE 10: A COMPARISON OF BIRTH RATES AND EXPENDITURE ON PREVENTION IN MATERNAL AND CHILD HEALTH, 2006/07	28
FIGURE 11: GROSS VALUE ADDED (GVA) PER CAPITA AND PRIVATE HEALTH EXPENDITURE PER CAPITA IN THE UK AT CONSTANT 2006 PRICES, 2000-2006	34

TABLES

TABLE 1: PREVENTION EXPENDITURE IN ENGLAND (£MILLION), 2006/07	7
TABLE 2: PREVENTION EXPENDITURE IN ENGLAND BY SUBCATEGORY (% OF TOTAL EXPENDITURE ON PREVENTION), 2006/07	7
TABLE 3: DETAILED PREVENTION EXPENDITURE IN ENGLAND (£MILLION), 2006/07	9
TABLE 4: SUMMARY OF PREVENTION EXPENDITURE IN ENGLAND (£MILLION), 2000/01-2006/07	16
TABLE 5: DETAILED BREAKDOWN OF PREVENTION EXPENDITURE IN ENGLAND (£MILLION), 2000/01-2006/07	18
TABLE 6: MEAN EXPENDITURE ON PREVENTATIVE PHARMACEUTICALS AND MEASURES OF DISPERSION AROUND THE MEAN	25
TABLE 7: COMPONENTS OF TOTAL HEALTH EXPENDITURE	30
TABLE 8: ESTIMATED SPENDING ON HEALTH BY ARMED FORCES (£MILLION), 2000-2007	31
TABLE 9: ESTIMATED SPENDING ON HEALTH IN PRISONS (£MILLION), 2000-2007	31
TABLE 10: ESTIMATED R&D EXPENDITURE IN THE DEPARTMENT OF HEALTH AND THE NHS (£MILLION), 2000-2007	32
TABLE 11: ESTIMATED SPENDING ON EDUCATION AND TRAINING IN THE NHS IN ENGLAND (£MILLION), 1999/00-2007/08	32
TABLE 12: ESTIMATED SPENDING ON EDUCATION AND TRAINING IN THE UK (£MILLION), 2000-2007 ..	32

TABLE 13: ESTIMATED HOUSEHOLD EXPENDITURE ON HEALTH INSURANCE AND OUT-OF-POCKET PAYMENTS (£MILLION), 2000-2007	33
TABLE 14: ESTIMATED HOUSEHOLD THIRD SECTOR EXPENDITURE ON HEALTH (£MILLION), 2000-2007	33
TABLE 15: ESTIMATED TOTAL HEALTH EXPENDITURE IN THE UK BY AREA OF SPEND (£MILLION), 2000-2007	33
TABLE 16: ESTIMATED TOTAL HEALTH EXPENDITURE IN THE UK BY COUNTRY (£BILLION), 2000-2007	35
TABLE 17: ESTIMATED TOTAL HEALTH EXPENDITURE IN ENGLAND (£BILLION), 2000/01-2006/07	35

1. Context

International comparisons are becoming ever more important in health policy. International data collection and comparison means that the performance of different healthcare systems can be compared, the determinants of this performance analysed and the effects of policies on the performance of different healthcare systems can be identified. International comparisons are essential, therefore, in ensuring that the NHS is performing to a good standard, as benchmarked against its international peers.

The January 2006 White Paper *“Our health, our care, our say”*³, stated that

“We must reorientate our health and social care services to focus together on prevention and health promotion, [with this requiring] a shift in the centre of gravity of spending.”

In meeting this challenge, it was felt that there were inadequate English, and UK-wide, data on current expenditure on prevention and public health measures, that met international definitions and guidelines.

Health England, a national reference group for health and well-being was, therefore, established in 2007. Part of Health England’s remit was to:

“ensure that we have good data on preventative spend, for both PCT and international comparisons”.

Health England’s Report No. 1⁴ proposes to use the OECD *System of Health Accounts*⁵ definition of expenditure on prevention and public health, in order to make international comparisons possible. In the OECD’s *System of Health Accounts*, prevention and public health services were defined to include:

“services designed to enhance the health status of the population as distinct from the curative services, which repair health dysfunction”

Within this definition, expenditure on prevention and public health is broken down into six sub-sections:

HC.6.1 Maternal and child health; family planning and counselling
<i>Includes:</i> genetic counselling; prevention of specific congenital abnormalities; prenatal and postnatal medical attention; baby healthcare; pre-school health
HC.6.2 School health services
<i>Includes:</i> interventions against smoking, alcohol and substance abuse; screening, e.g. by dentists
<i>Excludes:</i> vaccination programmes
HC.6.3 Prevention of communicable diseases
<i>Includes:</i> notification of certain infectious diseases; immunisations/vaccination
<i>Excludes:</i> vaccination for occupational health; vaccination for travel and tourism on patients' own initiative
HC.6.4 Prevention of non-communicable diseases
<i>Includes:</i> interventions against smoking, alcohol and substance abuse; activities of community workers, services provided by self-help groups; health education campaigns; information exchanges
<i>Excludes:</i> public health environmental surveillance and public information on environmental conditions; expenditure on pharmaceuticals
HC.6.5 Occupational health care
<i>Includes:</i> surveillance of employee health
<i>Excludes:</i> remuneration-in-kind of health services and goods
HC.6.9 All other miscellaneous public health services
<i>Includes:</i> public health environmental surveillance and public information on environmental conditions

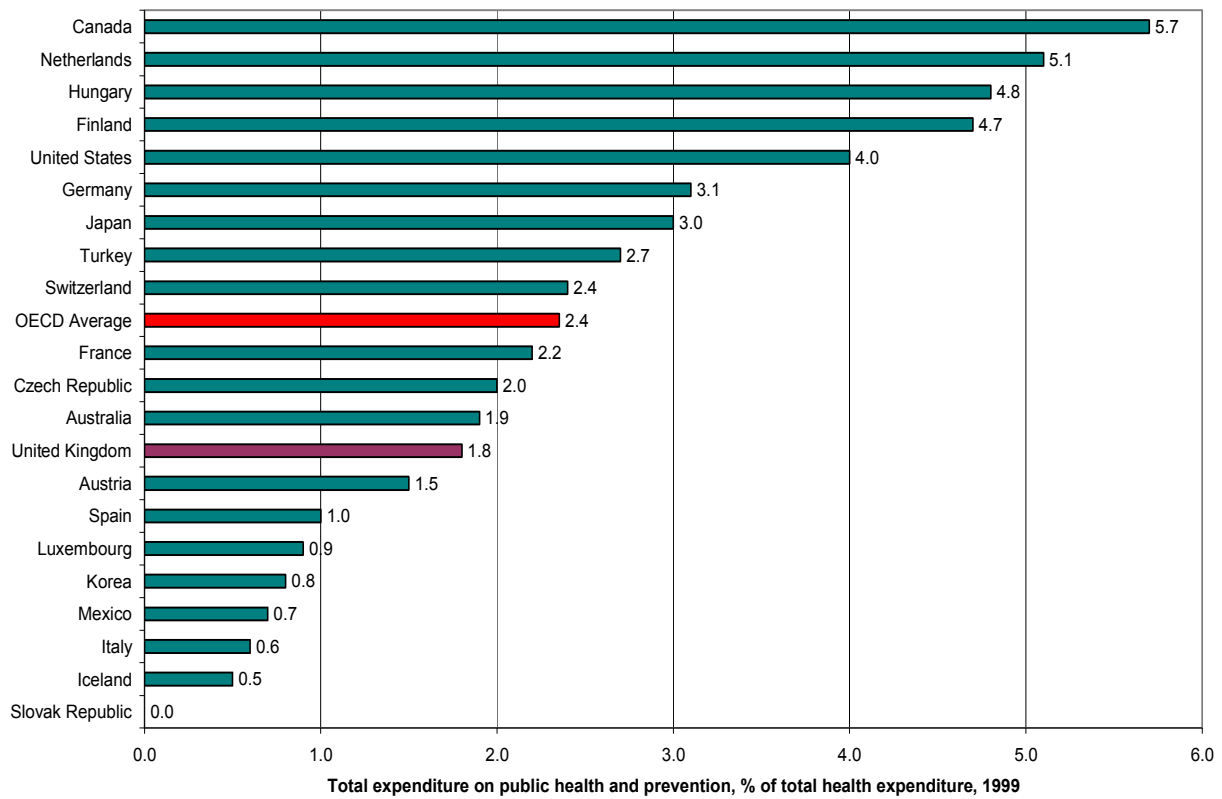
Source:OECD. A System of Health Accounts – Version 1.0, Chapter 9: ICHA-HC Functional Classification of Health Care. 2000

Importantly, in order for services to be classed as preventative under the OECD international definition, the service must be an *organised social programme* rather than requested on the patient's own initiative. This means that much private expenditure on prevention and public health would not be considered under the OECD's definition.

The headline figure described in this report is in line with this OECD definition. However, this report also highlights expenditure on prevention and public health including expenditure on preventative pharmaceuticals. Also included in the report is a section of expenditure on health-related functions predominately involving prevention and public health activities. (Note that the OECD is in the process of redefining the functional classifications in the System of Health Accounts. See possible implications of the reclassification for expenditure on prevention and public health in Annex C.)

The UK last submitted to the OECD estimates of expenditure on prevention and public health, in line with these international definitions, for 1999/00, with figures taken from the ONS publication of *Experimental Health Accounts*. Figure 1 shows that the UK estimate of expenditure on prevention and public health, as a share of total health expenditure, in 1999/00 was 1.8%, 0.6 percentage points below the OECD average of 2.4%.

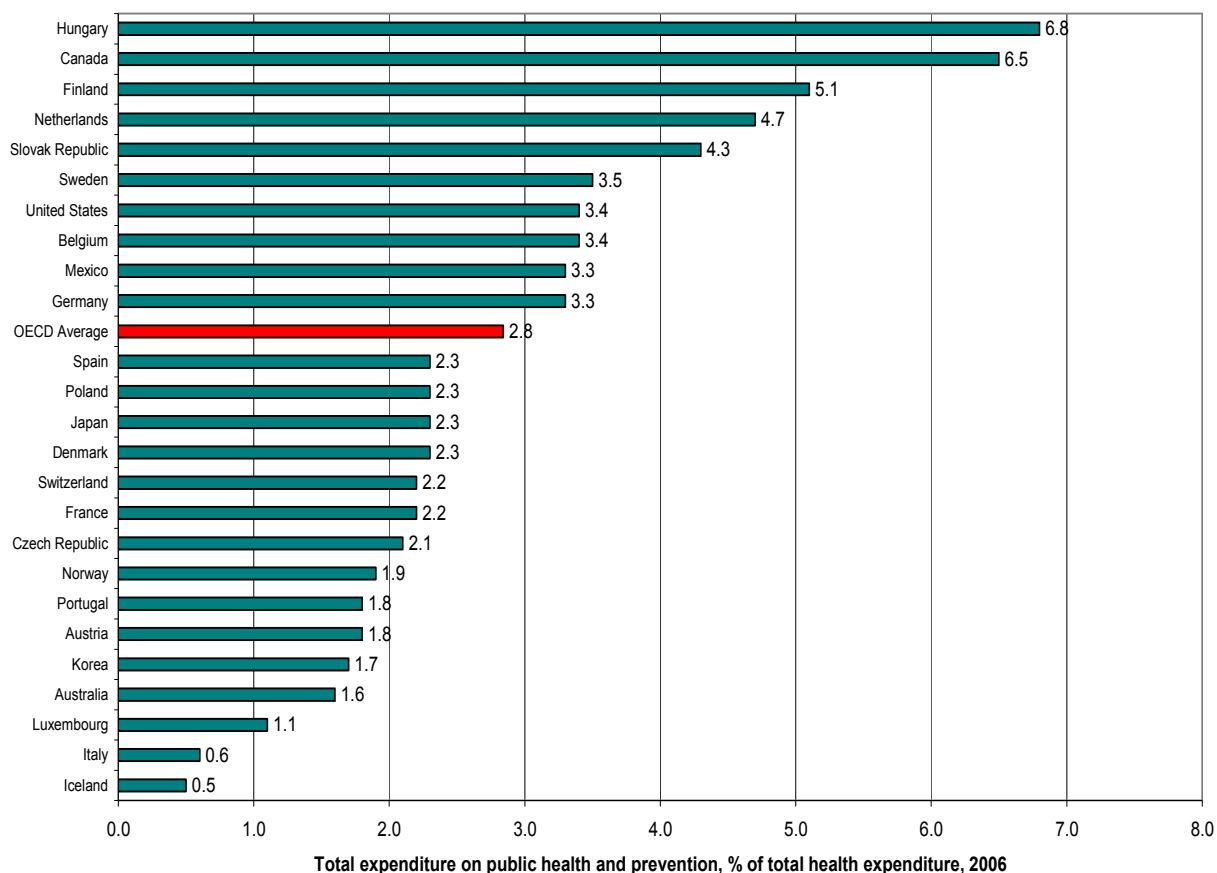
Figure 1: Expenditure on prevention and public health (% of total health expenditure), 1999



Source: OECD Health Data 2008, data for 1999. Note: No data available for Denmark, Belgium, Greece, Ireland, New Zealand, Norway, Poland, Portugal, Sweden.

The latest data from OECD⁶ suggest that, amongst OECD member states, the average share of total health expenditure going on public health and prevention was about 2.8% in 2006 (see Figure 2). If the UK prevention expenditure illustrated in Figure 1 had not changed, the UK would be further below the OECD average.

Figure 2: Expenditure on prevention and public health (% of total health expenditure), 2006



Source: OECD Health Data 2008, data for 2006. Note: No data available for the UK, Ireland, Turkey and Greece. Data for Luxembourg and Switzerland from 2005 and for the Netherlands from 2004.

Health England Report No. 2⁷, *Prevention and Preventative Spending*, provided provisional estimates of expenditure on prevention and public health in England in 2006/07, estimated at 3.6% of total health expenditure. This report updates and extends that estimate, in particular revising the total health expenditure estimate given new figures released by the Office for National Statistics⁸.

2. Objectives

2.1. Question to be addressed

What is the current level of expenditure on prevention, as a percentage of total health expenditure, in England, and how does this estimate compare to the UK estimate provided by ONS for 1999/2000?

2.2. Objectives

- To provide a current, internationally comparable, estimate for expenditure on prevention and public health in England, with some attempt also to provide a time series
- To provide an internationally comparable estimate for total expenditure on health in the UK, and in England
- To make some conclusions as to the level of similarity (or otherwise) of expenditure on prevention among PCTs and the level of consistency of expenditure by PCTs over time

2.3. Outline

We have aimed:

- To assess and compile data identifying prevention expenditure in England for 2006/07
- To provide internationally comparable figures on total prevention expenditure for England, broken down to a sub-category level of detail as suggested by the OECD *System of Health Accounts*⁹(Section 3)
- To provide a time series of expenditure on prevention and public health, from 2000/01 to 2006/07, in order to help clarify changes over time and to highlight any difficulties in comparing estimates of expenditure over time (Section 4)
- To compare PCT expenditure on prevention, as a percentage of total resource allocation both among PCTs and by PCTs over time, where data sources allow (Section 5)
- To estimate total health expenditure up to 2007, without the sub-category level of detail as for prevention expenditure, along similar lines as estimated by ONS in their *Experimental Health Accounts* (Section 6)
- To provide a detailed, technical description of the sources used and calculations made in compiling estimates of both prevention expenditure and total health expenditure, in order to assist in the transparency of the estimates made in the report, and to aid any future expenditure estimations (Annexes A and B)

3. Prevention and public health expenditure

3.1. A summary of total prevention and public health expenditure

Table 1, below, presents the estimates of expenditure on prevention in England in 2006/07, according to the OECD functional classification, both including and excluding expenditure on preventative medication. It also breaks down expenditure in terms of primary prevention (i.e. preventing the onset of undesirable states) and secondary prevention (i.e. early stage disease detection and interventions). The latter is further subdivided into screening, other secondary prevention and pharmaceuticals used in prevention.

The headline figure for expenditure on prevention and public health services in 2006/7 is £3.7bn. This figure is in line with the OECD definition as described in Section 1, in that it excludes expenditure on preventative pharmaceuticals and on health related functions. This headline figure is therefore most suitable for use in international comparisons.

Since expenditure on preventative pharmaceuticals does, however, reflect expenditure that is directed towards prevention, it would be included in a broader definition. Including this additional expenditure on pharmaceuticals gives an expenditure of £5bn. There is also an additional £1.3 billion expenditure on health-related functions with specific relevance to public health and prevention.

Note that where some data sources do not extend to 2006/7, the previous years' data are used (for example ophthalmic expenditure).

It should also be noted that, due to the sheer diversity of preventative activities and public health measures in England, it is impossible to say that the estimates shown in Table 1 provide a comprehensive view of all the preventative and public health measures in the country. However, they are our best estimates, given available data.

In particular, note that an area where data has largely been unavailable is private expenditure on preventative activities. However, as described in Section 1, since the OECD definition of preventative measures is as an *organised social programme*, the exclusion of much private expenditure is appropriate for use in international comparisons. Some potential areas that would, however, be classified as an organised programme are private dental and ophthalmic visits where patients are routinely recalled for check-ups. However, it has not been possible to find any robust data on this specific area (although it might be substantial).

Table 1: Prevention expenditure in England (£million), 2006/07

		Primary prevention	Secondary prevention			TOTAL	Total excl. medication
			Screening	Other	Medication		
HC.6.1	Maternal and child health; family planning and counselling	840	21	-	-	861	861
HC.6.2	School health services	44	-	115	-	159	159
HC.6.3	Prevention of communicable diseases	284	-	-	-	284	284
HC.6.4	Prevention of non-communicable diseases	206	1,461	348	1,337	3,352	2,015
HC.6.5	Occupational health care	4	-	-	-	4	4
HC.6.9	All other miscellaneous public health services	394	-	19	-	412	412
HC.6	Total prevention and public health services	1,771	1,482	482	1,337	5,072	3,735
<i>HC.R</i>	<i>Health related functions (specifically related to prevention and public health)</i>	<i>1,308</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>1,308</i>	<i>1,308</i>

Table 2 shows the identified preventative expenditures as percentages of the total of £5bn (i.e. of the total that includes preventative pharmaceuticals).

Table 2: Prevention expenditure in England by subcategory (% of total expenditure on prevention), 2006/07

		Primary prevention	Secondary prevention			TOTAL
			Screening	Other	Medication	
HC.6.1	Maternal and child health; family planning and counselling	16.6%	0.4%	-	-	17.0%
HC.6.2	School health services	0.9%	-	2.3%	-	3.2%
HC.6.3	Prevention of communicable diseases	5.6%	-	-	-	5.6%
HC.6.4	Prevention of non-communicable diseases	4.1%	28.8%	6.9%	26.4%	66.2%
HC.6.5	Occupational health care	0.1%	-	-	-	0.1%
HC.6.9	All other miscellaneous public health services	7.7%	-	0.4%	-	8.1%
HC.6	Total prevention and public health services	35.0%	29.2%	9.6%	26.4%	100%

Total health expenditure in England for the same period (as estimated in section 6 below) is approximately £93.5bn. This suggests that about 4.0% of health expenditure is directed towards prevention – using the figure without pharmaceuticals, so that this can be compared with other OECD countries. This share indicates that the UK is above the average of other OECD countries, which, in 2006, stood at 2.8%. (Including pharmaceuticals would imply that 5.4% of total health expenditure is directed towards prevention in England, but this is not comparable with other countries.)

By comparison, the ONS *Experimental Health Accounts* for 1999/2000 suggested prevention expenditure in the region of £1.1bn for the whole of the UK, or 1.8% of total health expenditure. This suggests a substantial rise in the proportion of total health expenditure directed towards prevention and public health in England. However, there are problems with making the direct comparison between the ONS estimates of prevention and public health expenditure in 1999/2000 and the estimates in this report; see section 4 for a further exploration of these difficulties.

Of the full total expenditure of £5bn in 2006/7, just over 70% can be broken down to PCT level. However, the remainder (including central budgets, cancer screening and ophthalmic expenditure) cannot. Section 5 explores the breakdown of expenditure between PCTs in the two areas of prevention expenditure where data are most plentiful: maternal and child health, and pharmaceutical expenditure.

3.2. Main areas of prevention expenditure by OECD category, 2006/07

Table 3 shows a more detailed breakdown of the sources of expenditure on prevention and public health. These sources are described in some detail below, with each OECD sub-category ranked in descending order of expenditure.

Table 3: Detailed prevention expenditure in England (£million), 2006/07

		Primary prevention	Secondary prevention		Total	
			Screening	Other	Medication	
HC.6	Prevention and public health services	1,771	1,482	482	1,337	5,072
HC.6.1	Maternal and child health; family planning and counselling	840	21	0	0	861
	Maternity services	618				618
	Family Planning Clinics	101				101
	Contraceptives	66				66
	Health Visiting Group Services	53				53
	Neonatal audiological screening		14			14
	Quality and Outcomes Framework	2	6			9
HC.6.2	School health services	44	0	115	0	159
	School-Based Children's Individual Health Services			115		115
	School-Based Children's Group Health Services	27				27
	Healthy Schools Programme *	17				17
HC.6.3	Prevention of communicable diseases	284	0	0	0	284
	Immunisation *	238				238
	Other infectious diseases *	24				24
	Quality and Outcomes Framework	19				19
	Reducing MRSA incidence *	3				3
HC.6.4	Prevention of non-communicable diseases	206	1,461	348	1,337	3,352
	Pharmaceuticals				1,337	1,337
	Dental Check-ups		937			937
	Quality and Outcomes Framework	28	41	348		417
	Screening programmes		275			275
	Sight tests		208			208
	Obesity/diet/lifestyle	116				116
	NHS Stop Smoking Services	56				56
	NICE Public Health Guidelines	4				4
	CJD surveillance *	2				2
HC.6.5	Occupational health care	4	0	0	0	4
	Occupational Health for Dentists	4				4
	Quality and Outcomes Framework	1				1
HC.6.9	All other miscellaneous public health services	394	0	19	0	412
	Health Protection Agency	248				248
	NHS BT *	53				53
	Publicity for prevention activities	34				34
	Charitable expenditure on prevention	33				33

National Biological Standards Board	25		25
Public Health in Prisons *		19	19

HC.R	Health-related functions	1,308	0	0	0	1,308
	Environmental Health Services (by LAs)	542				542
	Health Visiting Individual Services	402				402
	Food safety measures (by LAs)	122				122
	Healthy Start / Welfare Foods	121				121
	Food Standards Agency	121				121

Note: * refers to expenditure from the Central Budget, data available only for 2006/07

3.2.1. HC.6.4 Prevention of non-communicable diseases

The main sources of prevention expenditure are directed towards non-communicable diseases, accounting for around two thirds of total prevention expenditure. A large sum of this is expenditure on pharmaceuticals (around £1.4bn, driven by lipid-regulators) that have been identified as preventative (in consultation with Health England).

Routine dental check-ups contribute the second largest expenditure of all sources of prevention expenditure; second only to expenditure on preventative pharmaceuticals. There is some uncertainty as to precisely what is preventative in dental care. The estimate that £937 million is spent on prevention in dentistry is obtained by assuming that all routine NHS examinations, scaling and diagnostic procedures, (all treatments under Band 1 of the NHS dental contracts in place since 2006¹⁰) are preventative, even when they are followed by a filling or extraction (Band 2 treatment) or some treatment requiring laboratory work (Band 3). See Annex A for further details of what is included in this estimate.

We have also considered an alternative method of estimating preventative expenditure on dentistry, in order to quality assure this estimate. The Adult Dental Health Survey¹¹ estimates that 59% of dentate adults have regular check-ups and another 11% have occasional check-ups, while the remaining 30% only attend when they have trouble with their teeth. We might assume, therefore, that about 70% of dentate adults have a check-up about once per year, which means about 25 million (NHS, as well as private) check-ups occur annually in England. In addition, the Children's Dental Health Survey¹² estimates that about 61% of 5-15 year-olds have regular check-ups (within the past 6 months) and a further 13% have occasional check-ups. We may therefore estimate that 61% of children have two check-ups per year and 13% have one. This would suggest that, in addition to the 25 million dental check-ups performed on adults annually, there are a further 9 million check-ups per year for 5-15 year olds. This would suggest a total of 34 million NHS and private dental check-ups per year, excluding children aged under 5 years. If we assume that the cost of a check-up is £30, in line with the approximate cost of a unit of dental activity (see Annex A), we may assume a total cost of prevention in dentistry of approximately £1 billion (both NHS and private spending).

Ophthalmic¹³ check-ups, as well as the combined screening programmes also each contribute significantly to non-communicable disease prevention. These screening programmes include the three major ones (breast, cervical and bowel)¹⁴, as well as a number of smaller ones (including Downs' syndrome, sickle cell anaemia and retinal screening for diabetics). However, there is no central information on how much individual PCTs spend on screening activities. Note also that only data on public expenditure ophthalmic check-ups are available, and hence our estimate of national expenditure on

these check-ups is likely to be an underestimation of the true spend as we have been unable to include private expenditure.

A further major source of expenditure on the prevention of non-communicable diseases is part of the payment scheme for GPs, called the Quality and Outcomes Framework (QOF).¹⁵ Under the scheme, GPs receive points for the achievement of a wide range of indicators and payments are then based on the number of points attained. Overall, this accounted for £1.0bn of NHS expenditure in 2006/7. However, not all of these indicators are preventative. Almost half of the QOF points may be related to primary or secondary prevention, suggesting around £450m of QOF preventative activity (this list has been agreed with Health England). The vast majority of QOF expenditure is related to non-communicable diseases. For example, the indicator achieving the highest number of points in 2006/07 was for ensuring that patients with hypertension had a blood pressure reading in the previous 9 months of 150/90 or less.

There is further expenditure on NHS Stop Smoking Services,¹⁶ CJD surveillance and expenditure towards the Obesity, Nutrition and Exercise Public Services Agreement (none of which is available at PCT level).

In the National Programme Budget project¹⁷, expenditure on the “Healthy Individuals” is recorded. The “Healthy Individuals” programme engages “Individuals who have no current problems but who are involved in programmes for the prevention of illness and the promotion of good health”. Expenditure on the Healthy Individuals category reached £1,355m in 2006/7. This reflects a stable fraction of the total expenditure attributed to Programme Budget categories, at around 2% per year.

However, since 2006/7, the Healthy Individuals budget has been subdivided into three broad categories, the NSF Prevention Programme (21a), the NSF Mental Health Programme (21b) and ‘Other Healthy Individuals’ (21c). The first of these categories, the NSF Prevention Programme, seems to fit the OECD definition of prevention, and hence has been included in our estimation of prevention expenditure, under the heading ‘Obesity/diet/lifestyle’.

3.2.2. HC.6.1 Maternal and child health; family planning and counselling

The next largest area of expenditure is on maternal and child health and family planning. This is driven by maternity outpatient visits to hospital and community midwifery clinics, totalling over £600m. This information comes from NHS reference costs¹⁸. It also includes significant expenditure on family planning clinics, neonatal screening for hearing problems and health visiting group services (which include services such as child health clinics and new mother groups).

There are also three QOF indicators on contraceptive services, as well as data on the prescription of contraceptives. While the latter are generally pharmaceutical in nature, OECD methodology specifically includes contraceptives within the definition of prevention and public health. Therefore, they are placed in the “primary prevention” category of the table, leaving the fourth expenditure column containing only those pharmaceuticals that must be excluded for consistency with the OECD methodology.

3.2.3. HC.6.3 Prevention of communicable diseases

Prevention of communicable diseases is the third largest area of expenditure, totalling nearly £300m. This is predominantly through the central budget for immunisation, which is not broken down by PCT. This covers a wide range of diseases and includes immunisation programmes for children. This area will increase significantly in the future as the HPV immunisation programme for school girls was introduced in 2008, and will increase once more when preventative measures against an influenza pandemic are included. Other sources of expenditure include elements of the Quality and Outcomes Framework and spend on reducing MRSA levels in hospitals.

3.2.4. HC.6.2 School health services

The main sources of identified expenditure on school health services are school-based children's health services provided by the NHS. School-based children's services include routine medical checks, sexual health advice and family planning, smoking cessation and substance misuse advice and support. This information comes from NHS Reference Costs^{viii}, and distinguishes between services provided on an individual basis and in a group setting.

An additional source of identified expenditure on school health services is the Healthy Schools Programme, which includes aspects of healthy eating, physical activity and emotional health. Even where vaccination programmes are run through schools, the OECD methodology leaves it open as to whether these should be included under category HC.6.3 (prevention of communicable diseases) or HC.6.2. As the central budget for immunisation is not broken down in detail, we have placed all expenditure on immunisation into category HC.6.3.

3.2.5. HC.6.5 Occupational Health Care

Currently, data on expenditure on occupational health care is confined to £4m (from the central budget for dentists and one indicator for GPs in QOF), with any further work to properly identify the occupational health spend on prevention limited by a lack of data. However, since many countries have difficulties in providing data on occupational health care expenditure, the international data rarely include this, so the UK is not out of line, nor are international comparisons distorted, due to this omission.

3.2.6. HC.6.9 All other miscellaneous public health services

Further areas of miscellaneous expenditure (or expenditure that cannot be placed in a single category) include the Health Protection Agency¹⁹, the administration of NHS Blood and Transplant, publicity for sexual health, drugs and tobacco awareness programmes²⁰ and public health schemes in prisons.

Some work has also been carried out to estimate charitable spend on prevention and public health, with the current estimate standing at £33m (see Annex A for details of this estimate).

3.2.7. HC.R Health-related functions

As mentioned above, the border between prevention and public health and other activities is difficult to draw. A number of areas of expenditure are not formally included, in

accordance with the OECD *System of Health Accounts*, and are classified as “Health-related functions”.

At present, these include five additional areas of expenditure. The first of these is the Department of Health budget for Welfare Foods (including infant formula milk supplied to poor families and the newer “Healthy Start” food vouchers), totalling £121 million. In addition to this, total public spending by the Food Standards Agency amounted to £144 million, of which £121.3 million was spent in England²¹. Local Authority Environmental Health Departments in England spent a further £122 million on food safety, and in addition to this spent £542 million on other environmental health services²². Also included in this section are health visiting individual services. This includes, for example, post-natal visits more than 28 days after the birth of the infant.

This suggests an indicative total of £1,308 million on health-related functions. While the aim of these expenditures is prevention and public health, according to the OECD classification they are not classed as healthcare expenditures. Including these health-related functions would bring the combined total expenditure in the broadest sense to £6.4 billion.

3.3. Main areas of prevention expenditure by primary / secondary, 2006/07

Overall, expenditure on prevention is focussed more on secondary prevention than primary prevention, with the former accounting for 65% of total expenditure (of which over two fifths is on pharmaceuticals).

The main source of primary prevention is maternal and child health, rather than communicable and non-communicable disease later in life.

Expenditure on the prevention of communicable disease is mainly through primary prevention, while secondary prevention (in particular pharmaceuticals followed by screening) is the main source of expenditure for non-communicable disease.

3.4. Other methods and sources

Another potential source of organised social programmes in prevention and public health are the National Service Frameworks of the Department of Health.²³ These cover a wide range of health issues, from children’s health to coronary heart disease, offering a number of recommendations for preventing ill health and promoting public health. However, the concrete steps taken to follow these recommendations are covered by our other data sources, frequently the Quality and Outcomes Framework. For example, the fourth standard in the diabetes NSF²⁴ includes a recommendation for “support to optimise the control of... blood glucose”. This is covered by the QOF payments for monitoring and reducing blood glucose levels (DM05 and DM07).

There is also likely to be significant expenditure on staff in PCTs whose jobs are devoted to public health and prevention, for example registered midwives and directors of public health. However, this is likely to lead to double counting in prevention expenditure, as the measures of prevention ‘output’ used here (e.g. the reference cost for a community midwifery visit) include an allowance for the expenditure on ‘inputs’ (e.g. the salary of the midwife). Furthermore, as data on salaries and numbers of staff is only available at a much more generic level, expenditure for these subcategories of staff groups is not possible.

In March 2006, NICE published its first guideline devoted to public health, focussing on smoking cessation. In 2006/7, there were only two published guidelines (on smoking cessation and physical activity); to date, there are 19 published with a further 34 in development.²⁵ NICE also produces documents detailing how much these recommendations would cost the NHS if they were fully implemented (which total £17m for the two guidelines published in 2006/7). These provide a valuable source of information over how prevention and public health expenditure may change in future years. However, they do not specify how much the NHS has actually spent on these services in a particular year, only a hypothetical expenditure. As such, they are not included.

Other potential, but rather problematic, areas that could possibly be included are diagnoses primarily related to homelessness and the donation (as opposed to receipt) of organs.

4. A time series of prevention expenditure

4.1. A summary of prevention expenditure, 2000/01-2006/07

This section considers prevention expenditure over the years 2000/01-2006/07. In Section 3, this report concluded that prevention expenditure in England, as a proportion of total health expenditure, was 4.0% in 2006/07. In 1999/00, ONS, in the *Experimental Health Accounts*, estimated that prevention expenditure was 1.8% of total health expenditure in the UK. This section therefore attempts to highlight why prevention expenditure in England may have changed over the period.

However, there are challenges to comparing expenditure on prevention and public health over time. A lack of data on certain sources of expenditure in the years prior to 2006/07 provides an obvious source of difficulty in comparing expenditure over a time series. To correct for this difficulty as much as possible, and to make the years considered as comparable as possible, this section considers only sources of expenditure that are available for the entire time series 2000/01-2006/07.

If we consider total expenditure on prevention and public health (excluding pharmaceuticals) as shown in Table 3 in Section 3, this section includes just less than two thirds of that expenditure. This is the reason why prevention expenditure, excluding pharmaceuticals, is shown to be only 2.3% of total health expenditure in table 4, below, as compared to 4.0% in table 3, above. Health expenditure not included here is mostly central budget expenditure (denoted with an asterisk in Table 3), with data available only for 2006/07. Also excluded in the section is expenditure on occupational healthcare, shown in Section 3 to contribute only 0.1% of total prevention expenditure in England.

Another important part of prevention expenditure excluded in the time series is expenditure on preventative dentistry. There are significant problems in constructing a time series of expenditure on prevention in dentistry. Firstly, the contract under which practitioners work changed on 1st April 2006, making comparisons of expenditure over the period very problematic. Prior to this date dentists operated under the General Dental Services (GDS) and Personal Dental Services (PDS) arrangement. There were then 400 different payments for different types of dental work. Since April 2006, practitioners have been working under the new NHS dental contract, which bases payments on courses of treatment in just 3 bands, with more emphasis being placed on prevention²⁶. Secondly, between 2004 and 2006, there was a shift in expenditure on GDS to expenditure on PDS. Finally, in 2004, the data collecting authority changed; prior to 2004, data on dental activity were collected by the Dental Services Division of the NHS Business Services Authority²⁷ and post 2004 have been collected by the NHS Information Centre. Since changes in NHS dental contracts and data collection arrangements make comparisons in expenditure over time problematic, we have not been able to include a reasonably consistent time series.

Table 4, below, suggests that expenditure on prevention, as a percentage of total health expenditure, had risen over the time period considered, up until 2006/07 where we see a 0.1% point decrease in expenditure on prevention as a percentage of total health expenditure. Figure 3, also below, illustrates the contents of Table 4 graphically. The pink schedule on Figure 3 shows total prevention expenditure, excluding expenditure on preventative pharmaceuticals. This shows that prevention expenditure, in cash terms, has continued to rise over the entire period depicted. However, there was a slow down in growth in expenditure on prevention in the final year considered, 2006/07, so that growth

in preventative expenditure became slower than the growth in total health expenditure, which is why we have observed the decrease in expenditure on prevention as a percentage of total health expenditure. All other schedules show expenditure in each of the sub-categories of prevention expenditure as shown in Table 4; these help to explain the varying rates of growth of total prevention expenditure over the time period.

Note, in particular, the 0.4 percentage point increase in prevention expenditure, as a proportion of total health expenditure, from 2003/04 to 2004/05. Figure 3 shows that this increase is predominately from an increase in spend on the prevention of non-communicable disease. This is partly due to the introduction of the Quality and Outcomes Framework, which introduced a comprehensive “payment for performance” framework for general practitioners. Whilst the evidence is unclear as to what extent QOF has led to increased activity levels (such as on preventative services), it does represent the introduction of a *systematic, organised* framework for delivering preventative services. This would, therefore, be an appropriate step change in expenditure, under OECD definitions.

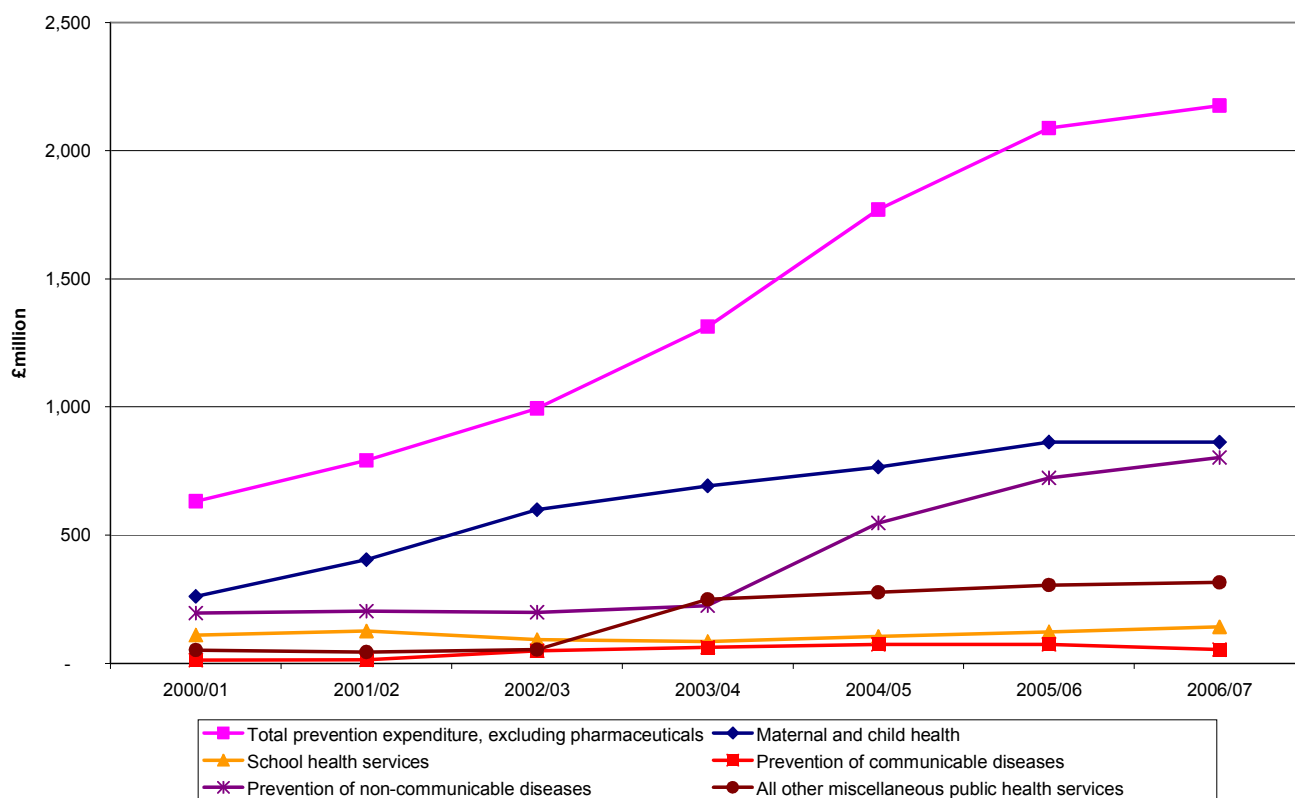
The trends seen in expenditure over time are described in more detail in the sub-section 4.2, below. Note, however, that there are difficulties in comparing expenditure from certain data sources over time. Results in this section, therefore, must be viewed with some caution.

Table 4: Summary of prevention expenditure in England (£million), 2000/01-2006/07

	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
HC.6.1 Maternal and child health; family planning and counselling	261	404	599	692	766	863	861
HC.6.2 School health services	111	126	92	85	104	123	143
HC.6.3 Prevention of communicable diseases	12	14	49	62	74	74	53
HC.6.4 Prevention of non-communicable diseases	1,136	1,300	1,508	1,725	2,077	2,083	2,140
HC.6.9 All other miscellaneous public health services	52	44	54	249	277	305	315
HC.6 Total prevention expenditure (exc. pharmaceutical)	632	792	994	1,314	1,769	2,088	2,176
Total health expenditure*	57,636	62,810	68,646	74,789	81,336	86,926	93,477
Total prevention expenditure (exc. pharmaceuticals), % of total health expenditure	1.1%	1.3%	1.4%	1.8%	2.2%	2.4%	2.3%
<i>Total (inc. pharmaceutical)</i>	<i>1,572</i>	<i>1,888</i>	<i>2,303</i>	<i>2,813</i>	<i>3,299</i>	<i>3,448</i>	<i>3,513</i>

* See Section 6 for details of calculations

Figure 3: Expenditure on prevention and public health, excluding expenditure on preventative pharmaceuticals, 2000/01-2006/07



4.2. Main areas of prevention expenditure by OECD category, 2000/01-2006/07

Table 5 shows a more detailed breakdown of expenditure on prevention and public health over the time series. These sources are described in some detail below, with each OECD sub-category ranked in order of expenditure as in section 3, above.

Table 5: Detailed breakdown of prevention expenditure in England (£million), 2000/01-2006/07

2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
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HC.6	Prevention and public health services (excluding pharmaceuticals)	632	792	994	1,314	1,769	2,088	2,176
HC.6.1	Maternal and child health; family planning and counselling	261	404	599	692	766	863	861
	Maternity services	185	321	457	529	571	644	618
	Family Planning Clinics			61	75	89	94	101
	Contraceptives	44	46	50	55	59	62	67
	Health Visiting Group Services	33	37	29	28	34	45	53
	Neonatal audiological screening			3	4	7	10	14
	Quality and Outcomes Framework	0	0	0	0	6	9	9
HC.6.2	School health services	111	126	92	85	104	123	143
	School-Based Children's Health Services	111	126	92	85	104	123	143
HC.6.3	Prevention of communicable diseases	12	14	49	62	74	74	53
	Immunisation *	12	14	49	62	56	43	34
	Quality and Outcomes Framework					18	31	19
HC.6.4	Prevention of non-communicable diseases	1,136	1,300	1,508	1,725	2,077	2,083	2,140
	Pharmaceuticals	940	1,096	1,308	1,499	1,530	1,360	1,337
	Quality and Outcomes Framework	0	0	0	0	211	363	417
	Sight tests	176	181	176	182	193	197	208
	Obesity/diet/lifestyle					96	110	116
	NHS Stop Smoking Services	20	23	23	41	46	51	56
	NICE Public Health Guidelines	0	0	0	0	0	0	4
	CJD surveillance *				2	2	2	2
HC.6.9	All other miscellaneous public health services	52	44	54	249	277	305	315
	Health Protection Agency				180	204	237	248
	Publicity for prevention activities	29	21	27	37	39	36	34
	Charitable expenditure on prevention	23	23	27	31	34	32	33

4.2.1. HC.6.4 Prevention of non-communicable diseases

Almost two thirds of expenditure on non-communicable diseases as shown in section 3 for 2006/07 is available for a time series. There has generally been a rise in expenditure in this sub-category over the period. Note however, the decrease in expenditure on pharmaceuticals post 2004/05. In 2005, the price of branded medicines fell by 7%, following a renegotiation of the *Pharmaceutical Price Regulation System*²⁸, and the price of generic medicine were reduced on a number of occasions post 2005 as part of the arrangement under the *Contractual Framework for Community Pharmacy*²⁹.

Also, the introduction of the Quality and Outcomes Framework in 2004/05 led to a sharp rise in expenditure on prevention. Since the majority of QOF points awarded for preventative activities are for the prevention of non-communicable diseases, expenditure in this sub-category of prevention was most affected by its introduction.

4.2.2. HC.6.1 Maternal and child health; family planning and counselling

The entire maternal and child health category of prevention expenditure has been included in the time series as shown in Table 5. The majority of expenditure in HC.6.1 is taken from the NHS Reference Costs, i.e. expenditure on maternity services, family planning services, health visiting group services and neonatal audiological screening. Over time, the codes under the Reference Costs have changed. This makes comparison, particularly in the former years, troublesome. In particular, for the years 2000/01 and 2001/02, it has been impossible to estimate expenditure on family planning and neonatal audiological screening from the NHS Reference Costs. Therefore, some of the apparent rises in expenditure on prevention in maternal and child health over the time period depicted are due to changes in the way the data are recorded, not just changes in actual expenditure.

4.2.3. HC.6.3 Prevention of communicable diseases

The majority of expenditure on the prevention of communicable diseases is via central budgets, which has data only for 2006/07. Expenditure data that is available for a time series is that on community vaccinations (contributes to the immunisation part of subsection HC.6.3), which is available via the NHS reference cost data, and on the Quality and Outcomes Framework. Since expenditure on these two items comprise only approximately one fifth of expenditure on the prevention of communicable diseases, it is difficult to draw any conclusions as to how expenditure has changed over time for this subsection HC.6.3.

Note that expenditure under the sub-category is likely to rise considerably in 2008/09 and 2009/10 with the introduction of the HPV vaccine and the purchasing of pandemic influenza countermeasures.

4.2.4. HC.6.2 School health services

As in sub-section HC.6.1, estimates of expenditure on school health services are taken from the NHS reference costs. Again, this poses difficulties when comparing over time, since the reference costs codes have changed somewhat. If, however, we consider expenditure from 2003/04 (when Reference Costs in this category begin to stabilise), expenditure on this category has risen fairly steeply year on year.

4.2.5. HC.6.9 All other miscellaneous public health services

In 2003/04, the Public Health Laboratory Service, the Microbiological Research Authority, the National Focus for Chemical Incidents, the Regional Provider Units and the National Poisons Information Services combined to form the Health Protection Agency. The expenditures of these predecessors have not been recorded in our estimations of prevention expenditure over the time period 2000/01-2002/03, since data are not comparable. We therefore see a significant rise in expenditure between 2002/03 and 2003/04 in this sub-category (see Figure 3, above).

In order to estimate charitable expenditure on prevention activities, we consider expenditure only by the British Heart Foundation, the charity identified as having the largest preventative expenditure in England, and assume that it contributes a constant proportion of total charitable expenditure as in 2006/07. (See Annex A for more details.) This may take away, somewhat, from the accuracy of expenditure estimates over the time series.

5. A comparison of expenditure on prevention and public health services in Primary Care Trusts (PCTs)

This section looks at comparisons of expenditure on public health and prevention between Primary Care Trusts (PCTs), the second remit of Health England. As with international comparisons, comparing expenditure on prevention and public health in PCTs will allow for some identification of those PCTs spending a lot on prevention and those spending only a little. We study a time series of 4 years in this section, with the aim of identifying patterns in spend on prevention by PCTs over time.

5.1. Sources and methods in estimations

There is a noticeable lack of data at the PCT level for health expenditure that can be used to draw conclusions as to diversity of expenditure on prevention among PCTs. The only two categories where data are largely available are in “maternal and child health” (HC.6.1 in OECD’s *System of Health Accounts*) and in “pharmaceuticals” (part of HC.6.4).

Expenditure on maternal and child health is mainly taken from the NHS Reference Cost³⁰ data, although there is some spend on the Quality and Outcome Framework (QOF)³¹ and pharmaceuticals for maternity services. NHS reference cost data are available broken down by provider, with the number of units of activity performed under each provider. Since comparisons are by PCT here, a mapping tool, developed by the Department of Health, was used to convert expenditure by provider to expenditure by PCT³². This does mean that the data are partially imputed rather than directly measured, and therefore that conclusions may be less robust.

Expenditure on pharmaceuticals is taken from the prescription cost analysis, available on the Information Centre website³³.

Preventative spend on maternal and child health accounts for approximately 17% of total expenditure on prevention and public health, whilst spend on pharmaceuticals accounts for just over 26%. Together then, spend on maternal and child health and pharmaceuticals accounts for just under half of all expenditure on prevention and public health.

In order to control for differences between PCTs in terms of population size and population need (for example an older population will require more resources), total expenditure on prevention in maternal and child health and preventative pharmaceutical expenditure have been expressed as a share of the PCT allocation of resources. Resources are allocated to PCTs using the weighted capitation formula, which sets the allocations for each PCT based on the age distribution of the population, additional need and unavoidable geographical variations in the cost of providing services. Thus, differences in need have been allowed for. Expenditure on public health and prevention, by PCT, is therefore shown as a percentage of total expenditure. This mirrors international comparisons of public health and prevention expenditure as a percentage of each country’s total health care expenditure.

Note also that another method of controlling for need in expenditure on preventative pharmaceuticals is considered in section 5.2.1. This method controls expenditure by *Specific Therapeutic group Age-sex weighting Related Prescribing Units* (STAR-PU)³⁴. Controlling for the number of prescribing units takes into account the general pattern that

the elderly are prescribed more medication than younger adult patients. In addition, STAR-PU controls for sex and for specific therapeutic groups in a population.

Results are shown comparing expenditure on the relevant preventative activity in year x with year y, in order to identify stability in expenditure on prevention in PCTs over time. Consistency in spend is identified both over a 3-year and 1-year time period to see whether the time gap affects the patterns. In addition, this section looks at whether PCTs spend similar proportions of their resource allocation on the relevant preventative activity.

5.2. Results

5.2.1. Pharmaceuticals

This sub-section shows the results of the comparison analysis for expenditure on preventative pharmaceuticals by PCTs. Figure 4 looks at how expenditure changes over a 3 year time period, whilst Figure 5 considers how expenditure changes over a 1 year time period. Figure 4 suggests that there is a lot of stability over time in expenditure on preventative pharmaceuticals, with all PCTs spending slightly smaller proportions of resource allocation on preventative pharmaceuticals in 2006/7, than in 2003/04. Figure 4 also shows that expenditure on preventative pharmaceuticals, as a percentage of resource allocation, has a share of around 3-5% for the majority of PCTs in 2003/04, and a share of 2-4% in 2006/07. There are, however, outliers to this pattern, with a minority of PCTs spending over 6% of total resource allocation on preventative pharmaceuticals. Again, these PCTs with high levels of expenditure on preventative pharmaceuticals have spending patterns that are consistent over time. Note that spend on drugs has fallen, as a percentage of resource allocation, between 2003/04 and 2006/07, largely because of price reductions in pharmaceuticals³⁵ occurring during a period of considerable funding growth.

The PCT with the highest expenditure on preventative pharmaceuticals, as a proportion of resource allocation, spends just over 10 times as big a share of their resource allocation than the lowest spending PCT, in all years considered (note that outliers are not seen to nearly the same extent when controlling by STAR-PU – discussed later in this sub-section).

Figure 4: Expenditure on preventative pharmaceuticals (% of total resource allocation), 2003/04 and 2006/07

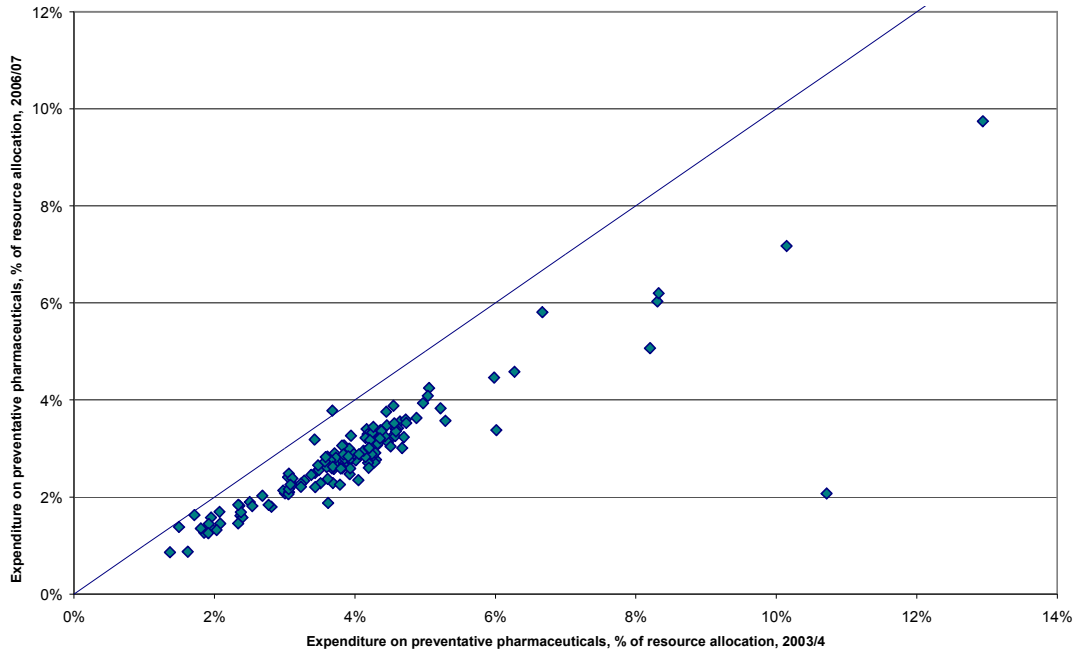
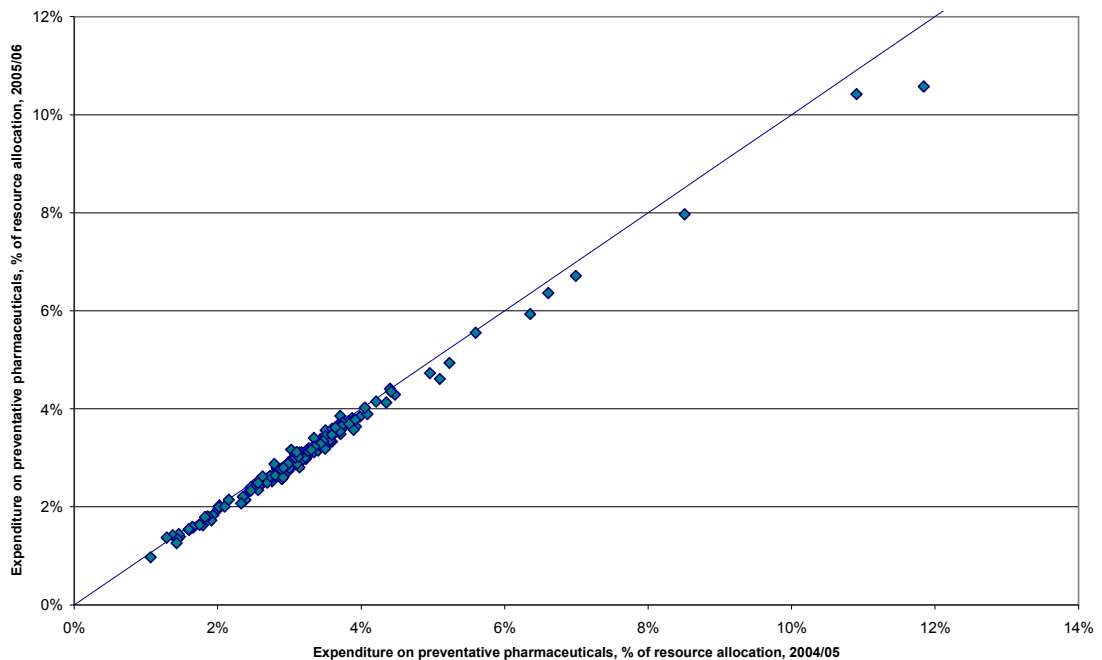


Figure 5, below, compares expenditure on preventative pharmaceuticals in 2005 and 2006. The tighter cluster of data points along the 45° line suggest that spend in the two periods by PCT was almost identical.

Figure 5: Expenditure on preventative pharmaceuticals (% of total resource allocation), 2004/05 and 2005/06



When considering expenditure on preventative pharmaceuticals as a share of total resource allocation, the difference between expenditure for the highest spender and lowest spender is rather substantial. The following section therefore addresses the issue of using resource allocation, or something else, as the control variable for expenditure on preventative pharmaceuticals and how this affects results. Figures 6 and 7, below, show expenditure on preventative pharmaceuticals per STAR-PU. Whilst the figures show a very similar pattern to Figures 4 and 5, with a lot of stability in expenditure over time by PCT, the difference between the highest spender and the lowest spender appears, graphically, to be smaller.

Figure 6: Expenditure on preventative pharmaceuticals (per STAR-PU), 2003/04 and 2006/07

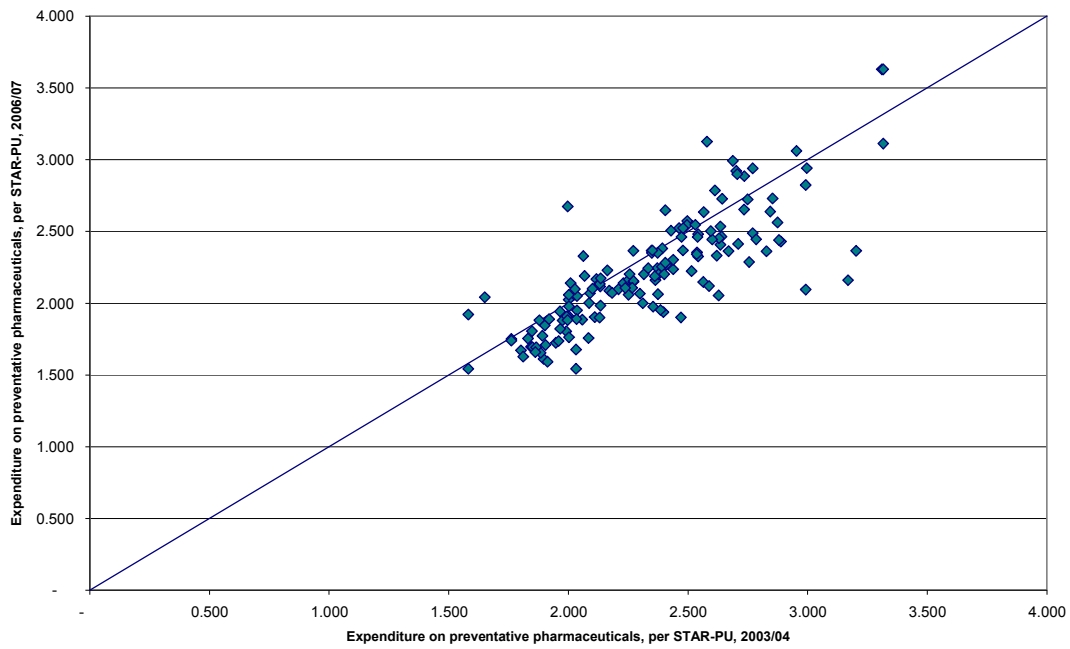
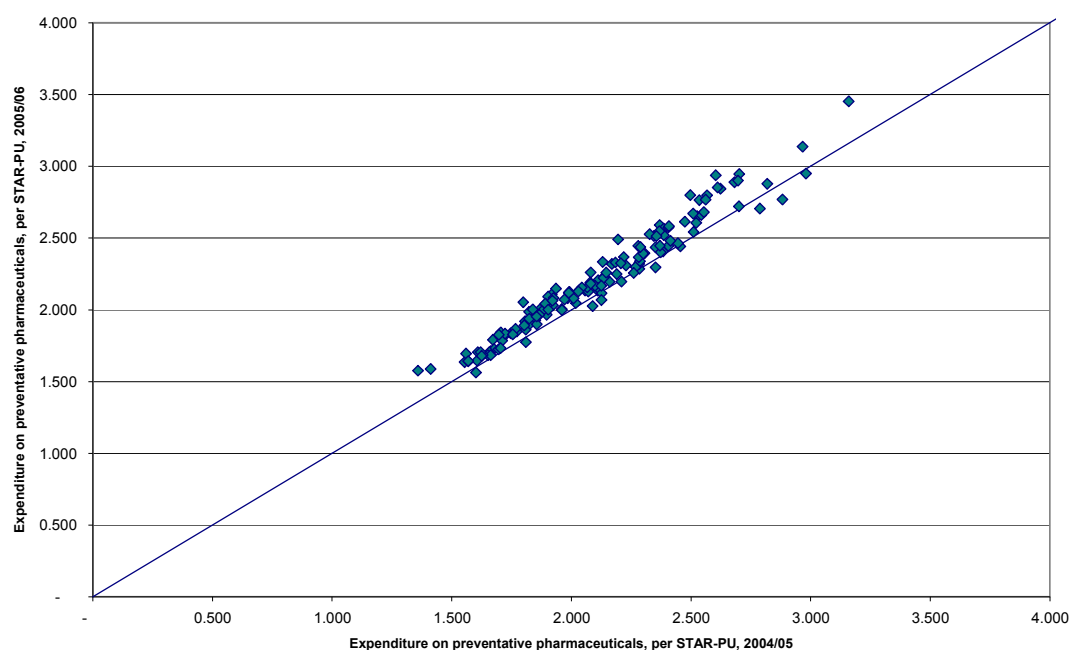


Figure 7: Expenditure on preventative pharmaceuticals (per STAR-PU), 2004/05 and 2005/06



The average, or mean, expenditure on preventative pharmaceuticals, firstly as a percentage of resource allocation, and secondly per STAR-PU, over the time series is shown in Table 6, below. Table 6 also gives an indication as to the spread around the mean, by recording the difference between the highest spender and the mean, as a multiple of the mean, and the lowest spender and the mean, again as a multiple of the mean. (This aids comparison across the different data units.) The results clearly suggest that there is a greater difference between the highest spender on preventative pharmaceuticals and the mean when we control expenditure by resource allocation than when we control by STAR-PU. The results also show that there is less difference between the lowest spender and the mean, both controlling expenditure by resource allocation and by STAR-PU.

Table 6: Mean expenditure on preventative pharmaceuticals and measures of dispersion around the mean

<i>Expenditure on preventative pharmaceuticals, % of resource allocation</i>				
	<i>2003/04</i>	<i>2004/05</i>	<i>2005/06</i>	<i>2006/07</i>
Mean expenditure, % of resource allocation	4.07%	3.31%	3.17%	2.91%
Highest spender, difference from mean as a multiple of the mean	2.56	2.58	2.34	2.35
Lowest spender, difference from mean as a multiple of the mean	-0.66	-0.68	-0.69	-0.70
<i>Expenditure on preventative pharmaceuticals, per STAR-PU</i>				
	<i>2003/04</i>	<i>2004/05</i>	<i>2005/06</i>	<i>2006/07</i>
Mean expenditure, per STAR-PU	2.32	2.10	2.20	2.21
Highest spender, difference from mean as a multiple of the mean	0.43	0.50	0.57	0.64
Lowest spender, difference from mean as a multiple of the mean	-0.32	-0.35	-0.29	-0.30

5.2.2. Maternal and Child Health

This sub-section considers expenditure on prevention in maternal and child health among PCTs. Figure 8, below, shows that, compared to PCT expenditure on preventative pharmaceuticals, there is much less stability over time when considering expenditure on prevention in maternal and child health within PCTs. Expenditure on prevention in maternal and child health tends to be between 1-2% of total resource allocation for the majority of PCTs.

In 2003/04, the highest spending PCT spent 3 times as large a share of their resource allocation on prevention in maternal and child health than the lowest spending PCT. This difference increased to 13-fold in 2006/07.

Figure 8: Expenditure on prevention in maternal and child health (% of total resource allocation), 2003/04 and 2006/07

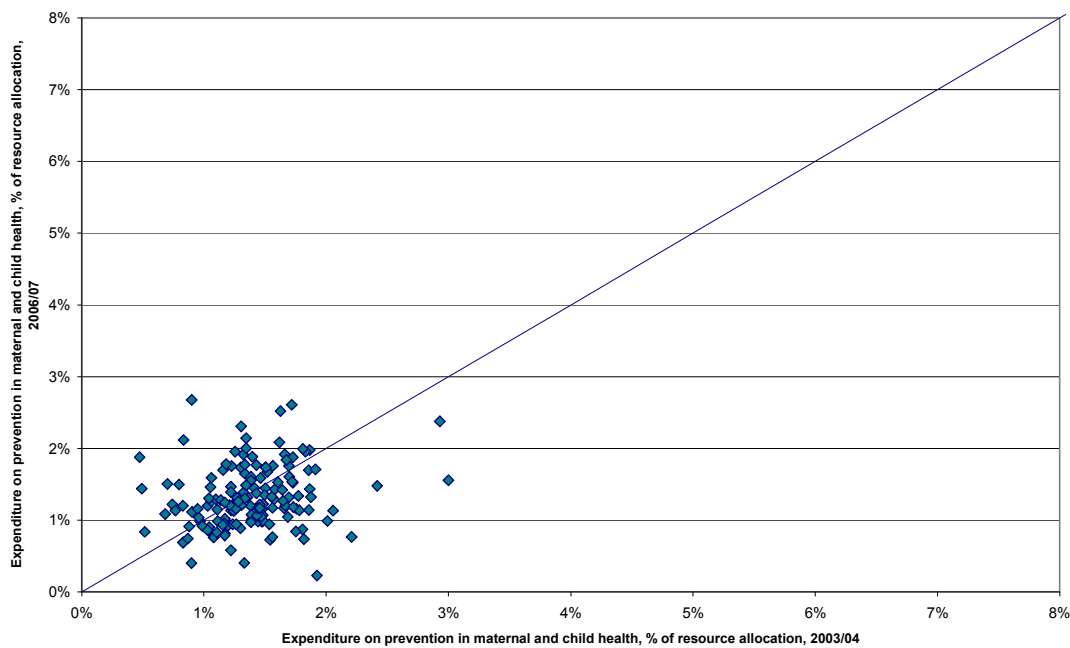
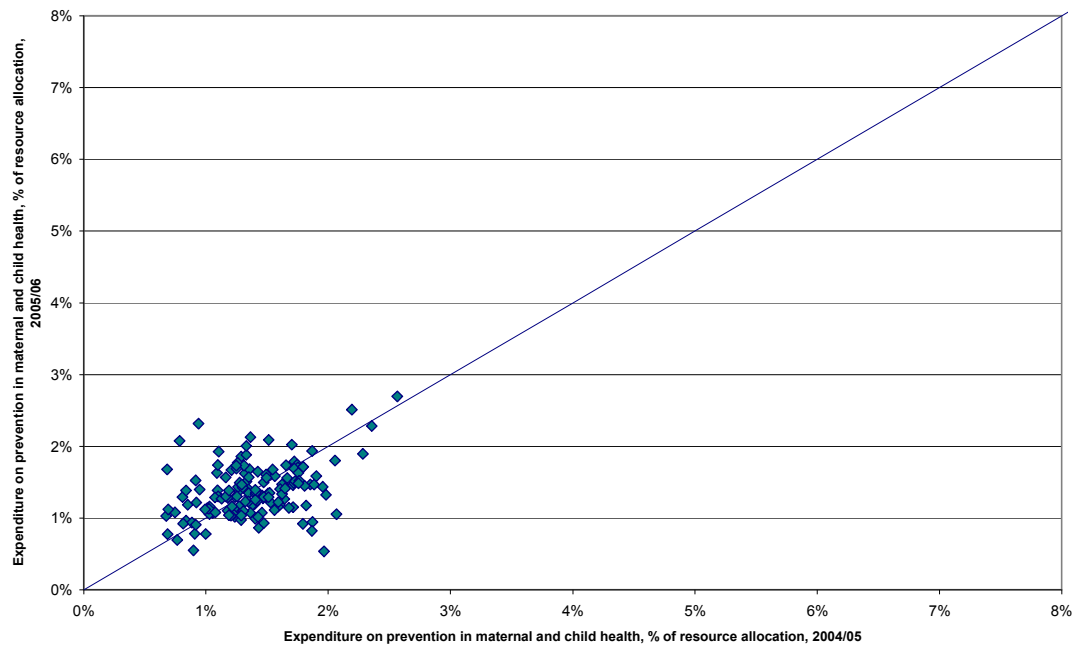


Figure 9 shows that, even when looking at consecutive years, expenditure on prevention in maternal and child health does not remain a regular proportion of resource allocation.

Figure 9: Expenditure on prevention in maternal and child health (% of total resource allocation), 2004/05 and 2005/06



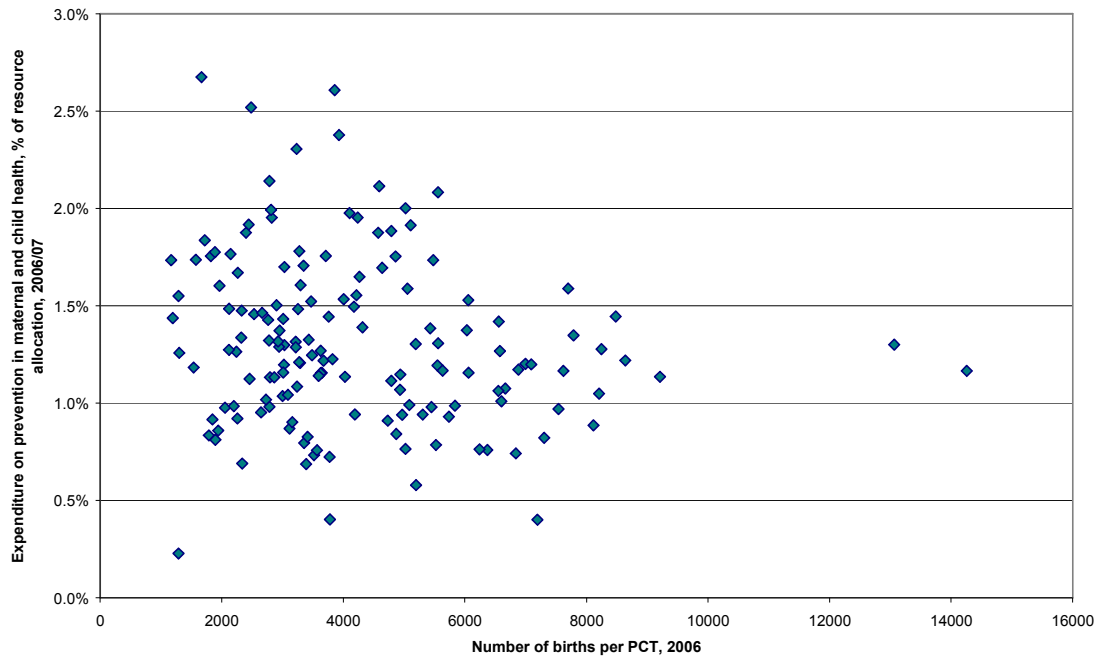
5.3. Discussion of results

This section has shown that the majority of PCTs do spend similar proportions of their resource allocation on preventative pharmaceuticals and on prevention in maternal and child health. However, we have also seen that, for preventative pharmaceuticals, a minority of PCTs do spend very high proportions of their resource allocation, with this pattern remaining constant over the 4 year time period considered. However, results in Section 5.2.1 also show that this pattern is sensitive to the control variable used, since the difference between expenditure by the highest spender and mean expenditure reduces substantially when considering expenditure on preventative pharmaceuticals per STAR-PU as opposed to as a proportion of resource allocation.

This section has also shown that there is a great deal of stability over time in expenditure on prevention and public health in pharmaceuticals. This may be because medicines prescribed for preventative purposes are, in the most part, prescribed for long-term conditions. Table A.5. in Annex A shows that the pharmaceuticals with the highest level of expenditure are angiotensin-converting enzyme inhibitors, for the prevention of hypertension and congestive heart failure, and lipid-regulating drugs, for the prevention of cardiovascular disease. Hence, a lot of the expenditure on pharmaceuticals for prevention and public health might be expected to be consistent over time.

In contrast, expenditure on prevention and public health in maternal and child health, as a percentage of total resource allocation, varies much more over time. We may hypothesise that expenditure on prevention in maternal and child health might be proportionate to the birth rate in a given PCT. However, Figure 10, below, suggests that this is not the case. Indeed, there seems to be no distinct correlation between the birth rate and spend on prevention in maternal and child health, at least for the year shown.

Figure 10: A comparison of birth rates and expenditure on prevention in maternal and child health, 2006/07



This report does not go into any detail as to why we see these patterns emerging. Therefore, perhaps the best initial use of findings such as those shown above are to prompt questions and suggest areas for further investigation and research, rather than giving a definitive diagnosis at this stage.

6. Total Health Expenditure

The Office for National Statistics published, for the years 1997 to 2002, a set of *Experimental Health Accounts* for the UK, calculated according to the OECD *System of Health Accounts* methodology, as far as possible. This section of the report updates these estimates along very similar lines, to provide estimates up to, and including, 2007. It should be noted that these figures are not provided to the same sub-category levels as those for prevention expenditure.

6.1. National Accounts Public Health Expenditure versus the OECD definition of total health expenditure

ONS has extracted from the *National Accounts* estimates of total public expenditure on health. In order to bring this estimation in line with total expenditures on health, as defined by the OECD *System of Health Accounts*, a number of changes need to be made to that estimate. Table 7 summarises these changes, along with the sources used to estimate each change in the report. Note that estimations for each addition or subtraction to the public health expenditure base figure are discussed in more detail throughout the rest of this section of the report (as indicated by the first column in the table).

Table 7: Components of total health expenditure

For further description	Component	Addition or subtraction	Source
	Government current expenditure on health care	Addition	Consistent with data submitted to Eurostat and published on ONS website
	Government capital expenditure on health care	Addition	Consistent with data submitted to Eurostat and published on ONS website
6.2.1	Expenditure on health care in the armed forces	Addition	Army Quinquennial Review, Navy Quinquennial Review, RAF Quinquennial Review, Medical Supplies Agency and Surgeon General's department, see ONS Experimental Accounts
6.2.2	Expenditure on health care in prisons	Addition	HM Prison Service, Scottish Prison Service and Northern Ireland Prison Service, see ONS Experimental Accounts
6.2.3	Expenditure on Research and Development in health by the NHS	Subtraction	PESA 2008 (expenditure by government departments other than the Department of Health) Science, Engineering and Technology statistics (expenditure by the DH and devolved administrations)
6.2.4	Expenditure on education and training of health personnel by the NHS	Subtraction	Multi-Profession Education and Training Levy
6.2.5	Household expenditure on healthcare / Capital expenditure by private sector health care providers	Addition	Blue Book 2008 / Estimated using data consistent with Blue Book 2008, and data submitted to Eurostat and published on ONS website
6.2.6	Expenditure on health care by non-profit institutions serving households (mainly charities)	Addition	IFF Research Ltd, "Third Sector Market Mapping"
6.2.7	Government benefits paid to those providing home health care for their relatives	Addition	[Omitted – mainly to enhance international comparability]
6.2.7	Occupational health care	Addition	[Omitted – mainly to enhance international comparability]
6.2.7	Non-NHS expenditure on nursing care in nursing homes	Addition	[Most costs covered by NHS expenditure]

6.2. Additions and subtractions in the estimation of total health expenditure

6.2.1. Armed forces healthcare expenditure

In accordance with ONS *Experimental Health Accounts*, estimates of expenditure on health in the armed forces have been made by taking point estimates from the five sources listed below. These are not routinely available and have been provided to the Department of Health for this exercise. These are then scaled up or down for changes in the workforce of the respective parts of the armed forces³⁶ and adjusted for changes in prices over the time-period (using the HCHS pay and prices index³⁷ which looks specifically at healthcare costs).

Table 8: Estimated spending on health by armed forces (£million), 2000-2007

	2000	2001	2002	2003	2004	2005	2006	2007
Army Quinquennial Review	102.3	106.9	111.4	118.5	124.0	125.7	128.7	132.4
Navy Quinquennial Review	20.4	21.1	21.6	22.5	23.1	23.4	24.0	24.7
RAF Quinquennial Review	21.2	21.8	22.4	23.4	24.4	24.8	24.5	23.8
Medical Supplies Agency	49.5	51.6	53.4	56.4	58.7	59.5	60.3	61.3
Surgeon General's Department	169.3	176.5	182.7	193.2	201.0	203.5	206.5	209.7
Total	362.6	377.9	391.4	414.0	431.1	436.8	444.1	451.9

6.2.2. Prisons healthcare expenditure

Expenditure on health in prisons has been estimated in the same manner as for the armed forces. This uses point expenditure estimates from the administrations that are not publicly available, scaled up for prison population size in England & Wales³⁸, Scotland³⁹ and Northern Ireland⁴⁰ and for changes in prices. However, since April 2005, PCTs in England have taken over responsibility for the provision of healthcare in prisons⁴¹, so from this date, the adjustment no longer needs to be made for England expenditure. As this transfer has occurred over three years, we have assumed that English expenditure in 2003 is scaled down by a third and in 2004 by two thirds.

Table 9: Estimated spending on health in prisons (£million), 2000-2007

	2000	2001	2002	2003	2004	2005	2006	2007
England & Wales	103.3	110.6	122.7	89.0	46.5	0.0	0.0	0.0
Scotland	8.5	9.2	10.0	10.8	11.5	12.1	13.1	13.9
Northern Ireland	4.0	3.6	4.2	5.0	5.6	6.0	6.8	7.3
United Kingdom	115.8	123.4	136.9	104.8	63.6	18.0	19.9	21.2

6.2.3. Research & Development expenditure

The following table shows estimates of Research & Development expenditure in the Department of Health and National Health Service in England that must be subtracted from the ONS *Blue Book Public Health Expenditure* definition⁴². Further estimates are available for the devolved administrations, though these are not provided in routine, publicly available data sources. In 1999/2000, the Welsh administration estimated R&D expenditure in health at £14.7m, the Scottish £40.3m and the Northern Irish £7.7m,

totalling £62.6m. Assuming these estimations of expenditure rise in the same proportions as English expenditure in health R&D, this yields the following national estimate:

Table 10: Estimated R&D expenditure in the Department of Health and the NHS (£million), 2000-2007

	2000	2001	2002	2003	2004	2005	2006	2007
England	476	498	512	573	620	632	635	636
Wales	15	15	16	18	19	20	20	20
Scotland	41	42	44	49	53	54	54	54
Northern Ireland	8	8	8	9	10	10	10	10
United Kingdom	539	564	580	649	702	716	720	720

6.2.4. Education & Training

The sole source of E&T expenditure in the NHS is the MPET (Multi-Profession Education and Training Levy).⁴³ While data on this is available, the MPET expenditure needs to be examined and apportioned between those aspects that are health-related and those that are actually health care. The three areas of MPET expenditure are MADEL,⁴⁴ NMET⁴⁵ and SIFT.⁴⁶ Previous estimates in the ONS health accounts work apportioned all of MADEL to education and training, 50% of NMET and none of SIFT. Assuming their shares remain constant, this yields the following expenditure for England to be excluded:

Table 11: Estimated spending on education and training in the NHS in England (£million), 1999/00-2007/08

	1999/0	2000/1	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	2007/8
MADEL	614	701	763	1,022	1,229	1,314	1,361	1,409	1,459
NMET	400	488	584	668	758	853	975	1,114	1,273
SIFT	0	0	0	0	0	0	0	0	0
MPET	1,014	1,189	1,347	1,690	1,987	2,167	2,335	2,523	2,733

If we assume similar spending per head of the population throughout the UK on education and training, estimates of expenditure at the UK level are as follows (apportioned to calendar years assuming that expenditure is constant in each quarter):

Table 12: Estimated spending on education and training in the UK (£million), 2000-2007

	2000	2001	2002	2003	2004	2005	2006	2007
England	1,145	1,307	1,604	1,913	2,122	2,293	2,476	2,680
Wales	68	77	94	112	125	134	145	156
Scotland	118	134	163	194	215	232	250	270
Northern Ireland	39	45	55	65	72	78	85	92
United Kingdom	1,370	1,563	1,917	2,285	2,534	2,737	2,955	3,198

6.2.5. Payments by private individuals

Household expenditure on health insurance⁴⁷ and out-of-pocket payments⁴⁸, as shown in Table 13, also need to be included. These can be calculated from UK-level national statistics released by ONS and, again, mark a significant addition to the public expenditure estimate as in the *National Accounts*.

Total household expenditure also includes capital expenditure by private sector health care providers. No published data is available for this component but a broad estimate was made available by ONS for this purpose.

Table 13: Estimated household expenditure on health insurance and out-of-pocket payments (£million), 2000-2007

	2000	2001	2002	2003	2004	2005	2006	2007
Household health insurance	1,108	1,021	1,075	1,116	1,188	1,270	1,312	1,300
Medical products and equipment	5,265	5,722	6,266	6,542	6,924	6,893	7,141	7,315
Out-patient services	2,178	2,344	2,422	2,553	2,747	2,909	2,983	3,459
Hospital services	1,765	1,910	2,090	2,240	2,358	2,504	2,620	2,724
Total consumption expenditure	9,208	9,976	10,778	11,335	12,029	12,306	12,744	13,498

6.2.6. Non Profit Institutions Serving Households (NPISH) sector

Finally, a recent report commissioned by the Department of Health has provided point estimates for expenditure on health and social care (separately) for 2006. These are £4.7bn and £7.2bn respectively, combining to a total of £11.9bn.⁴⁹ This is a major source of expenditure in addition to the *National Accounts* estimate of public expenditure on health. The following table adjusts this for the HCHS pay and prices index to provide estimates for previous years.

Table 14: Estimated household Third Sector expenditure on health (£million), 2000-2007

	2000	2001	2002	2003	2004	2005	2006	2007
Third Sector Spend	3,666	3,853	3,987	4,194	4,334	4,495	4,700	4,915

6.2.7. Components omitted

Other countries tend not to include expenditure on government benefits paid to those providing home health care for their relatives and occupational health care. Hence, our exclusion on these increases international comparability.

6.3. Total Health Expenditure in the UK

Combining all these factors, the following table provides estimates for total health expenditure in the UK.

Table 15: Estimated total health expenditure in the UK by area of spend (£million), 2000-2007

	2000	2001	2002	2003	2004	2005	2006	2007
National Accounts Health Expenditure	56 320	61 382	67 544	73 924	82 123	88 057	95 470	100 432
plus Armed Forces Spend	363	378	391	414	431	437	444	452
plus Prisons Spend	116	123	137	105	64	18	20	21
less R&D (other departments)	356	404	407	454	474	549	600	615
less R&D (DH and devolved)	539	564	580	649	702	716	720	720
less Education & Training	1,370	1,563	1,917	2,285	2,534	2,737	2,955	3,198
plus Private Spend	10 545	10 994	12 397	13 442	13 461	14 155	15 369	16 621
plus Third Sector Spend	3,666	3,853	3,987	4,194	4,334	4,495	4,700	4,915
Total Health Expenditure	68 745	74 200	81 553	88 691	96 703	103 159	111 728	117 907

6.4. Total Health Expenditure in England

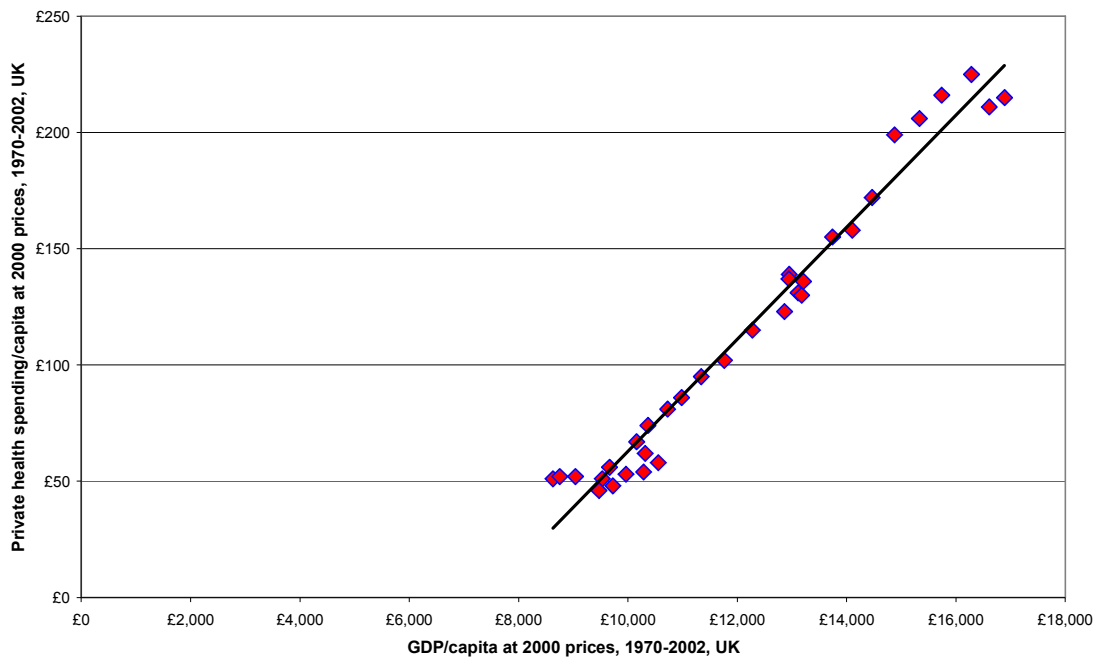
This report has looked at estimating expenditure on prevention and public health *in England*. We therefore need some way of apportioning total health expenditure in the UK to an England level, in order to estimate how much of total health expenditure in England goes toward preventative activities.

As has been described in this section, expenditures on health in prisons and research and development are already broken down into expenditure by each devolved administration.

We weight public expenditure by total health expenditure in each of the devolved administrations. Figures for public expenditure on healthcare in England, Scotland, Wales and N Ireland are available via the Public Expenditure Statistical Analyses 2008 (PESA 2008)⁵⁰.

We weight private spending by a measure of income per capita in each of the four UK countries*. This assumes that spending on private health care increases with income. This hypothesis is supported by Figure 11, which shows the relationship between GDP per capita and private health expenditure per capita in the UK over recent decades (using OECD data).

Figure 11: GDP per capita and Private Health Expenditure per capita in the UK at constant 2000 prices, 1970-2002



* Our weightings actually use GVA per capita from ONS. In the UK, three theoretical approaches are used to estimate GDP: 'production', 'income' and 'expenditure'. When using the production or income approaches, the contribution to the economy of each industry or sector is measured using GVA. GVA + taxes on products, minus subsidies on products = GDP.

Since England has a higher income per capita than the other devolved administrations, we therefore assume that more is spent on private health care in England as compared to other countries in the UK.

All other sources of expenditure were apportioned using the different populations served in each of the devolved administrations (which is the Barnett methodology⁵¹ for setting budgets for the Scottish Parliament, the National Assembly of Wales and the Northern Ireland Assembly).

Table 16: Estimated total health expenditure in the UK by country (£billion), 2000-2007

	2000	2001	2002	2003	2004	2005	2006	2007
England	56.4	61.4	67.2	73.0	80.0	85.2	92.1	97.6
Wales	3.5	3.6	4.0	4.5	4.9	5.2	5.6	5.8
Scotland	6.7	7.0	7.9	8.5	9.0	9.7	10.6	11.0
Northern Ireland	2.1	2.2	2.5	2.6	2.9	3.0	3.3	3.5
United Kingdom	68.7	74.2	81.6	88.7	96.7	103.1	111.7	117.8

Apportioning in this way, total health expenditure in England in 2007 was approximately £97.6 billion.

Since we estimate expenditure on public health and prevention in England for financial years, as opposed to calendar years, we apportion expenditure estimates as shown in Table 15 to financial years (assuming that expenditure in each quarter of the calendar year is constant). Results for expenditure in England are shown in Table 16.

Table 17: Estimated total health expenditure in England (£billion), 2000/01-2006/07

	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
England	57.6	62.8	68.6	74.8	81.3	86.9	93.5

We therefore have total health expenditure in England in 2006/07 as £93.5 billion. This provides the denominator for the estimate of expenditure on prevention and public health

Annex A. Calculating Expenditure on Prevention and Public Health in England

This annex details the precise sources and methods of calculation involved in estimating expenditure on prevention and public health in England under the OECD *Systems of Accounts* definition. Both Annex A and Annex B aim to provide a more technical and detailed overview of the report, and may therefore be of interest to analysts involved in future projects estimating both expenditure on prevention and public health (Annex A) and total health care expenditure (Annex B).

This annex gives details, where appropriate, on each expenditure source quoted in Table 3, with emphasis on the following points:

- i) The data source (the contact name/organisation/publication for the data)
- ii) The calculations carried out on the data
- iii) The assumptions or approximations made
- iv) Whether data is available for a time series or just a current year, i.e. whether and how the source was used in the time series of prevention, as detailed in Section 4

A.1. HC.6.1 Maternal and child health; family planning and counselling

A.1.1. Maternity services

- i) Maternity services include maternity outpatient attendances and ante, and postnatal visits. Expenditure on these activities is taken from NHS Reference Costs⁵², and includes combined NHS Trust and PCT costs schedules (Appendix NSRC4). NHS Reference Costs are compiled by collecting data from over 400 NHS provider organisations. Reference costs represent the average cost to the NHS of providing a defined service in a given financial year.

The following codes were used for ante and post natal visits: CN402 (in sheet TCSPVN), CMANV & CMPNV (in sheet TCSCMV). And for maternity outpatient attendances: 501MD, 501MO, 501MR, 501MS, 560MD, 560MO, 560MR, 560MS (in sheets TCLFAMFF, TCLFAMNFF, TCLFASFF, TCLFASNFF, TCLFUMFF, TCLFUMNFF, TCLFUSFF, TCLFUSNFF, TNCLFAMFF, TNCLFAMNFF, TNCLFASFF, TNCLFASNFF, TNCLFUMFF, TNCLFUMNFF, TNCLFUSFF, TNCLFUSNFF⁵³).

- ii) In order to calculate expenditure, we have multiplied the total number of visits by the national average unit cost. For example, see the following table, taken from the NHS Reference Costs, showing the costs for ante and postnatal visits.

Table A.1: NHS Reference Costs: an example

Service	Description	No. of Visits	National Average Unit cost (£)
CMANV	Ante Natal Visits	2,479,331	41
CMPNV	Post Natal Visits	2,838,974	51

- iii) Codes change periodically, particularly between 2005/6 and 2006/7. Some data is not collected in earlier years with the reference cost programme expanding each

year to cover more activity. This makes comparing expenditure over years problematic (as is discussed with reference to particular examples in Section 4).

- iv) NHS Reference Cost data has been collected on an annual basis since the financial year 1997/98. Data for 2006/07 was released in February 2008.

A.1.2. Family planning clinics

- i) Again, expenditure on family planning clinics are taken from the NHS Reference Cost data, using code FPC (in sheets TCLFAMFF, TCLFAMNFF, TCLFASFF, TCLFASNFF, TCLFUMFF, TCLFUMNFF, TCLFUSFF, TCLFUSNFF, TNCLFAMFF, TNCLFAMNFF, TNCLFASFF, TNCLFASNFF, TNCLFUMFF, TNCLFUMNFF, TNCLFUSFF, TNCLFUSNFF)⁵⁴

For details on points ii), iii) and iv) see A.1.1

A.1.3. Contraceptives

- i) Data is based on the Prescription Cost analysis on the Information Centre website⁵⁵. However, detailed information was provided by Paul Hathaway at the Prescription Pricing Division of the NHS Business Services Authority (Paul.Hathaway@ppa.nhs.uk); also help from Graham Mitchell (Graham.Mitchell@ppa.nhs.uk), and Kevin Illingworth (Kevin.Illingworth@ppa.nhs.uk). Data on contraceptives is found in chapter 7, section 3 of the BNF.
- ii) N/A
- iii) These data are based in the Net Ingredient cost, which is listed in the British National Formulary, reduced by the national average discount and increased by the average container cost per preparation. As such they may not entirely represent the funds that were actually received by pharmacies for those drugs.
- iv) The BNF publishes data biannually, with the most recent version published September 2007.

A.1.4. Health visiting group services

- i) Again, expenditure on health visiting group services is taken from the NHS Reference Costs, using code CN403FG (in sheet TCSHVO).

For details on points ii), iii) and iv) see A.1.1.

A.1.5. Neonatal audiological screening

- i) Expenditure on neonatal audiological screening is taken from NHS Reference Costs, using code ASSNS (in sheet TAUNDS)

For details on points ii), iii) and iv) see A.1.1.

A.1.6. Quality and Outcomes Framework

- i) Quality and Outcomes Framework data is taken from the NHS Information Centre⁵⁶. Data is measured, and then supplied, to the Information Centre by the Quality Management Analysis System (QMAS), a national IT system developed by NHS Connecting for Health (CfH). The NHS Information Centre says that QMAS ensures consistency in the calculation of quality achievement and disease prevalence. Since data collection is linked to the payment system for achieving points, the coverage rate of supplying data is high.
- ii) The following table shows how many QOF points were achieved in each area in maternity and child health. To estimate average expenditure per point, total expenditure on QOF⁵⁷ was compared to total number of points achieved. Indicator MAT1 was considered secondary prevention with a total estimated QOF expenditure of £6m (49,500*£130) in 2006/7, whilst indicator CON1 and CON2 were considered primary prevention with a total estimated QOF expenditure of £2m. In this and all the following, the indicators were selected in agreement with clinical experts at Health England (Robert.Sherriff@nhs.net).

Table A.2: QOF points achieved in maternal and child health

		Points Achieved		
		2004/05	2005/06	2006/07
MAT1	Ante-natal care and screening are offered according to current local guidelines	50,550	50,088	49,500
CON1	The team has a written policy for responding to requests for emergency contraception	8,331	8,275	8,241
CON2	The team has a policy for providing pre-conceptual advice	8,215	8,253	8,227

Table A.3: QOF spend per point

	2004/5	2005/6	2006/7
Total expenditure on QOF (£m)	659	1,095	1,040
Total number of points (m)	7	8	8
Spend per point (£)	97	129	130

- iii) This assumes that expenditure per QOF point is an accurate measure of the cost of a GPs time and resource of administering a treatment. It also assumes a national average price per point, which is not the case. In reality, the payment depends upon practice size. Since the QOF system was only introduced in 2004, there will be a jump in expenditure on prevention at this time. However, we could qualify this, since although doctors were probably doing most of the things specified under the QOF payment scheme before the scheme was put in place, the QOF system essentially organises the actions of individual GP's into an organised programme of prevention, in line with OECD definitions (See Section 4).
- iv) The QOF system was introduced in April 2004, with data being made publicly available annually since then.

A.2. HC.6.2 School health services

A.2.1. School-based children's individual and group health services

- i) Expenditure on school-based individual and group health services are taken from the NHS Reference Cost data, using codes CN103FG and CN103FO (in sheet TCSSNO).

For details on points ii), iii) and iv) see A.1.1.

A.2.2. Healthy schools programme

- i) Expenditure on the *Healthy Schools Programme* is taken from the central budget. Data is not made publicly available on central budget expenditure. Data has been supplied as a one-off exercise by John Haworth (John.Haworth@dh.gsi.gov.uk), the Expenditure Data Manager in the Finance and Operations Directorate at the Department of Health. The Healthy Schools Programme is funded jointly by the Health Improvement and Protection Directorate at the Department of Health and the Department for Children, Schools and Family (DCSF)⁵⁸. Expenditure only by the Department of Health on the Healthy Schools Programme has been made available.
- ii) N/A
- iii) Data from the central budget gives expenditure allocated to a specific initiative, and does not therefore necessarily show an accurate portrayal of what is actually spent on the initiative in practice.
- iv) The detailed breakdowns into individual budgets are not made publicly available, leading to difficulties in obtaining this data. Further, since projects under central budget provision often change, sometimes year-on-year, it has been impossible to include expenditure on central budgets when analysing over a time series.

A.3. HC.6.3 Prevention of communicable diseases

A.3.1. Immunization

- i) A substantial sum of money from the central budget is allocated to delivering childhood and adult vaccination programmes against, for example, influenza and meningitis. Again, central budget expenditure allocations have been provided by John Haworth at the Department of Health (see A.2.2. i) for more information). There is also expenditure on immunisations from the NHS Reference Costs. The codes used are CN401 (in sheet TSCHVV), CN102 (in sheet TCSSNV) and CM15 (in sheet TCSCVac).

For details on points i), ii) and iii) see A.1.1 for NHS Reference Costs data and A.2.2 for Central Budget data.

A.3.2. Other infectious diseases

- i) Expenditure on preventing other infectious diseases that have not already been accounted for, for example Hepatitis C, TB, MRSA and vCJD, is taken from the central budget allocations data (See A.2.2. i) for more information).

For details on points ii), iii) and iv) see A.2.2.

A.3.3. Quality and Outcomes Framework

- i) See A.1.6. i)

- ii) The QOF points achieved in this category are shown in Table A.4, below. They include points achieved for providing influenza vaccinations to clinical at-risk patients. For details on calculating expenditure on QOF see A.1.6. ii)

Table A.4: QOF points achieved for prevention of communicable diseases

		Points Achieved		
		2004/05	2005/06	2006/07
CHD12	The percentage of patients with coronary heart disease who have a record of influenza immunisation in the preceding 1 September to 31 March	56,691	57,790	56,976
STROKE10	The percentage of patients with TIA or stroke who have had influenza immunisation in the preceding 1 September to 31 March	15,514	16,181	16,167
DM18	The percentage of patients with diabetes who have had influenza immunisation in the preceding 1 September to 31 March.	23,858	24,630	24,599
COPD8	The percentage of patients with COPD who have had influenza immunisation in the preceding 1 September to 31 March	48,588	49,542	49,443
ASTHMA7	The percentage of patients aged 16 and over with asthma who have had influenza immunisation in the preceding 1 September to 31 March	83,908	93,687	

For details on points iii) and iv) see A.1.6.

A.3.4. Reducing MRSA incidence

- i) This category looks at the expenditure allocated, via the central budget, to support local trusts in reducing the incidence of MRSA (see A.2.2. i) for more information on central budgets).

For detail on points ii), iii) and iv) see A.2.2.

A.4. HC.6.5 Prevention of non-communicable diseases

A.4.1. Pharmaceuticals

- i) This section includes all expenditure on pharmaceuticals with the aim of preventing non-communicable diseases. This data is taken from the British National Formulary (see A.1.3. i) for more information), with the items included in the total expenditure shown in Table A.5. The “BNF code” column details the chapter, followed by section, followed by paragraph (where appropriate).

Table A.5: Expenditure on pharmaceuticals for prevention of non-communicable diseases, 2007 (£m)

BNF code	Pharmaceutical	Expenditure
2.9.0	Aspirin	40.0
2.9.1	Thiazides And Related Diuretics	36.8
2.5.5	Angiotensin-Converting Enzyme Inhibitors	419.3
2.6.2	Calcium-Channel Blockers	166.4
2.4	Beta-Adrenoceptor Blocking Drugs	89.7
2.12	Lipid-Regulating Drugs	544.1

For details on points iii) and iv) see A.1.3.

A.4.2. Quality and Outcomes Framework

- i) See A.1.6. i)
- ii) There are many QOF points awarded for preventing non-communicable diseases. These are listed, along with the number of points achieved for each area in the following table. To calculate expenditure on QOF, see A.1.6. ii).

Table A.6: QOF points achieved for prevention of non-communicable diseases

		Points Achieved		
		2004/05	2005/06	2006/07
CHD3	The percentage of patients with coronary heart disease whose notes record smoking status in the past 15 months, except those who have never smoked where smoking status need be recorded only once since diagnosis	58,686	58,543	
CHD4	The percentage of patients with coronary heart disease who smoke, whose notes contain a record that smoking cessation advice or referral to a specialist service, where available, has been offered within the last 15 months	32,471	32,962	
CHD5	The percentage of patients with coronary heart disease whose notes have a record of blood pressure in the previous 15 months	59,219	58,652	58,450
CHD6	The percentage of patients with coronary heart disease in whom the last blood pressure reading (measured in the previous 15 months) is 150/90 or less	160,336	159,161	158,586
CHD7	The percentage of patients with coronary heart disease whose notes have a record of total cholesterol in the previous 15 months	56,361	57,627	57,700
CHD8	The percentage of patients with coronary heart disease whose last measured total cholesterol (measured in the previous 15 months) is 5 mmol/l or less	130,071	132,854	139,890
CHD9	The percentage of patients with coronary heart disease with a record in the previous 15 months that aspirin, an alternative anti-platelet therapy, or an anti-coagulant is being taken (unless a contraindication or side-effects are recorded)	56,866	58,090	58,071
CHD10	The percentage of patients with coronary heart disease who are currently treated with a beta blocker (unless a contraindication or side-effects are recorded)	57,732	58,136	56,895
CHD11	The percentage of patients with a history of myocardial infarction (diagnosed after 1 April 2003) who are currently treated with an ACE inhibitor or Angiotensin II antagonist	57,433	57,814	57,551
STROKE3	The percentage of patients with TIA or stroke who have a record of smoking status in the last 15 months, except those who have never smoked where smoking status need be recorded only once since diagnosis	24,618	24,896	
STROKE4	The percentage of patients with a history of TIA or stroke who smoke and whose notes contain a record that smoking cessation advice or referral to a specialist service, if available, has been offered in the last 15 months	16,033	16,298	
STROKE5	The percentage of patients with TIA or stroke who have a record of blood pressure in the notes in the preceding 15 months	16,720	16,682	16,642

STROKE6	The percentage of patients with a history of TIA or stroke in whom the last blood pressure reading (measured in the previous 15 months) is 150/90 or less	41,367	41,575	41,557
STROKE7	The percentage of patients with TIA or stroke who have a record of total cholesterol in the last 15 months	14,752	15,881	15,988
STROKE8	The percentage of patients with TIA or stroke whose last measured total cholesterol (measured in the previous 15 months) is 5 mmol/l or less	36,265	40,108	40,629
STROKE9	The percentage of patients with a stroke shown to be non-haemorrhagic, or a history of TIA, who have a record that aspirin, an alternative anti-platelet therapy, or an anti-coagulant is being taken (unless a contraindication or side-effects are recorded)	31,578	32,770	
STROKE12	The percentage of patients with a stroke shown to be non-haemorrhagic, or a history of TIA, who have a record that an anti-platelet agent (aspirin, clopidogrel, dipyridamole or a combination), or an anti-coagulant is being taken (unless a contraindication or side-effects are recorded)			32,848
BP1	The practice can produce a register of patients with established hypertension	76,878	75,663	50,220
BP2	The percentage of patients with hypertension whose notes record smoking status at least once since diagnosis	83,852	83,873	
BP3	The percentage of patients with hypertension who smoke, whose notes contain a record that smoking cessation advice or referral to a specialist service, if available, has been offered at least once	82,591	83,657	
BP4	The percentage of patients with hypertension in whom there is a record of the blood pressure in the previous 9 months	164,394	165,574	165,125
BP5	The percentage of patients with hypertension in whom the last blood pressure (measured in the previous 9 months) is 150/90 or less	442,091	457,596	467,674
DM2	The percentage of patients with diabetes whose notes record BMI in the previous 15 months	24,332	24,798	24,831
DM3	The percentage of patients with diabetes in whom there is a record of smoking status in the previous 15 months, except those who have never smoked where smoking status need be recorded only once since diagnosis	25,298	25,134	
DM4	The percentage of patients with diabetes who smoke and whose notes contain a record that smoking cessation advice or referral to a specialist service, where available, has been offered in the last 15 months	40,878	41,391	
DM8	The percentage of patients with diabetes who have a record of retinal screening in the previous 15 months	36,096	38,806	
DM11	The percentage of patients with diabetes who have a record of the blood pressure in the previous 15 months	25,455	25,171	25,068
DM12	The percentage of patients with diabetes in whom the last blood pressure is 145/85 or less	142,289	142,093	149,623
DM16	The percentage of patients with diabetes who have a record of total cholesterol in the previous 15 months	24,789	24,978	24,946
DM17	The percentage of patients with diabetes whose last measured total cholesterol within previous 15 months is 5 mmol/l or less	49,346	50,080	49,648
DM21	The percentage of patients with diabetes who have a record of retinal screening in the previous 15 months			38,096

COPD4	The percentage of patients with COPD in whom there is a record of smoking status in the previous 15 months, except those who have never smoked where smoking status need be recorded only once since diagnosis	49,712	49,966	
COPD5	The percentage of patients with COPD who smoke, whose notes contain a record that smoking cessation advice or referral to a specialist service, where available, has been offered in the past 15 months	48,327	49,286	
MH9	The percentage of patients with schizophrenia, bipolar affective disorder and other psychoses with a review recorded in the preceding 15 months. In the review there should be evidence that the patient has been offered routine health promotion and prevention advice appropriate to their age, gender and health status			181,826
ASTHMA3	The percentage of patients with asthma between the ages of 14 and 19 in whom there is a record of smoking status in the previous 15 months	47,903	49,339	48,987
ASTHMA4	The percentage of patients aged 20 and over with asthma whose notes record smoking status in the past 15 months, except those who have never smoked where smoking status need be recorded only once since diagnosis	50,872	50,383	
ASTHMA5	The percentage of patients with asthma who smoke, and whose notes contain a record that smoking cessation advice or referral to a specialist service, where available, has been offered within the last 15 months	49,993	50,064	
DEP1	The percentage of patients on the diabetes register and /or the CHD register for whom case finding for depression has been undertaken on one occasion during the previous 15 months using two standard screening questions			53,366
AF3	The percentage of patients with atrial fibrillation who are currently treated with anti-coagulation drug therapy or an anti-platelet therapy.			123,881
OB1	The practice can produce a register of patients aged 16 and over with a BMI greater than or equal to 30 in the previous 15 months.			66,952
SMOKING1	The percentage of patients with any or any combination of the following conditions: coronary heart disease, stroke or TIA, hypertension, diabetes, COPD or asthma whose notes record smoking status in the previous 15 months. Except those who have never smoked where smoking status need only be recorded once since diagnosis			274,881
SMOKING2	The percentage of patients with any or any combination of the following conditions: coronary heart disease, stroke or TIA, hypertension, diabetes, COPD or asthma who smoke whose notes contain a record that smoking cessation advice or referral to a specialist service, where available, has been offered within the previous 15 months			285,857
RECORDS10	The smoking status of patients aged from 15 to 75 is recorded for at least 55% of patients	49,776	50,208	
RECORDS11	The blood pressure of patients aged 45 and over is recorded in the preceding 5 years for at least 65% of patients	84,000	83,780	83,460
RECORDS16	The smoking status of patients aged from 15 to 75 is recorded for at least 75% of patients	36,905	40,515	
RECORDS17	The blood pressure of patients aged 45 and over is recorded in the preceding 5 years for at least 80% of patients	37,505	40,635	40,345

RECORDS22	The percentage of patients aged over 15 years whose notes record smoking status in the past 27 months, except those who have never smoked where smoking status need be recorded only once (payment stages 40 – 90%)			76,799
INFORMATION5	The practice supports smokers in stopping smoking by a strategy which includes providing literature and offering appropriate therapy	16,866	16,684	16,516
INFORMATION6	Information is available to patients on the roles of the GP, community midwife, health visitor and hospital clinics in the provision of ante-natal and post-natal care	4,078	4,116	
CS1	The percentage of patients aged from 25 to 64 (in Scotland from 21 to 60) whose notes record that a cervical smear has been performed in the last five years Standard 40 – 80%	87,494	88,730	87,855
CS2	The practice has a system to ensure inadequate/abnormal smears are followed up	25,236	24,933	
CS3	The practice has a policy on how to identify and follow up cervical smear defaulters. Patients may opt for exclusion from the cervical cytology recall register by completing a written statement which is filed in the patient record (exception reporting)	16,624	16,526	
CS4	Women who have opted for exclusion from the cervical cytology recall register must be offered the opportunity to change their decision at least every 5 years	16,340	16,480	
CS5	The practice has a system for informing all women of the results of cervical smears	16,638	16,558	16,468
CS6	The practice has a policy for auditing its cervical screening service, and performs an audit of inadequate cervical smears in relation to individual smear-takers at least every 2 years	15,794	16,162	16,190
CS7	The practice has a protocol that is in line with national guidance and practice for the management of cervical screening, which includes staff training, management of patient call/ recall, exception reporting and the regular monitoring of inadequate smear rates			56,812
CHS1	Child development checks are offered at intervals that are consistent with national guidelines and policy	48,078	47,778	47,520

For details on points iii) and iv) see A.1.6.

A.4.3. Dental check-ups

- i) The NHS Information Centre provides information on the number of courses of treatment performed in 2006/07 by treatment category or 'Band'. For our estimations, we have assumed that one unit of dental activity for each course of treatment in bands 1, 2 and 3 can be defined as preventative. Considering Table A.7, we therefore assume that Band 1 is entirely preventative, Band 2 is 33% preventative and Band 3 is 8% preventative. The following table details what is included in each band of treatment, taken from "Dental Treatment Band Analysis, England 2007, Preliminary Results"⁵⁹ from the NHS Information Centre:

Table A.7: Treatment Categories

Treatment Category	Description	UDA
<i>Band 1</i>	Routine examination, scaling and diagnostic procedures	1
<i>Band 2</i>	Fillings and extractions	3
<i>Band 3</i>	Treatment requiring laboratory work	12
<i>Band 1 Urgent</i>	Care and treatment given only to the extent necessary to prevent significant deterioration in oral condition or to address severe pain	1.2

- ii) Dentists performed 19 million courses of treatment (COTs) on the NHS in treatment band 1, 10.7 million in band 2 and 1.5 million in band 3 in 2006/07. If we assume one unit of dental activity is performed with the main function of prevention in each course of treatment delivered, then we can assume that 31 million units of preventative dental activity are performed. Multiplying the number of UDAs delivered by expenditure per UDA gives a total estimated expenditure on preventative treatments in NHS dentistry in England of £937 million in 2006/07.
- iii) The value received per UDA by dentists working for the NHS varies depending on the contract they have with the NHS. We have therefore, estimated that dentists receive £30 per unit of dental activity (including patient charges). This comes from comparing gross expenditure less amounts for some specialist dental activity divided by the number of UDAs (estimate provided by william.burns@dh.gsi.gov.uk). The estimate for expenditure on dental check-ups does not include expenditure on dental check-ups from those patients who receive wholly private dental care. The Office of Fair Trading published results from the "Survey of consumers' experience of dental services"⁶⁰ in March 2003 that estimated that from all registered dental patients, 19% are wholly private. We could therefore predict that expenditure on dental check-ups could rise by a further £108 million, assuming that private dental check-ups cost at least as much as those on the NHS. Due to a lack of reliable and robust data, this estimate has not been included in the accounts.
- iv) Data on the number of units of dental activity performed on the NHS are available annually from the Information Centre. Prior to 2004, data on dental activity was collected by the Dental Services Division of the NHS Business Services Authority⁶¹. Here, data was collected in a much more detailed manner. Whilst this may help in identifying precisely those preventative treatments, aggregating becomes a tenuous task, and one susceptible to mistakes.

A.4.4. Screening programmes

- i) The majority of expenditure on screening programmes is taken from point estimates provided by the National Screening Committee⁶². They estimate that, for 2006/07, £75 million was spent on breast cancer screening, £157 million on cervical cancer screening and £27.5 million on bowel cancer screening. Data is also taken from the central budget source (see A.2.2. i)), that details expenditure on cancer screening quality assurance and other screening programmes, such as for Down's syndrome and sickle cell. There is also some additional expenditure, for diabetic retinal screening, taken from the NHS Reference Costs (for more information on NHS Reference Costs see A.1.1. i)). The NHS Reference Cost code used for screening programmes is DA11 (in sheet TDADS).

For details on points ii), iii) and iv) see A.1.1 for NHS Reference Cost data and A.2.2 for Central Budget data. Note also that expenditure estimates provided by the National Screening Committee are not available for a time series.

A.4.5. Sight tests

- i) The General Ophthalmic Services (GOS) *Statistical Bulletin*⁶³ provides statistics, taken from PCTs and practitioners themselves, on total NHS expenditure on ophthalmic services. In addition they break this expenditure down by spend on sight tests, spend on glasses provision and other costs.

Table A.8: Total expenditure on ophthalmic services

	Total gross spend (£m)	Cost of sight test provision (£m)	Cost of glasses provision (£m)	Other costs (£m)
1999/00	330.0	171.6	157.8	0.6
2000/01	329.9	176.1	153.3	0.5
2001/02	336.1	180.8	154.5	0.8
2002/03	327.7	176.3	150.6	0.8
2003/04	336.8	182.5	153.2	1.1
2004/05	346.4	192.7	152.6	1.1
2005/06	358.7	197.4	158.7	2.6
2006/07	377.3	207.6	166.9	2.7

- ii) Estimates for expenditure for the year 2006/07 assume that expenditure on ophthalmic services have risen in line with population growth between 2005/6 and 2006/7 (0.6%) plus the rise in pay and prices over the same period (4.6%). The results of these calculations are shown in red in Table A.8.
- iii) The cost of sight test provision was taken to be the preventative spend in ophthalmic services. Whilst the GOS *Statistical Bulletin* says that in 2005/06, 31 percent of all sight tests in Great Britain were paid for privately (estimate from the Sight Test Volume Survey), this estimate was not deemed robust enough to make any estimates as to private expenditure on sight tests. Expenditure estimates here are therefore wholly NHS spend.
- iv) GOS provide these statistics for 1995/96-2005/06.

A.4.6. Obesity/diet/lifestyle

- i) The healthy individuals programme expenditure is taken from the central programme budgeting data⁶⁴. The programming budgeting project provides a retrospective appraisal of NHS resources broken down into 'programmes'. It maps all PCT and SHA expenditure on 23 programmes of care. The programme included in the prevention expenditure estimate is the prevention part of the Healthy Individuals programme (programme 21a of the central budget).
- ii) N/A
- iii) N/A

- iv) The programme budgeting project began in 2002, with data being collected annually since then. Prior to 2006/07, the Healthy Individuals programme was not broken down to highlight the preventative part of expenditure. We have therefore assumed that the same proportion of expenditure on the Healthy Individuals programme in previous years was directed toward prevention.

A.4.7. NHS stop smoking services

- i) Data on expenditure on NHS stop smoking services is made publicly available by the Department of Health⁶⁵.
- ii) N/A
- iii) N/A
- iv) Data is provided annually on an ongoing basis.

A.4.8. NICE public health guidelines

- i) NICE expenditure has been taken from their 2006/07 Annual Accounts⁶⁶, where they calculate that their total expenditure is £28.7m. NICE estimates, in their Annual Report⁶⁷, that they spend 13% of their total expenditure on public health.
- ii) To calculate total NICE expenditure on public health and prevention we simply took 13% of total expenditure, £28.7m.
- iii) N/A
- iv) NICE publish their Accounts and Report on an annual basis. However, NICE has only recently (since 2006/7) begun work specifically on Public Health Guidelines.

A.4.9. CJD surveillance

Expenditure on CLD surveillance is from the central budget. For details on points i), ii) iii) and iv) see A.2.2.

A.5. HC.6.5 Occupational healthcare

A.5.1. Occupational healthcare for dentists

Expenditure on occupational healthcare for dentists is from the central budget. For details on points i), ii) iii) and iv) see A.2.2.

A.5.2. Quality and Outcome Framework

- i) See A.1.6. i)
- ii) The following table shows the QOF point available for occupational health. See A.1.6. i) for calculations.

Table A.9: QOF points achieved for occupational healthcare

		Points achieved		
		2004/05	2005/06	2006/07
MANAGEMENT3	The Hepatitis B status of all doctors and relevant practice-employed staff is recorded and immunisation recommended if required in accordance with national guidance	3,829	3,951	3,964

For details on points iii) and iv) see A.1.6.

A.6. HC.6.9 All Other Miscellaneous Public Health Services

A.6.1. Health Protection Agency

- i) Expenditure by the Health Protection Agency (HPA) on public health and prevention was taken from their 2006/07 Annual Report⁶⁸.
- ii) N/A
- iii) In 2003/04, the Public Health Laboratory Service, the Microbiological Research Authority, the National Focus for Chemical Incidents, the Regional Provider Units and the National Poisons Information Services combined to form the Health Protection Agency. Expenditure of these predecessors has not been found.
- iv) Data is available from annual reports of the HPA, but not of predecessor organisations.

A.6.2. NHS BT

Expenditure by NHS BT is from the central budget. For details on points i), ii) iii) and iv) see A.2.2.

A.6.3. Publicity for Prevention Activities

- i) The data on expenditure on publicity for prevention activities comes from Annex E of the Department of Health Departmental Report⁶⁹. Table A.10 aggregates those activities identified as specifically preventative.

Table A.10: Publicity for Prevention Activities (£m)

	1999/0	2000/1	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7
Expenditure	19.3	28.9	20.5	27.1	37.3	38.7	36.5	34.0

- ii) N/A
- iii) N/A
- iv) Departmental Reports are produced annually

A.6.4. Charitable Expenditure

- i) Data was provided by Guidestar⁷⁰ on charitable expenditure on prevention. The Guidestar database has base data on each charity operating in England and Wales from records of the Charity Commission. Data is then updated by the charities themselves. As a one-off exercise for the Department of Health, Guidestar identified all charities that list “public health” and/or “prevention” in their aims and objectives. To narrow down the search criteria, consideration was only given to those charities with both “public health” and “prevention” listed as an aim or objective. So, while Guidestar identified 23,000 charities with public health or prevention as an aim, only 362 of these mentioned both an aim of prevention and public health. In order to focus our attention on a manageable group of charities with which to further our research, we initially disregarded charities with a total charitable spend of less than £500,000. This reduced the 362 charities to a more manageable 90. Having considered these 90 charities annual reports, along with their strategies and activities, we were able to conclude that only 20 charities actually spent any of their charitable spend on prevention as is given in the definition provided by OECD System of Accounts on an England wide basis. Many of the other charities listed with an aim as prevention in the database, were actually solely concerned with research (perhaps into *preventative* medicine) or patient care (for example hospices or care home to *prevent* the stress and worry on family members).

- ii) Many of the 20 charities involved in preventative activities did not spend their entire charitable expenditure on prevention itself, but were also involved in research and/or patient care. We therefore estimated how much of their charitable spend went on prevention, assigning the arbitrary proportions of 10% for a low spend, 30% for a medium spend and 60% for a high spend where charities were involved in prevention, care and research. Where charities were only involved in one or two of the afore mentioned activities arbitrary proportions were assigned as deemed fit, see Table A.11. We also had to control for the fact that many of the charities operating in England work on a UK basis. We therefore assumed that 83% of their charitable spend was spent in England, in line with the England to UK population ratio⁷¹. We have since contacted the charities mentioned in our final estimate, to ensure that our estimates are, in broad terms, accurate. The few responses we have received suggest that our estimations seem accurate. See a list of charities included in our estimate, along with their estimated spend on prevention in England in the following table.

Table A.11: Charitable spend broken down by charities (£000s)

Charity Name	(£ thousands)			
	Total charitable expenditure	Proportion spent on prevention	Proportion spent in England only	Prevention expenditure
British Heart Foundation	82,935	20%	84%	13,897
Asthma UK	10,398	60%	84%	5,227
Arthritis Research Campaign	24,781	10%	84%	2,076
Samaritans	6,750	30%	84%	1,697
Marie Curie Cancer	67,674	3%	84%	1,622
Cobalt Unit Appeal Fund	4,018	30%	84%	1,010
Cystic Fibrosis Trust	10,314	10%	84%	864
The Roy Castle Lung Cancer Foundation	2,260	45%	84%	852
The Thrombosis Research Institute	3,091	30%	84%	777
Cranstoun Drug Services	7,895	10%	84%	661
National Heart Forum	1,003	65%	100%	652
Action on Smoking and Health (ASH)	742	100%	84%	622
Alcohol and Drug Addiction Prevention and Treatment Ltd	7,291	10%	84%	611
The Genesis Appeal Company Ltd	1,027	65%	84%	559
Tenovus	4,705	10%	84%	394
Heart Research UK	1,442	30%	84%	362
National Eye Research Centre	1,035	40%	84%	347
Drinksense	1,121	35%	84%	329
SANE	829	45%	84%	313
Age Concern Wirral	794	30%	84%	199
				33,101

- iii) See section ii)
- iv) Data on charitable expenditure on prevention and public health was made available by Guidestar as a one-off exercise. However, data is collected and updated annually on the Guidestar database. Now that a manageable list of what we may consider are the charities with the largest expenditure on prevention have been identified, updating expenditure by considering the individual Annual Accounts of the afore mentioned charities, assigning the same apportion of total expenditure to prevention expenditure would allow for comparisons over time. For the purpose of the time series as shown in Section 4 of this report, we have looked only at the previous annual reports of the British Heart Foundation, assuming that they contributed 42% of total charitable spend on prevention for each year considered.

A.6.5. National Biological Standards Board

- i) Data comes from the National Biological Standards Board Annual Reports⁷².
- ii) N/A
- iii) N/A
- iv) Annual reports are published annually.

A.6.6. Public Health in Prisons

Expenditure on public health in prisons is from the central budget. For details on points i), ii) iii) and iv) see A.2.2.

A.7. HC.R Health-related Functions

A.7.1. Environmental Health Services (by LAs)

- i) Local Authority expenditure was taken from the Department for Communities and Local Government's (DCLG) publication entitled "Local Government Finance Statistics England No. 18"⁷³. The service measured here is titled 'Other Environmental Health' (indicator 218). The measure taken from these accounts was total expenditure.
- ii) N/A
- iii) N/A
- iv) Accounts are produced annually, for the financial year, and are available on the DCLG website.

A.7.2. Health Visiting Individual Services

- i) See A.1.1. i)
- ii) The code CN403FO (in sheet HCSHVO) was used for this. For more details on calculations see HC.6.1) a) ii)

For details on points iii) and iv) see A.1.1.

A.7.3. Food Safety Standards (by LAs)

- i) Again, expenditure is taken from the DCLG publication (see HC.R) a) i)). Expenditure by LAs on food safety standards is available in the same table as expenditure on environmental health services. The food safety standards services is entitled 'Food Safety' (indicator 221).

For details on points ii) iii) and iv) see A.7.1.

A.7.4. Healthy Start/Welfare Foods

Expenditure on healthy start/welfare foods is from the central budget. For details on points i), ii) iii) and iv) see A.2.2.

A.7.5. Food Standards Agency

- i) Expenditure by the Food Standards Agency (FSA) is taken from the FSA Annual Report for 2006⁷⁴. Total expenditure by the FSA is taken to be preventative.
- ii) The FSA works on a UK remit. In the annual accounts, FSA expenditure in Scotland, Wales and Northern Ireland is provided. Hence, to calculate expenditure

in England alone, expenditure in the devolved administrations was taken away from the total.

iii) N/A

iv) Accounts are produced by the FSA on an annual basis.

Annex B: Calculating Total Expenditure on Health

This annex details the precise sources and methods of calculation involved in estimating total expenditure on health under the OECD Systems of Accounts definition.

This annex aims to give details on each addition/subtraction made in Table 1, with emphasis on the following points:

- i) The data source (the contact name/organisation/publication for the data)
- ii) The calculations carried out on the data (if any)
- iii) The assumptions or approximations made
- iv) Whether data is available for a time series or just a current year

The base data for calculating total expenditure on health and the adjustments made to it are summarised in the table below.

Table B.1: Summary of expenditure calculations (£million)

	2000	2001	2002	2003	2004	2005	2006	2007
National Accounts Health Expenditure	56 320	61 382	67 544	73 924	82 123	88 057	95 470	100 432
plus Armed Forces Spend	363	378	391	414	431	437	444	452
plus Prisons Spend	116	123	137	105	64	18	20	21
less R&D (other departments)	356	404	407	454	474	549	600	615
less R&D (DH and devolved)	539	564	580	649	702	716	720	720
less Education & Training	1,370	1,563	1,917	2,285	2,534	2,737	2,955	3,198
plus Private Spend	10 545	10 994	12 397	13 442	13 461	14 155	15 369	16 621
plus Third Sector Spend	3,666	3,853	3,987	4,194	4,334	4,495	4,700	4,915
Total Health Expenditure	68 745	74 200	81 553	88 691	96 703	103 159	111 728	117 907

B.1. National Accounts Public Health Expenditure

- i. The base estimate for total public expenditure on health was provided by the ONS (rhys.lewis@ons.gsi.gov.uk), with the estimate consistent with data submitted to Eurostat.
- ii. No adjustments made
- iii. N/A
- iv. Available annually

B.2. Armed Forces Expenditure

- i) Armed forces spend on health is based on estimates for single years from identical sources to those in the previous Experimental Health Accounts by ONS. The five point estimates of expenditure come from the Army Quinquennial Review (£98.9m in 1999/2000), Navy Quinquennial Review (£20.5m for 2000/2001), RAF Quinquennial Review (£22.0m for 2001/2002), Medical Supplies Agency (£52.1m for 2001/2002), and Surgeon General's Department (£184.2m for 2002/2003).
- ii) These point estimates are extrapolated to different years, factored up (or down) by the change in prices, specific to health. These are measured by the HCHS Pay and

Prices Index, as reported in the PSSRU Unit Costs of Health and Social Care⁷⁵. This measure of inflation is a weighted average of the pay cost index (PCI) and the health services cost index (HSCI). The PCI is a weighted average of increases in unit staff costs for each of the staff groups within HCHS. HSCI measures the price change for each of the 40 sub-indices of goods/services purchased by the HCHS. The figure for 2007/8 is a projection.

Table B.2: HCHS Pay and Prices Inflation Index

	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
Index (1989/90 = 100)	188.6	196.5	206.5	213.7	224.8	232.3	240.9	251.9

The figures are also factored up by armed forces personnel, from the Defence Analytical Services Agency in MOD⁷⁶. The first three sources are factored up by changes to personnel specific to that force (Army, Navy and RAF). The last two sources are factored up by total service personnel (i.e. excluding civilians but including FTRS, Ghurkhas and Locally Entered).

Table B.3: Armed Forces Personnel numbers, excluding civilians (persons)

	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Army	109,700	110,100	109,500	110,100	112,100	112,700	109,300	107,700	106,200
Naval Service	43,700	42,800	42,400	41,600	41,500	40,900	39,900	39,400	38,900
Royal Air Force	55,200	54,700	53,700	53,000	53,200	53,400	51,900	48,700	45,400
FTRS	600	1,000	1,500	2,000	2,400	2,200	1,700	1,500	1,600
Ghurkhas	3,600	3,700	3,800	3,800	3,800	3,700	3,700	3,700	3,700
Locally entered/engaged	400	400	300	400	400	400	400	400	400
Total Service	213,200	212,700	211,200	210,800	213,400	213,300	206,900	201,400	196,100

Finally, estimates are converted from financial year to calendar year by simple apportionment (i.e. one quarter of 2000/1 and three quarters of 2001/2 expenditure is assumed equal to 2001 expenditure).

- iii) This assumes that armed forces expenditure is proportional to the number of personnel (after taking into account information). However, this is likely to underestimate later years' expenditure due to rises in real per capita health spend internationally. A source at MOD says that actual data on expenditure on health in the armed forces (i.e. later version of the Quinquennial reviews etc.) is no longer collected⁷⁷.
- iv) Personnel numbers and HCHS pay and prices inflation are available annually. Expenditure estimates are point measures.

B.3. Prisons expenditure

- i) Part of prisons health expenditure is commissioned and paid for by Primary Care Trusts and shows up in Departmental expenditure. However, there is additional expenditure by Prisons themselves. These are based on point estimates as provided by HM Prison Service (£86m in 1997/8 less DH admin costs of £3m from 1998), Scottish Prison Service (£8.5m in 2000/1) and Northern Ireland Prison

Service (£4.2m in 1999/2000). These sources are identical to those used in the previous ONS Experimental Health Accounts.

- ii) These point estimates are extrapolated to other years, factored up (or down) by the change in prices, specific to health. These are measured by the HCHS Pay and Prices Index, as reported in the PSSRU Unit Costs of Health and Social Care (see above). The figures are also factored up by prison numbers in each region: England & Wales⁷⁸, Scotland⁷⁹, and Northern Ireland⁸⁰.

Table B.4: Prisons populations (persons)

	2000	2001	2002	2003	2004	2005	2006	2007
England & Wales	65,194	66,403	71,218	73,657	74,488	76,190	78,128	80,187
	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
Scotland	5,975	5,883	6,186	6,475	6,621	6,779	6,857	7,183
	2000	2001	2002	2003	2004	2005	2005/6	2006/7
Northern Ireland	1,068	910	1,026	1,160	1,274	1,301	1,328	1,455

England saw a major change in the provision of healthcare in prisons in April 2005, with PCTs in England taking over the responsibility of provision. This transfer of provision occurred over the three years prior to April 2005, so English expenditure is scaled down by a third in 2003 and two thirds in 2004, so that by 2005 there is no expenditure on health in prisons in England. This move is explained on the DH website⁸¹.

- iii) This assumes that additional prisons expenditure is proportional to the number of prisoners (after taking into account information). However, this is likely to underestimate later years' expenditure due to rises in real per capita health spend internationally. It also assumes that the movement to providing all prisons health care in England happened in a proportional manner over the three years from start to finish. Currently estimates assume that Wales have followed England in transferring over health expenditure in prisons to NHS organisations, although there is no evidence of this. If this is not the case, then the above calculations will miss the portion of expenditure on health in prisons that is still funded by the prisons authority, underestimating total spend.
- iv) Data on prison population size and the HCHS pay and price inflation is made available annually. Data on expenditure on health in prisons was provided specifically for the ONS Experimental Health Accounts project.

B.4. R&D (Departments other than the Department of Health)

- i) This is calculated in PESA by HM Treasury, and makes up part of their estimation for total health expenditure⁸². See table 2 line two for details.
- ii) No adjustments made
- iii) N/A
- iv) Available annually

B.5. R&D (Department of Health and Devolved Administrations)

- i) Data on Department of Health R&D investment in England is provided by Science, Engineering and Technology statistics indicators⁸³. SET statistics, in collaboration with the Office for National Statistics, covers science, engineering and technology expenditure statistics from as far back as 1981. Also included are estimated outturn data for 2006/07 and plan figures for 2007/08 and 2008/09.

Table B.5: Expenditure on R&D in England (£m)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07 estimate	2007-08 planned
Expenditure	473	478	504	514	593	629	628	668	734

For Wales, Scotland and Northern Ireland there is less routinely available data. Data on R&D were provided as point estimates for the ONS Experimental Health Accounts for Wales (£14.65m), Scotland (£40.31m) and Northern Ireland (£7.66m) in 1999/2000

- ii) In order to update figures for 1999/00 for Wales, Scotland and Northern Ireland, we have assumed that there has been the same percentage growth in R&D in these regions as there has been in England in the same period. Again, expenditure has been apportioned to calendar years from financial years.
- iii) This assumes that expenditure on R&D in Wales, Scotland and Northern Ireland grows at the same rate as in England, although there is no reason why this may be the case. It is not clear how SET figures for R&D are cross-checked with R&D figures in PESA.
- iv) SET statistics (for England) are available on an annual basis. However, the other regions do not provide routine data.

B.6. Education and Training

- i) The sole source of E&T expenditure in the NHS is the MPET (Multi-Profession Education and Training Levy). Expenditure on this is detailed on the Department of Health website for Resource Allocation⁸⁴.

Table B.6: Expenditure MPET in England (£m)

	1999/0	2000/1	2001/2	2002/3	2003/4	2004/5	2005/6
MADEL	614	701	763	1,022	1,229	1,314	1,361
NMET	800	976	1,167	1,337	1,517	1,705	1,949
SIFT	492	514	540	589	663	729	800
MPET	1,906	2,191	2,470	2,947	3,408	3,748	4,110

- ii) There are three parts to the MPET: MADEL⁸⁵, NMET⁸⁶ and SIFT⁸⁷. Part of these is classified as health related expenditure (i.e. education and training) and part is classified as healthcare expenditure. Estimates of the split were provided for the previous ONS Experimental Health Accounts. Specifically, it was assumed that 100% of MADEL, 50% of NMET funding and 0% of SIFT funding is spent on education and training. This is therefore excluded from the calculations of total health spend. We assume that spend on Education and Training per head is the

same in the other regions. Therefore, England spend is factored up by ONS populations for the regions for each year⁸⁸.

Table B.7: UK populations (thousands)

	2000	2001	2002	2003	2004	2005	2006	2007
England	49,233	49,450	49,652	49,866	50,111	50,466	50,763	51,094
Wales	2,907	2,910	2,920	2,931	2,946	2,954	2,966	2,979
Scotland	5,063	5,064	5,055	5,057	5,078	5,095	5,117	5,138
Northern Ireland	1,683	1,689	1,697	1,703	1,710	1,724	1,742	1,761
United Kingdom	58,886	59,113	59,323	59,557	59,846	60,238	60,587	60,973

Expenditure figures for 2006/7 and 2007/8 are projected by assuming the same percentage growth rate as occurred between 2004/5 and 2005/6. Again, expenditure has been apportioned to calendar years from financial years.

- iii) This assumes that the shares of MADEL, NMET and SIFT spent on specifically education and training remain constant. It also assumes that per capita expenditure on Education and Training is the same in Wales, Scotland and Northern Ireland as it is in England.
- iv) All estimates are provided on an annual basis (although there is no data for Wales, Scotland and Northern Ireland).

B.7. Private Expenditure

- i) Estimates for private expenditure in health in 2006 are taken from the 2008 ONS Blue Book data⁸⁹. Individual consumption expenditure on health includes individual consumption on medical products and equipment, outpatient services and hospital services⁹⁰. Also included in this category is private healthcare insurance expenditure⁹¹. We also include an estimate of private capital expenditure. Estimates provided by ONS (rhys.lewis@ons.gsi.gov.uk).

Table B.8: Private expenditure on health (£m)

	2000	2001	2002	2003	2004	2005	2006	2007
Household health insurance	1,108	1,021	1,075	1,116	1,188	1,270	1,312	1,300
Medical products and equipment	5,265	5,722	6,266	6,542	6,924	6,893	7,141	7,315
Out-patient services	2,178	2,344	2,422	2,553	2,747	2,909	2,983	3,459
Hospital services	1,765	1,910	2,090	2,240	2,358	2,504	2,620	2,724
Total consumption expenditure	9,208	9,976	10,778	11,335	12,029	12,306	12,744	13,498

- ii) N/A
- iii) N/A
- iv) ONS Blue Book is published annually, with data available for a time series.

B.8. Third Sector Expenditure

- i) Data for third sector expenditure on health in 2006 is available in the DH commissioned publication "Third Sector Market Mapping" by IFF Research Ltd⁹². This reported expenditure by the third sector on health of £4.7bn.

- ii) In order to provide estimates for previous years and for 2007, the estimate for 2006 was adjusted using the HCHS pay and prices index.
- iii) Due to scaling, estimates for years other than that provided by IFF Research Ltd may be inaccurate.
- iv) Data was provided for 2006 as a one off project commissioned by the Department of Health. NB the Guidestar database, not used for the above calculations, covers the UK.

Annex C. Suggested categories in prevention for OECD's System of Health Accounts Version 2.0

OECD is currently revising the System of Health Accounts⁹³. Part of the changes will involve a new functional classification of expenditure on prevention and public health. The proposals make much more of a distinction between expenditure on prevention and public health for individual services and for collective services. The proposal is as follows:

Table C.1: Functional classification for expenditure on prevention and public health under possible OECD SHA v.2

HC2.1 Individual Services	
HC2.1.1 Counselling and Diagnosis	
	<i>Includes:</i> Informing patients about specific health problems, conditioning factors and risks. Provide diagnosis to enhance awareness about their health status.
HC2.1.2 Prophylaxis	
	<i>Includes:</i> Medical procedures designed to prevent the occurrence of a disease, e.g. vaccines, antibiotics
HC2.2 Collective Services	
HC2.2.1 Regulation	
	<i>Includes:</i> Valuation of regulations and enforcement to protect public health
HC2.2.2 Disease Surveillance and Control	
	<i>Includes:</i> Valuation of the epidemiological surveillance of outbreaks and patterns of communicable and non-communicable disease.
HC2.2.3 Information and Awareness	
	<i>Includes:</i> Valuation of providing access to information and promoting health lifestyles

Source: OECD. Revision of the System of Health Accounts, Proposal Unit 17: Functional Classification of Health Expenditure

Given the research and findings of this report, we suggest a slightly different functional classification, as shown in Table C.2. This maintains the classification of individual versus collective public health services. However, for HC2.1 Individual Services, we suggest 5 categories: i) counselling and risk assessment; ii) screening and check-ups; iii) family planning and contraception; iv) immunisation and vaccinations; and v) medication; as opposed to the two categories as detailed in Table C.1.

Note that under this suggested classification, expenditure on preventative pharmaceuticals and many of the expenditures previously classified as health-related functions are included in the headline total expenditure figure. This revised functional classification would therefore mean that the headline figure for expenditure on prevention and public health in England in 2006/07 was £6.3 billion. Under this classification, therefore, England spends approximately 6.7% of total health expenditure on prevention and public health, 2.7 percentage points above the estimate that is in line with current OECD *System of Health Accounts* classifications.

Table C.2 also shows that the vast majority of expenditure on prevention and public health, almost 80%, goes toward individual services. The largest subcategory of individual services is screening and check-ups, which includes spending on maternity services and dental check-ups.

Table C.2: Expenditures under the suggested functional classification for expenditure on prevention and public health (£million), 2006/07

HC.2	Public Health and Prevention	6,254
HC.2.1	Individual Services	4,900
HC.2.1.1	Counselling & Risk Assessment	1,082
	Quality and Outcomes Framework	446
	Health Visiting Individual Services	402
	Obesity/diet/lifestyle	116
	School-Based Children's Individual Health Services	115
	Occupational Health for Dentists	4
HC.2.1.2	Screening & Check-ups	2,052
	Maternity services	618
	Dental check-ups	937
	Screening programmes	275
	Sight tests	208
	Neonatal audiological screening	14
HC.2.1.3	Family Planning & Contraception	167
	Family Planning Clinics	101
	Contraceptives	66
HC.2.1.4	Immunisations & Vaccines	262
	Immunisation *	238
	Other infectious diseases *	24
HC.2.1.5	Medications	1,337
	Pharmaceuticals	1,337
HC.2.2	Collective Services	1,354
HC.2.2.1	Regulation	867
	Environmental Health Services (by LAs)	542
	Food safety measures (by LAs)	122
	Food Standards Agency	121
	NHS BT *	53
	National Biological Standards Board	25
	NICE Public Health Guidelines	4
HC.2.2.2	Disease Surveillance & Control	250
	Health Protection Agency	248
	CJD surveillance *	2
HC.2.2.3	Information & Awareness	237
	Health Visiting Group Services	53
	NHS Stop Smoking Services	51
	Publicity for prevention activities	34
	Charitable expenditure on prevention	33

School-Based Children's Group Health Services	27
Public Health in Prisons *	19
Healthy Schools Programme *	17
Reducing MRSA incidence *	3

HC.R	Health-Related Functions	121
	Healthy Start / Welfare Foods	121

Annex D. Primary Care Trusts names and codes, 2007

Source: NHS Connecting for Health, National Administrative Codes Service (NACS),
Version update 3rd January 2007

5A3	SOUTH GLOUCESTERSHIRE PCT	5K6	HARROW PCT
5A4	HAVERING PCT	5K7	CAMDEN PCT
5A5	KINGSTON PCT	5K8	ISLINGTON PCT
5A7	BROMLEY PCT	5K9	CROYDON PCT
5A8	GREENWICH TEACHING PCT	5KF	GATESHEAD PCT
5A9	BARNET PCT	5KG	SOUTH TYNESIDE PCT
5AT	HILLINGDON PCT	5KL	SUNDERLAND TEACHING PCT
5C1	ENFIELD PCT	5KM	MIDDLESBROUGH PCT
5C2	BARKING AND DAGENHAM PCT	5L1	SOUTHAMPTON CITY PCT
5C3	CITY AND HACKNEY TEACHING PCT	5L3	MEDWAY PCT
5C4	TOWER HAMLETS PCT	5LA	KENSINGTON AND CHELSEA PCT
5C5	NEWHAM PCT	5LC	WESTMINSTER PCT
5C9	HARINGEY TEACHING PCT	5LD	LAMBETH PCT
5CC	BLACKBURN WITH DARWEN PCT	5LE	SOUTHWARK PCT
5CN	HEREFORDSHIRE PCT	5LF	LEWISHAM PCT
5CQ	MILTON KEYNES PCT	5LG	WANDSWORTH PCT
5D7	NEWCASTLE PCT	5LH	TAMESIDE AND GLOSSOP PCT
5D8	NORTH TYNESIDE PCT	5LQ	BRIGHTON AND HOVE CITY PCT
5D9	HARTLEPOOL PCT	5M1	SOUTH BIRMINGHAM PCT
5E1	NORTH TEES TEACHING PCT	5M2	SHROPSHIRE COUNTY PCT
5EF	NORTH LINCOLNSHIRE PCT	5M3	WALSALL TEACHING PCT
5EM	NOTTINGHAM CITY PCT	5M6	RICHMOND AND TWICKENHAM PCT
5ET	BASSETLAW PCT	5M7	SUTTON AND MERTON PCT
5F1	PLYMOUTH TEACHING PCT	5M8	NORTH SOMERSET PCT
5F5	SALFORD PCT	5MD	COVENTRY TEACHING PCT
5F7	STOCKPORT PCT	5MK	TELFORD AND WREKIN PCT
5FE	PORTSMOUTH CITY TEACHING PCT	5MV	WOLVERHAMPTON CITY PCT
5FL	BATH AND NORTH EAST SOMERSET PCT	5MX	HEART OF BIRMINGHAM TEACHING PCT
5GC	LUTON PCT	5N1	LEEDS PCT
5H1	HAMMERSMITH AND FULHAM PCT	5N2	KIRKLEES PCT
5H8	ROTHERHAM PCT	5N3	WAKEFIELD DISTRICT PCT
5HG	ASHTON, LEIGH AND WIGAN PCT	5N4	SHEFFIELD PCT
5HP	BLACKPOOL PCT	5N5	DONCASTER PCT
5HQ	BOLTON PCT	5N6	DERBYSHIRE COUNTY PCT
5HX	EALING PCT	5N7	DERBY CITY PCT
5HY	HOUNSLOW PCT	5N8	NOTTINGHAMSHIRE COUNTY TEACHING PCT
5J2	WARRINGTON PCT	5N9	LINCOLNSHIRE TEACHING PCT
5J4	KNOWSLEY PCT	5NA	REDBRIDGE PCT
5J5	OLDHAM PCT	5NC	WALTHAM FOREST PCT
5J6	CALDERDALE PCT	5ND	COUNTY DURHAM PCT
5J9	DARLINGTON PCT	5NE	CUMBRIA TEACHING PCT
5JE	BARNSLEY PCT	5NF	NORTH LANCASHIRE TEACHING PCT
5JX	BURY PCT	5NG	CENTRAL LANCASHIRE PCT
5K3	SWINDON PCT	5NH	EAST LANCASHIRE TEACHING PCT
5K5	BRENT TEACHING PCT		

5NJ	SEFTON PCT	5QF	BERKSHIRE WEST PCT
5NK	WIRRAL PCT	5QG	BERKSHIRE EAST PCT
5NL	LIVERPOOL PCT	5QH	GLOUCESTERSHIRE PCT
5NM	HALTON AND ST HELENS PCT	5QJ	BRISTOL PCT
5NN	WESTERN CHESHIRE PCT	5QK	WILTSHIRE PCT
5NP	CENTRAL AND EASTERN CHESHIRE PCT	5QL	SOMERSET PCT
5NQ	HEYWOOD, MIDDLETON AND ROCHDALE PCT	5QM	DORSET PCT
5NR	TRAFFORD PCT	5QN	BOURNEMOUTH AND POOLE TEACHING PCT
5NT	MANCHESTER PCT	5QP	CORNWALL AND ISLES OF SCILLY PCT
5NV	NORTH YORKSHIRE AND YORK PCT	5QQ	DEVON PCT
5NW	EAST RIDING OF YORKSHIRE PCT	5QR	REDCAR AND CLEVELAND PCT
5NX	HULL TEACHING PCT	5QT	ISLE OF WIGHT NHS PCT
5NY	BRADFORD AND AIREDALE TEACHING PCT	TAC	NORTHUMBERLAND CARE TRUST
5P1	SOUTH EAST ESSEX PCT	TAK	BEXLEY CARE TRUST
5P2	BEDFORDSHIRE PCT	TAL	TORBAY CARE TRUST
5P3	EAST AND NORTH HERTFORDSHIRE PCT	TAM	SOLIHULL CARE TRUST
5P4	WEST HERTFORDSHIRE PCT	TAN	NORTH EAST LINCOLNSHIRE CARE TRUST PLUS
5P5	SURREY PCT		
5P6	WEST SUSSEX PCT		
5P7	EAST SUSSEX DOWNS AND WEALD PCT		
5P8	HASTINGS AND ROTHER PCT		
5P9	WEST KENT PCT		
5PA	LEICESTERSHIRE COUNTY AND RUTLAND PCT		
5PC	LEICESTER CITY PCT		
5PD	NORTHAMPTONSHIRE TEACHING PCT		
5PE	DUDLEY PCT		
5PF	SANDWELL PCT		
5PG	BIRMINGHAM EAST AND NORTH PCT		
5PH	NORTH STAFFORDSHIRE PCT		
5PJ	STOKE ON TRENT PCT		
5PK	SOUTH STAFFORDSHIRE PCT		
5PL	WORCESTERSHIRE PCT		
5PM	WARWICKSHIRE PCT		
5PN	PETERBOROUGH PCT		
5PP	CAMBRIDGESHIRE PCT		
5PQ	NORFOLK PCT		
5PR	GREAT YARMOUTH AND WAVENEY PCT		
5PT	SUFFOLK PCT		
5PV	WEST ESSEX PCT		
5PW	NORTH EAST ESSEX PCT		
5PX	MID ESSEX PCT		
5PY	SOUTH WEST ESSEX PCT		
5QA	EASTERN AND COASTAL KENT PCT		
5QC	HAMPSHIRE PCT		
5QD	BUCKINGHAMSHIRE PCT		
5QE	OXFORDSHIRE PCT		

¹ http://www.healthengland.org/health_england_publications.htm

² http://www.statistics.gov.uk/healthaccounts/experimental_health_accounts.asp

³

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4127453

⁴ Health England Report No. 1. Definitions and measures of preventative spending. Found at http://www.healthengland.org/health_england_publications.htm

⁵ OECD definition of prevention available in the “Health care functions” document found at http://www.oecd.org/document/8/0,3343,en_2649_33929_2742536_1_1_1_37407,00.html

⁶ OECD Health Data 2008: www.oecd.org/health/healthdata

⁷ Health England Report No. 2. Prevention and Preventative Spending. 2009. See http://www.healthengland.org/health_england_publications.htm

⁸ Office for National Statistics, 2009. Expenditure on Health Care in the UK 1997-2007. published 29 April 2009; see <http://www.statistics.gov.uk/cci/article.asp?id=2169>

⁹ <http://www.oecd.org/health/sha>

¹⁰ See www.ic.nhs.uk/statistics-and-data-collections/primary-care/dentistry and www.dpb.nhs.uk/

¹¹ http://www.statistics.gov.uk/ssd/surveys/adult_dental_health_survey.asp

¹² <http://www.statistics.gov.uk/CHILDREN/dentalhealth/default.asp>

¹³ See www.ic.nhs.uk/statistics-and-data-collections/primary-care/eye-care

¹⁴ See www.cancerscreening.nhs.uk/

¹⁵ See www.ic.nhs.uk/our-services/improving-patient-care/the-quality-and-outcomes-framework-gof-2006-07

¹⁶ See www.ic.nhs.uk/statistics-and-data-collections/health-and-lifestyles/nhs-stop-smoking-services and www.dh.gov.uk/en/Managingyourorganisation/Financeandplanning/Allocations/index.htm

¹⁷

www.dh.gov.uk/en/Managingyourorganisation/Financeandplanning/Programmebudgeting/DH_075743

¹⁸ See

www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_082571

¹⁹ See <http://www.hpa.org.uk/>

²⁰ See www.dh.gov.uk/en/Publicationsandstatistics/Publications/AnnualReports/index.htm

²¹ Food Standards Agency Annual Report for 2006-07, 2007, Appendix 4, see <http://www.food.gov.uk/multimedia/pdfs/annualreport200607.pdf>

²² DCLG: Local Government Finance Statistics England No.18, Table C1e, see <http://www.local.communities.gov.uk/finance/stats/lgfs/2008/lgfs18/index.html>

²³ See <http://www.dh.gov.uk/en/Healthcare/NationalServiceFrameworks/index.htm>

²⁴ See http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_072812

²⁵ As of August 2008, see <http://www.nice.org.uk/Guidance/PHIG>

²⁶ For more information see <http://www.ic.nhs.uk/news-and-events/press-office/press-releases/archived-press-releases/april-2006--march-2007/first-publication-of-new-nhs-dental-contract-statistics>

²⁷ www.dpb.nhs.uk/archive/nhs_statistics/ddonline_digest_search.cfm

²⁸ For details see http://www.dh.gov.uk/en/Healthcare/Medicinespharmacyandindustry/Pharmaceuticalpriceregulation/scheme/DH_494

²⁹ For details see http://www.dh.gov.uk/en/Healthcare/Medicinespharmacyandindustry/Communitypharmacy/Communitypharmacycontractualframework/DH_514

³⁰ http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_082571

³¹ <http://www.ic.nhs.uk/statistics-and-data-collections/supporting-information/audits-and-performance/the-quality-and-outcomes-framework/qof-2007/08/data-tables>

³² The mapping tool calculates the proportion of each provider's total inpatient activity from HES (weighted by the reference cost per inpatient and including the Market Forces Factor of unavoidable costs of provision) that is purchased by each PCT. As it is based on *total inpatient* activity, putting figures for *maternity* expenditure (which are generally *outpatient* services) through the tool will necessarily result in only an approximation of the proportions of maternity services purchased by each PCT from the original provider data.

³³ <http://www.ic.nhs.uk/statistics-and-data-collections/primary-care/prescriptions>

³⁴ <http://www.ic.nhs.uk/services/prescribing-support-unit-psu/measures/star-pus>
Note that the STAR-PU adjustments uses 2008 values.

³⁵ In January 2005, there was a 7% price cut for branded medicines as part of the renegotiated *Pharmaceutical Price Regulation Scheme*, and in March 2005, the price of generic medicine reduced considerably as part of the arrangements under the *Contractual Framework for Community Pharmacy*.

³⁶ See www.dasa.mod.uk/

³⁷ See www.pssru.ac.uk/uc/uc2007contents.htm

³⁸ See www.justice.gov.uk/publications/populationincustody.htm

³⁹ See www.scotland.gov.uk/Publications/2007/08/31102446/0

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- ⁴⁰ See www.niprisonservice.gov.uk/module.cfm/opt/5/area/Publications/page/publications/archive/false/cid/30 and www.nio.gov.uk/the_northern_ireland_prison_population_in_2005_bulletin_2-2006.pdf
- ⁴¹ See www.dh.gov.uk/en/Healthcare/Offenderhealth/DH_4032016#_1
- ⁴² See <http://www.berr.gov.uk/dius/science/science-funding/set-stats/index.html>
- ⁴³ Based on point estimates for 1999/2000, 2000/1, 2001/2 and 2005/6, see http://www.dh.gov.uk/en/Publicationsandstatistics/Lettersandcirculars/Dearcolleagueletters/DH_4123828
- ⁴⁴ Medical And Dental Education Levy – this provides support for postgraduate medical education, including salary and non-pay costs
- ⁴⁵ Non-Medical Education & Training – this covers pre-registration and part of post-registration education and training for non-medical professionals
- ⁴⁶ Service Increment For Teaching – this covers the costs to the NHS for supporting the teaching of medical undergraduates, for example through consultants seeing less patients in a clinic due to a student being present
- ⁴⁷ Data series ADXY from the Blue Book
- ⁴⁸ Data series ADGP from the Blue Book
- ⁴⁹ “Third Sector Market Mapping” by IFF Research Ltd, commissioned by Department of Health www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_065411
- ⁵⁰ http://www.hm-treasury.gov.uk/pespub_pesa08.htm
- ⁵¹ See, for example “The Barnett Formula”, House of Commons, 2001 <http://www.parliament.uk/commons/lib/research/rp2001/rp01-108.pdf>
- ⁵² See “Appendix NSRC4: NHS trust and PCT combined reference cost schedules at http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_082571
- ⁵³ In prior years these codes were 560F (in sheets TOPS FA, TOPS FU) and codes MDOBFA, MOOBFA, MROBFA, MSOBFA, MDOBFU, MOOBFU, MROBFU, MSOBFU, MDANFA, MOANFA, MRANFA, MSANFA, MDANFU, MOANFU, MRANFU, MSANFU (in sheet TOPS MAT)
- ⁵⁴ In prior years these codes were FPCF and FPCN (in sheets TOPS FA and TOPS FU)
- ⁵⁵ <http://www.ic.nhs.uk/statistics-and-data-collections/primary-care/prescriptions>
- ⁵⁶ <http://www.ic.nhs.uk/statistics-and-data-collections/supporting-information/audits-and-performance/the-quality-and-outcomes-framework/qof-2007/08/data-tables>
- ⁵⁷ Received from Tony Smith at the Information Centre (tony.smith@ic.nhs.uk)
- ⁵⁸ See www.healthyschools.gov.uk/Uploads/Resources/b0ae5c96-4f17-4878-84ac-539f12adff32/HS%20Whole%20School%20Approach.pdf for more details on the Healthy Schools Programme

59

www.ic.nhs.uk/webfiles/publications/dentaltdba/Dental%20Treatment%20Band%20Analysis%2C%20England%202007_Preliminary%20Results.pdf

60 www.offt.gov.uk/shared_offt/reports/consumer_protection/oft630b.pdf

61 www.dpb.nhs.uk/archive/nhs_statistics/ddonline_digest_search.cfm

62 www.cancerscreening.nhs.uk/

63

http://www.ic.nhs.uk/webfiles/publications/genophservsstatseng/GeneralOphthalmicServices241006_PDF.pdf

64

www.dh.gov.uk/en/Managingyourorganisation/Financeandplanning/Programmebudgeting/DH_075743

65 Data on expenditure on NHS smoking cessation services for the years 2000/01-2006/07 are available from the following sources:

HSC 1999/087: New NHS smoking cessation services

http://www.dh.gov.uk/en/Publicationsandstatistics/Lettersandcirculars/Healthservicecirculars/DH_4004990

2000/01

http://www.dh.gov.uk/en/Publicationsandstatistics/Lettersandcirculars/Dearcolleagueletters/DH_4003018

HSC 2002/012 - Primary care trusts revenue resource limits 2003/04, 2004/05 & 2005/06

http://www.dh.gov.uk/en/Publicationsandstatistics/Lettersandcirculars/Healthservicecirculars/DH_4005021

2006/07 and 2007/08.

http://www.dh.gov.uk/en/Managingyourorganisation/Financeandplanning/Allocations/DH_4104471

66

www.nice.org.uk/aboutnice/whatwedo/corporatepublications/annualaccounts/annual_accounts.jsp

67 www.nice.org.uk/media/F3A/E4/NICEAnnualReport0607.pdf

68

www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1194949700031?p=1190383623959, page 92

69 www.dh.gov.uk/en/Publicationsandstatistics/Publications/AnnualReports/index.htm

70 www.guidestar.org.uk/guidestar.aspx

71 From Population Trends 132, at www.statistics.gov.uk/STATBASE/ssdataset.asp?vlnk=9537

72 www.nibsc.ac.uk/aboutus/annualreport.html, page 38

73 <http://www.local.communities.gov.uk/finance/stats/lgfs/2008/lgfs18/index.html>, Table C1e

74 See Appendix 4, Table 1 at <http://www.food.gov.uk/multimedia/pdfs/annualreport200607.pdf>

⁷⁵ See “Inflation Indices” in Section V “Sources of Information” at www.pssru.ac.uk/uc/uc2007contents.htm

⁷⁶ www.dasa.mod.uk/

⁷⁷ Laura Gadsby, Economist at MoD (laura.gadsby@dasa.defence.gsi.gov.uk)

⁷⁸ www.justice.gov.uk/publications/populationincustody.htm

⁷⁹ www.scotland.gov.uk/Publications/2007/08/31102446/0

⁸⁰ www.nio.gov.uk/the_northern_ireland_prison_population_in_2005_bulletin_2-2006.pdf and www.niprisonservice.gov.uk/module.cfm/opt/5/area/Publications/page/publications/archive/false/cid/30

⁸¹

www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_064096

⁸² “Health Research” expenditure in Table 5.2 in http://www.hm-treasury.gov.uk/pespub_pesa08.htm

⁸³ Table 3.1 in the external link “SET Statistics: science, engineering and technology” at <http://www.berr.gov.uk/dius/science/science-funding/set-stats/>

⁸⁴ www.dh.gov.uk/en/Managingyourorganisation/Financeandplanning/Allocations/index.htm and www.dh.gov.uk/en/Publicationsandstatistics/Lettersandcirculars/Dearcolleagueletters/DH_4123828

⁸⁵ Medical And Dental Education Levy – this provides support for postgraduate medical education, including salary and non-pay costs

⁸⁶ Non-Medical Education & Training – this covers pre-registration and part of post-registration education and training for non-medical professionals

⁸⁷ Service Increment For Teaching – this covers the costs to the NHS for supporting the teaching of medical undergraduates, for example through consultants seeing less patients in a clinic due to a student being present

⁸⁸ From Population Trends 132, at www.statistics.gov.uk/STATBASE/ssdataset.asp?vlnk=9537. Populations for 2007 are projections from the GAD website www.gad.gov.uk/Demography_Data/Population/Index.asp?v=Principal&y=2006&subYear=Continue

⁸⁹ http://www.statistics.gov.uk/downloads/theme_economy/BB08.pdf

⁹⁰ Data series ADGP, found in Table 6.4 at http://www.statistics.gov.uk/downloads/theme_economy/BB08.pdf

⁹¹ Data series ADXY. This was not published in Blue Book 2008. Data consistent with this series, however, can be found in Consumer trends in section 12 on page. See the link - Consumer trends - Quarter 2 2008 at http://www.statistics.gov.uk/downloads/theme_economy/CT2008q2.pdf

⁹² Page 3 of www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_065411



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