

Prescribing costs in primary care

Technical supplement

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Drugs studied

For the purpose of this study we examined the expenditure by every Primary Care Trust, over a 12 month period from August 2005 to July 2006, across four commonly prescribed drug types. The drugs were chosen because, as well as their high volume of use for each type, there are a range of options available of similar efficacy but which vary considerably in price. The four areas investigated accounted for £1.5 billion of expenditure during the study period (around 19 per cent of the annual drugs bill) and made up 14 per cent of the 731 million prescriptions issued over that period.

The drug areas investigated were:

Statins - drugs commonly prescribed to lower cholesterol in the treatment and prevention of Coronary Heart Disease. There are currently five statins listed in the British National Formulary (BNF) from which doctors can prescribe. Scope for savings in this area arise from the fact that both generic and branded statins are available which have a marked difference in price. For example it is possible to treat a patient for one year with 80mg of generic simvastatin for £110; however, the same treatment with Lipitor® (a branded version of atorvastatin produced by Pfizer) would cost £367 and treatment with Zocor® (a branded version of simvastatin) would cost £387. The National Institute for Health Clinical Excellence (NICE), which provides objective guidance on the use of drugs, recommends that treatment with statins should usually be initiated with a low acquisition cost (generic) drug¹.

Renin Angiotensin Drugs - Used in the treatment of hypertension, heart failure, diabetic nephropathy and prophylaxis of cardiovascular events, renin angiotensins divide into two main categories, angiotensin-converting enzyme inhibitors (ACE inhibitors), the majority of which are available generically and are relatively cheap, and angiotensin-2 receptor antagonists (A2RAs), newer drugs which remain on patent and are more expensive than the generic alternative. Treatment with ACE inhibitors will be adequate for most patients, except those who prove to be intolerant. NICE guidance states that ACE inhibitors and A2RAs should be treated as equally efficacious but that due to cost differences treatment with ACE inhibitors should be initiated first².

Proton Pump Inhibitors - These are used in the treatment of gastric conditions such as dyspepsia, peptic ulcer disease and gastric reflux. There are two key issues affecting the prescribing of PPIs, namely choice of drug (branded versions are more expensive than commonly available generics), and choice of formulation (some dispersible tablet formulations of a drug available as a generic product are only available as more expensive branded version). This can have large cost implications, for example a 28 day supply of generic lansoprazole costs £6.73, whereas the same supply of Zoton® (a branded version of lansoprazole produced by

¹ *Statins for the prevention of cardiovascular events* January 2006

² *Management of hypertension in adults in primary care*, June 2006

Wyeth) as dispersible tablets costs £19.88³. Our analysis shows that during the period studied £11m could have been saved if all lansoprazole dispersible tablets (FasTabs®) were prescribed as generic lansoprazole.

Clopidogrel - An antiplatelet prescribed in secondary care usually after an acute cardiovascular event such as a heart attack or stroke. NICE guidance states clopidogrel treatment should be limited to a maximum of 12 months after which, for patients other than those who are intolerant to aspirin, treatment with low dose aspirin is an appropriate alternative. Following a patient's discharge from hospital it is their GP's responsibility to end treatment with clopidogrel, normally by prescribing aspirin in its place. However, practice based audit data, as well as the expert opinion of the clinical pharmacologists we spoke to, indicate that in some instances clopidogrel is prescribed for longer periods than is recommended. For example, Keele University studied a population of 197,314 patients in the West Midlands through 2004 and 2005. Fifty-seven per cent of the 633 of these patients who were prescribed clopidogrel in 2004 received over a year's treatment. This may be due to a lack of certainty amongst GPs about when to cease treatment with clopidogrel, or because patients have been incorrectly diagnosed as aspirin intolerant. Treatment with aspirin or with clopidogrel can sometimes lead to dyspepsia; however a cost-efficient proton pump inhibitor, such as omeprazole, can be added to the treatment to alleviate symptoms. There are significant cost differences between alternative treatment regimes. For example it is possible to treat about six people with aspirin and omeprazole, or 40 people with aspirin alone, for the cost of treating one person with clopidogrel.

³ The price quoted for Zoton FasTab® is for the period of analysis (August 2005-July 2006). As of 1 September 2006, the price of FasTab 30 mg was reduced to £11.00.

Efficiency measures and savings - methodology

The **net ingredient cost (NIC)** of a drug is its basic price, i.e. the price listed in the Drug Tariff.

Within a therapeutic area, drugs vary in preparation and potency (e.g. 10 mg tablets or 20 mg tablets). Practices also vary in how they prescribe (e.g. one prescription item might represent one month's supply of a drug in one area, and three month's supply in another). A standardised measure of volume which can be used to compare prescribing between practices and PCTs, within a therapeutic area, is the **defined daily dose (DDD)**, developed and maintained by the World Health Organisation. In this system, each drug is given a value that represents 'the assumed average maintenance dose per day for a drug used for its main indication for adults'. By expressing all prescribing in DDD units, prescribing volumes can be validly compared within therapeutic areas.

When comparing how prescribing costs vary between practices or PCTs, it is of course necessary to allow for the fact that areas with greater patient need (greater prevalence of the disease(s) in question) would be expected to have higher levels of prescribing. A way of allowing for differences in demography which affect prescribing needs is by using **STAR PUs** (specific therapeutic area age-sex related prescribing units) to adjust patient numbers within each practice or PCT. For example, a practice with a relatively large proportion of elderly patients would be expected to have to spend more on cardiovascular drugs than one with a relatively younger patient population. Both practices might have the same total number of patients on their lists, but the practice with the higher number of elderly patients would have a greater number of STAR PUs than the practice serving a younger client group, because older patients are more highly weighted in calculating cardiovascular STAR PUs. STAR PU weightings are widely understood and easy to apply in practical situations such as budget setting.

Based on these definitions, we can construct three useful metrics for comparing PCTs' drugs expenditure in a particular therapeutic area:

- **NIC per DDD:** roughly speaking 'how much the PCT pays per prescription of the drug type in question'. A relatively low NIC/DDD indicates that the PCTs' 'basket' of drugs is relatively efficient (i.e., it tends to buy lower-priced versions of the drug). **We have used this as our key efficiency measure.**
- **DDD per STAR PU:** roughly, 'how many prescriptions the PCT writes per patient', adjusting for different age-sex profiles across PCTs. In practice this is often quoted as DDDs per thousand STAR PUs. **This is a key prescribing volume measure.**
- **NIC per STAR PU:** roughly, 'per capita expenditure on that drug type at the PCT', adjusting for different age-sex profiles across PCTs. In practice this is often quoted as NIC per thousand STAR Pus. **This is a key prescribing costs measure.**

A PCT's prescribing of a certain drug type is **effective** if it meets patient need. To measure effectiveness we need a measure of prevalence of the condition(s) for which the drug is being prescribed in the PCT, as discussed in paragraphs 2.21 to 2.26 of the report. Although such analyses can never give an absolute indicator of what level of prescribing would be effective for a given PCT, they can indicate where prescribing seems unduly low or high. PCTs whose prescribing is unduly low may not be meeting all the treatment needs that exist in their area: this would be ineffective and poor VFM (untreated diseases may have serious and costly consequences). PCTs whose prescribing is unduly high are being wasteful, and again exhibiting poor VFM (more is being prescribed than is necessary—perhaps, for example, because of poor control on repeat prescribing systems—thus diverting money from more effective uses).

A *rough* measure of effectiveness is DDD/STAR PU, since the number of STAR PUs is a rough proxy for disease prevalence in a therapeutic area.

Even if a PCT is prescribing effectively, however, it may be that it is not prescribing efficiently. A PCT's prescribing of a certain drug type is **efficient** if lower priced versions of the drug are prescribed in preference to higher priced versions. As noted above, we can measure this by measuring the average cost being paid per DDD of the drug in question by the PCT.

Finally, we can calculate **potential savings** per PCT that could be generated by more efficient prescribing. We can do this by calculating, for example, how much would be saved on statin prescribing if all PCTs prescribed at the lowest average cost per PCT; or if the bottom three-quarters of PCTs prescribed as efficiently as the top quarter; or by reference to any other 'benchmark' level of efficiency.

Specifically, let there be N PCTs, labelled 1, 2, ..., N ; let the NIC/DDD for statins in PCT i be s_i ; let PCT i prescribe d_i DDDs in total over the period; and set a 'benchmark' level of efficiency for statin prescribing to be £ s per DDD (we take s to be the 25th percentile of NIC/DDD in calculating the savings reported in paragraph 2.17 in the report). Then the savings that would arise if PCTs that did not already do so were to prescribe at the benchmark level of efficiency would be

$\sum_{i=1}^N d_i \langle s_i - s \rangle$, where $\langle s_i - s \rangle = \begin{cases} s_i - s, & \text{if } s_i \geq s \\ 0, & \text{otherwise} \end{cases}$. The savings for renin angiotensin drugs and proton pump inhibitors are calculated similarly.

For clopidogrel, where, as explained in the report, the savings arise from a reduction in the volume of prescribing, let v represent a benchmark volume (we take v to be the 25th percentile of DDDs/STAR PU for calculating the savings reported in paragraph 2.17). Let PCT i have p_i STAR PUs, and let it currently prescribe v_i DDDs/STAR PU. Let the NIC/DDD for clopidogrel be c . Then the savings that would arise if PCTs that did not already do so were to prescribe at the

benchmark level would be $c \sum_{i=1}^N p_i \langle v_i - v \rangle$.

Note that, whilst more efficient prescribing is a necessary condition for a PCT to generate savings in a particular therapeutic area, it is not a sufficient one. PCTs which prescribe relatively inefficiently for a particular drug class, but have relatively fewer patients for whom the drug is indicated, will not stand to make as high a level of savings, from more efficient prescribing of that drug, as PCTs with a relatively high number of relevant patients.

The table overleaf shows the efficiency rank, calculated on the basis of NIC/DDD, each of the 303 pre-reconfiguration PCTs achieved during the period August 2005 to July 2006 across the four drug classes. (So '1' means 'most efficient' in each drug class, and '303' means 'least efficient'.) It also shows the savings that each PCT could have achieved during the study period if it had achieved the same standard of efficiency as the PCTs in the top 25 per cent across all drug classes. If all PCTs had achieved the efficiency level of the top 10 per cent, a total saving of £351 million would have resulted.

PCT (post reconfiguration)	PCT (pre reconfiguration)	Rank on Cost per DDD for Statins	Rank on Cost per DDD for Renin Angiotensins	Rank on Cost per DDD for Proton Pump Inhibitors	Rank on DDDs per 1000 STAR PUs for Clopidogrel	Potential Savings
Ashton, Leigh and Wigan	Ashton, Leigh and Wigan	287	148	186	283	£3,392,688
Barking and Dagenham	Barking and Dagenham	296	213	234	234	£1,410,271
Barnet	Barnet	284	296	68	200	£3,283,386
Barnsley	Barnsley	239	167	145	290	£2,110,190
Bassetlaw	Bassetlaw	289	150	207	130	£933,779
Bath and North East Somerset	Bath and North East Somerset	127	275	10	77	£659,188
Bedfordshire	Bedford	297	111	246	148	£1,109,855
	Bedfordshire Heartlands	275	193	148	122	£1,445,849
Berkshire East	Bracknell Forest	123	277	269	103	£400,565
	Slough	228	299	193	226	£942,515
	Windsor, Ascot and Maidenhead	234	300	272	132	£1,292,778
Berkshire West	Newbury and Community	86	80	32	29	£19,914
	Reading	205	131	94	51	£515,502
	Wokingham	238	128	52	35	£389,333
Bexley Care Trust	Bexley Care Trust	158	232	41	221	£927,506
Birmingham East and North	Eastern Birmingham	186	240	184	273	£1,548,331
	North Birmingham	263	208	134	186	£1,148,326
Blackburn with Darwen	Blackburn with Darwen	42	90	8	238	£212,205
Blackpool	Blackpool	92	135	80	245	£455,242
Bolton	Bolton	111	220	278	261	£1,679,093
Bournemouth and Poole Teaching	Bournemouth Teaching	45	72	105	48	£22,355
	Poole	94	18	104	6	£87,830

PCT (post reconfiguration)	PCT (pre reconfiguration)	Rank on Cost per DDD for Statins	Rank on Cost per DDD for Renin Angiotensins	Rank on Cost per DDD for Proton Pump Inhibitors	Rank on DDDs per 1000 STAR PUs for Clopidogrel	Potential Savings
Bradford and Airedale Teaching	Airedale	249	37	297	235	£768,636
	Bradford City Teaching	298	226	286	280	£1,176,768
	Bradford South and West	283	53	267	224	£1,117,889
	North Bradford	251	41	236	139	£484,977
Brent Teaching	Brent Teaching	257	267	31	202	£1,817,942
Brighton and Hove City Teaching	Brighton and Hove City Teaching	53	222	223	167	£754,731
Bristol Teaching	Bristol North	8	227	4	53	£353,859
	Bristol South and West	82	259	60	106	£439,916
Bromley	Bromley	90	236	69	61	£689,192
Buckinghamshire	Chiltern and South Bucks	168	252	172	84	£674,915
	Vale of Aylesbury	87	63	255	140	£280,752
	Wycombe	216	218	173	50	£573,625
Bury	Bury	288	255	42	272	£2,096,022
Calderdale	Calderdale	134	19	213	296	£1,046,919
Cambridgeshire	Cambridge City	156	165	62	133	£284,941
	East Cambridgeshire and Fenland	189	82	262	98	£557,404
	Huntingdonshire	83	199	153	47	£265,878
	South Cambridgeshire	254	230	245	121	£557,315
Camden	Camden	164	266	20	164	£670,403
Central and Eastern Cheshire	Central Cheshire	271	140	147	182	£1,843,804
	Eastern Cheshire	204	132	160	145	£1,119,200
Central Lancashire	Chorley and South Ribble	295	234	228	214	£2,189,221
	Preston	300	274	229	203	£1,698,854
	West Lancashire	294	251	124	287	£1,269,367

PCT (post reconfiguration)	PCT (pre reconfiguration)	Rank on Cost per DDD for Statins	Rank on Cost per DDD for Renin Angiotensins	Rank on Cost per DDD for Proton Pump Inhibitors	Rank on DDDs per 1000 STAR PUs for Clopidogrel	Potential Savings
City and Hackney Teaching	City and Hackney Teaching	188	225	126	159	£735,807
Cornwall and Isles of Scilly	Central Cornwall	243	233	43	114	£957,724
	North and East Cornwall	138	264	49	158	£803,449
	West of Cornwall	131	205	23	161	£545,825
County Durham	Derwentside	185	138	7	244	£391,162
	Durham and Chester-le-Street	102	114	78	213	£321,996
	Durham Dales	93	29	25	239	£166,812
	Easington	170	190	276	236	£662,092
	Sedgefield	61	55	72	230	£119,484
Coventry Teaching	Coventry Teaching	233	258	187	151	£2,042,038
Croydon	Croydon	106	163	167	82	£651,677
Cumbria	Carlisle and District	43	124	116	208	£227,016
	Eden Valley	77	146	22	141	£101,819
	Morecambe Bay [Sth Lakeland only]	244	77	47	205	£1,592,533
	West Cumbria	39	17	212	97	£126,696
Darlington	Darlington	80	125	19	154	£144,069
Derby City	Central Derby	17	10	87	27	£5,237
	Greater Derby	74	42	57	20	£0
Derbyshire County	Amber Valley	37	5	30	15	£0
	Chesterfield	5	3	120	11	£28,227
	Derbyshire Dales and South Derbyshire	95	21	121	55	£57,099
	Erewash	28	51	64	49	£0
	High Peak and Dales	23	9	157	25	£45,997
	North Eastern Derbyshire	1	2	46	24	£0

PCT (post reconfiguration)	PCT (pre reconfiguration)	Rank on Cost per DDD for Statins	Rank on Cost per DDD for Renin Angiotensins	Rank on Cost per DDD for Proton Pump Inhibitors	Rank on DDDs per 1000 STAR PUs for Clopidogrel	Potential Savings
Devon	East Devon	24	65	51	31	£0
	Exeter	52	6	66	32	£0
	Mid Devon	140	112	215	36	£279,890
	North Devon	48	30	71	189	£164,634
	South Hams and West Devon	51	195	2	34	£169,480
	Teignbridge	72	81	196	4	£96,381
Doncaster	Doncaster Central	221	39	280	199	£630,147
	Doncaster East	270	61	263	206	£718,321
	Doncaster West	220	15	295	185	£666,280
Dorset	North Dorset	120	4	40	13	£104,968
	South and East Dorset	85	56	169	26	£90,672
	South West Dorset	56	1	56	40	£0
Dudley	Dudley South	240	211	257	212	£1,516,691
	Dudley, Beacon and Castle	248	247	284	246	£927,163
Ealing	Ealing	273	270	241	265	£2,895,599
East and North Hertfordshire	North Hertfordshire and Stevenage	139	130	171	88	£476,667
	Royston, Buntingford and Bishop's Stortford	88	62	140	54	£39,331
	South East Hertfordshire	89	248	150	80	£471,917
	Welwyn Hatfield	73	139	114	57	£98,192
East Lancashire	Burnley, Pendle and Rossendale	67	122	141	285	£883,333
	Hyndburn and Ribble Valley	32	110	33	243	£225,725
East Riding of Yorkshire	East Yorkshire	281	115	277	211	£1,222,380
	Yorkshire Wolds and Coast	282	254	287	156	£1,891,937

PCT (post reconfiguration)	PCT (pre reconfiguration)	Rank on Cost per DDD for Statins	Rank on Cost per DDD for Renin Angiotensins	Rank on Cost per DDD for Proton Pump Inhibitors	Rank on DDDs per 1000 STAR PUs for Clopidogrel	Potential Savings
East Sussex Downs and Weald	Eastbourne Downs	175	144	181	168	£924,463
	Sussex Downs and Weald	174	281	240	146	£1,084,719
Eastern and Coastal Kent	Ashford	160	197	36	70	£363,955
	Canterbury and Coastal	119	149	149	90	£439,346
	East Kent Coastal	264	172	194	157	£1,804,141
	Shepway	79	249	61	152	£325,492
	Swale	200	166	188	129	£413,987
Enfield	Enfield	269	298	174	144	£2,350,332
Gateshead	Gateshead	10	103	144	275	£619,135
Gloucestershire	Cheltenham and Tewkesbury	35	156	162	42	£272,889
	Cotswold and Vale	2	86	15	58	£31,559
	West Gloucestershire	62	118	44	177	£326,807
Great Yarmouth and Waveney	Great Yarmouth	30	25	54	78	£381
	Waveney	11	75	58	44	£0
Greenwich Teaching	Greenwich Teaching	235	285	123	225	£1,374,292
Halton and St Helen's	Halton	96	66	84	294	£428,706
	St Helens	183	152	254	288	£1,552,337
Hammersmith and Fulham	Hammersmith and Fulham	124	238	3	198	£474,890
Hampshire	Blackwater Valley and Hart	191	256	136	86	£804,459
	East Hampshire	58	74	92	10	£8,368
	Eastleigh and Test Valley South	12	16	86	46	£5,505
	Fareham and Gosport	81	96	13	2	£91,067
	Mid Hampshire	22	91	131	43	£90,229
	New Forest	54	57	137	63	£69,628

PCT (post reconfiguration)	PCT (pre reconfiguration)	Rank on Cost per DDD for Statins	Rank on Cost per DDD for Renin Angiotensins	Rank on Cost per DDD for Proton Pump Inhibitors	Rank on DDDs per 1000 STAR PUs for Clopidogrel	Potential Savings
Hampshire	North Hampshire	21	47	55	113	£36,474
Haringey Teaching	Haringey Teaching	208	283	175	83	£1,122,877
Harrow	Harrow	219	231	24	173	£1,154,361
Hartlepool	Hartlepool	143	161	99	264	£461,609
Hastings and Rother	Bexhill and Rother	107	297	216	197	£767,443
	Hastings and St Leonards	212	288	264	254	£930,564
Havering	Havering	272	105	97	165	£1,333,839
Heart of Birmingham Teaching	Heart of Birmingham Teaching	195	262	200	259	£1,554,427
Herefordshire	Herefordshire	60	246	81	19	£470,715
Heywood Middleton and Rochdale	Heywood and Middleton	279	185	75	289	£752,601
	Rochdale	299	239	26	274	£1,691,861
Hillingdon	Hillingdon	180	216	45	227	£1,189,844
Hounslow	Hounslow	218	186	27	223	£1,072,523
Hull	Eastern Hull	162	123	279	281	£662,790
	West Hull	182	93	164	216	£529,865
Isle of Wight NHS	Isle of Wight	47	83	37	14	£18,062
Islington	Islington	165	127	82	181	£425,314
Kensington and Chelsea	Kensington and Chelsea	245	293	29	118	£853,834
Kingston	Kingston	173	268	9	71	£590,349
Kirklees	Huddersfield Central	109	89	210	195	£330,541
	North Kirklees	76	134	281	269	£715,937
	South Huddersfield	196	60	127	204	£289,486
Knowsley	Knowsley	105	157	166	295	£883,328
Lambeth	Lambeth	104	217	206	85	£596,817

PCT (post reconfiguration)	PCT (pre reconfiguration)	Rank on Cost per DDD for Statins	Rank on Cost per DDD for Renin Angiotensins	Rank on Cost per DDD for Proton Pump Inhibitors	Rank on DDDs per 1000 STAR PUs for Clopidogrel	Potential Savings
Leeds	East Leeds	232	126	237	286	£1,235,657
	Leeds North East	262	214	233	248	£1,299,522
	Leeds North West	225	175	208	231	£992,726
	Leeds West	184	164	93	270	£613,564
	South Leeds	44	46	203	260	£323,847
Leicester City	Eastern Leicester	278	219	301	251	£1,445,253
	Leicester City West	226	191	299	180	£815,690
Leicestershire County and Rutland	Charnwood and North West Leicestershire	213	184	290	125	£1,280,658
	Hinckley and Bosworth	128	107	285	79	£284,806
	Melton, Rutland and Harborough	151	95	247	33	£314,841
	South Leicestershire	132	120	293	115	£509,205
Lewisham	Lewisham	115	151	222	220	£780,946
Lincolnshire	East Lincolnshire	242	23	256	172	£1,996,055
	Lincolnshire South West Teaching	149	33	199	39	£393,349
	West Lincolnshire	231	8	155	102	£959,299
Liverpool	Central Liverpool	155	253	195	300	£2,158,126
	North Liverpool	153	291	191	303	£1,188,354
	South Liverpool	167	263	232	297	£904,709
Luton	Luton	301	241	189	229	£1,817,691
Manchester	Central Manchester	223	136	156	252	£853,088
	North Manchester	260	202	35	298	£1,480,551
	South Manchester	258	179	89	276	£1,026,674
Medway	Medway	137	194	220	105	£867,830

PCT (post reconfiguration)	PCT (pre reconfiguration)	Rank on Cost per DDD for Statins	Rank on Cost per DDD for Renin Angiotensins	Rank on Cost per DDD for Proton Pump Inhibitors	Rank on DDDs per 1000 STAR PUs for Clopidogrel	Potential Savings
Mid Essex	Chelmsford	108	32	100	93	£103,828
	Maldon and South Chelmsford	274	223	243	112	£644,136
	Witham, Braintree and Halstead Care Trust	252	162	102	123	£634,824
Middlesbrough	Middlesbrough	75	102	242	179	£412,029
Milton Keynes	Milton Keynes	152	68	158	73	£312,661
Newcastle	Newcastle	6	183	70	218	£579,593
Newham	Newham	256	31	271	250	£1,452,393
Norfolk	Broadland	100	196	296	95	£435,676
	North Norfolk	303	292	303	69	£1,549,456
	Norwich	59	228	298	136	£456,181
	Southern Norfolk	147	201	265	59	£857,751
	West Norfolk	113	141	294	137	£674,061
North East Essex	Colchester	190	272	224	126	£849,341
	Tendring	266	261	250	175	£1,354,665
North East Lincolnshire	North East Lincolnshire	217	85	185	240	£865,304
North Lancashire	Fylde	250	224	88	176	£538,497
	Morecambe Bay [Lancaster]	244	77	47	205	£1,592,533
	Wyre	141	177	109	257	£743,188
North Lincolnshire	North Lincolnshire	261	27	259	258	£1,176,725
North Somerset	North Somerset	78	229	112	104	£471,243
North Staffordshire	Newcastle-under-Lyme	169	54	178	241	£396,807
	Staffordshire Moorlands	259	99	238	207	£697,485
North Tees	North Tees	18	26	85	60	£6,779
North Tyneside	North Tyneside	4	284	202	242	£1,165,034

PCT (post reconfiguration)	PCT (pre reconfiguration)	Rank on Cost per DDD for Statins	Rank on Cost per DDD for Renin Angiotensins	Rank on Cost per DDD for Proton Pump Inhibitors	Rank on DDDs per 1000 STAR PUs for Clopidogrel	Potential Savings
North Yorkshire and York	Craven, Harrogate and Rural District	227	104	65	120	£657,214
	Hambleton and Richmondshire	146	98	275	18	£358,303
	Scarborough, Whitby and Ryedale	247	159	128	163	£919,996
	Selby and York	211	50	204	190	£1,069,900
Northamptonshire Teaching	Cherwell Vale [Northamptonshire]	154	113	163	16	£292,489
	Daventry and South Northamptonshire	229	109	258	37	£451,618
	Northampton	117	88	151	91	£316,750
	Northamptonshire Heartlands	97	12	17	30	£126,994
Northumberland Care Trust	Northumberland Care Trust	7	188	18	149	£686,859
Nottingham City	Nottingham City	125	70	106	101	£331,543
Nottinghamshire County Teaching	Ashfield	19	13	79	117	£19,549
	Broxtowe and Hucknall	55	94	248	87	£165,248
	Gedling	201	133	111	131	£378,961
	Mansfield District	29	40	98	162	£65,897
	Newark and Sherwood	38	84	209	110	£136,892
	Rushcliffe	202	206	283	62	£580,631

PCT (post reconfiguration)	PCT (pre reconfiguration)	Rank on Cost per DDD for Statins	Rank on Cost per DDD for Renin Angiotensins	Rank on Cost per DDD for Proton Pump Inhibitors	Rank on DDDs per 1000 STAR PUs for Clopidogrel	Potential Savings
Oldham	Oldham	293	210	211	302	£2,898,873
Oxfordshire	Cherwell Vale [North Oxfordshire]	154	113	163	16	£292,489
	North East Oxfordshire	69	49	135	21	£22,468
	Oxford City	26	71	76	28	£0
	South East Oxfordshire	126	153	159	8	£220,353
	South West Oxfordshire	49	52	91	12	£9,430
Peterborough	North Peterborough	277	187	168	52	£648,625
	South Peterborough	286	200	244	38	£706,946
Plymouth Teaching	Plymouth Teaching	41	244	1	124	£688,197
Portsmouth City Teaching	Portsmouth City Teaching	66	92	74	17	£44,408
Redbridge	Redbridge	302	178	180	266	£2,594,902
Redcar and Cleveland	Langbaugh	16	34	77	74	£371
Richmond and Twickenham	Richmond and Twickenham	197	168	11	41	£454,685
Rotherham	Rotherham	166	69	268	210	£1,121,709
Salford	Salford	181	235	122	293	£1,864,942
Sandwell	Oldbury and Smethwick	130	198	205	255	£568,708
	Rowley Regis and Tipton	135	64	214	262	£347,157
	Wednesbury and West Bromwich	163	257	226	284	£917,848
Sefton	South Sefton	129	282	179	299	£1,558,291
Sefton	Southport and Formby	280	303	50	291	£1,814,833
Sheffield	North Sheffield	101	7	38	282	£338,347
	Sheffield South West	209	76	63	256	£501,147
	Sheffield West	187	48	48	249	£388,988
	South East Sheffield	136	14	129	292	£726,330

PCT (post reconfiguration)	PCT (pre reconfiguration)	Rank on Cost per DDD for Statins	Rank on Cost per DDD for Renin Angiotensins	Rank on Cost per DDD for Proton Pump Inhibitors	Rank on DDDs per 1000 STAR PUs for Clopidogrel	Potential Savings
Shropshire County	Shropshire County	207	265	119	135	£1,861,323
Solihull	Solihull	176	276	14	193	£1,320,518
Somerset	Mendip	142	11	161	3	£192,592
	Somerset Coast	50	28	6	7	£0
	South Somerset	267	38	59	9	£724,755
	Taunton Deane	133	35	146	5	£167,331
South Birmingham	South Birmingham	110	192	201	222	£1,401,699
South East Essex	Castle Point and Rochford	122	242	230	228	£933,177
	Southend-on-Sea	255	295	183	247	£1,655,649
South Gloucestershire	South Gloucestershire	27	290	125	45	£884,183
South Staffordshire	Burntwood, Lichfield and Tamworth	121	24	165	153	£277,351
South Staffordshire	Cannock Chase	65	78	198	160	£154,581
	East Staffordshire	150	79	221	108	£318,057
	South Western Staffordshire	148	154	133	119	£605,019
South Tyneside South West Essex	South Tyneside	36	67	231	219	£329,120
	Basildon	215	243	289	170	£693,737
	Billericay, Brentwood and Wickford	246	279	249	134	£1,138,489
	Thurrock	177	209	261	143	£660,717
Southampton City	Southampton City	13	22	90	72	£9,090
Southwark Health and Social Care Stockport	Southwark	71	145	117	65	£212,268
	Stockport	236	237	239	267	£2,663,560
Stoke on Trent	North Stoke	253	36	217	278	£898,615
	South Stoke	98	73	95	196	£207,633

PCT (post reconfiguration)	PCT (pre reconfiguration)	Rank on Cost per DDD for Statins	Rank on Cost per DDD for Renin Angiotensins	Rank on Cost per DDD for Proton Pump Inhibitors	Rank on DDDs per 1000 STAR PUs for Clopidogrel	Potential Savings
Suffolk	Central Suffolk	210	260	292	155	£766,493
	Ipswich	157	221	115	191	£655,931
	Suffolk Coastal	203	250	197	171	£663,120
	Suffolk West	265	294	300	192	£2,467,036
Sunderland Teaching	Sunderland Teaching	46	155	302	232	£1,429,822
Surrey	East Elmbridge and Mid Surrey	192	189	110	56	£978,581
	East Surrey	241	171	227	23	£666,923
	Guildford and Waverley	276	302	235	150	£2,403,237
	North Surrey	193	271	190	187	£1,321,393
	Surrey Heath and Woking	230	286	252	166	£1,440,832
Sutton and Merton	Sutton and Merton	179	100	154	66	£819,197
Swindon	Swindon	68	182	21	127	£316,224
Tameside and Glossop	Tameside and Glossop	292	170	270	301	£3,302,853
Telford and Wrekin	Telford and Wrekin	91	269	108	100	£557,392
Torbay Care Trust	Torbay Care Trust	33	59	218	1	£120,795
Tower Hamlets	Tower Hamlets	118	117	138	253	£492,452
Trafford	Trafford North	145	97	28	201	£289,025
	Trafford South	206	101	39	217	£576,020
Wakefield District	Eastern Wakefield	14	20	142	268	£396,445
	Wakefield West	9	116	118	233	£316,075
Walsall Teaching	Walsall Teaching	15	44	132	237	£401,859
Waltham Forest	Waltham Forest	285	158	130	215	£1,508,958
Wandsworth Teaching	Wandsworth Teaching	214	173	53	89	£747,342
Warrington	Warrington	172	106	73	279	£906,932
Warwickshire	North Warwickshire	224	204	274	147	£1,185,419
	Rugby	268	143	139	109	£504,343
	South Warwickshire	112	280	107	138	£1,242,325

PCT (post reconfiguration)	PCT (pre reconfiguration)	Rank on Cost per DDD for Statins	Rank on Cost per DDD for Renin Angiotensins	Rank on Cost per DDD for Proton Pump Inhibitors	Rank on DDDs per 1000 STAR PUs for Clopidogrel	Potential Savings
West Essex	Epping Forest	291	169	219	188	£940,229
	Harlow	159	181	152	194	£327,947
	Uttlesford	290	180	288	142	£760,214
West Hertfordshire	Dacorum	57	160	177	81	£214,299
	Hertsmere	144	278	113	174	£479,258
	St Albans and Harpenden	194	215	251	75	£503,478
	Watford and Three Rivers	34	203	34	116	£265,180
West Kent	Dartford, Gravesham and Swanley	64	121	170	184	£470,888
	Maidstone Weald	99	273	96	111	£856,881
	South West Kent	114	301	225	169	£1,301,914
West Sussex	Adur, Arun and Worthing Teaching	63	142	67	128	£373,784
	Crawley	199	119	260	64	£376,766
	Horsham and Chancetonbury	161	147	273	76	£483,503
	Mid Sussex	222	174	291	107	£868,591
	Western Sussex	103	108	253	22	£479,963
Western Cheshire	Cheshire West	116	212	282	271	£1,096,395
	Ellesmere Port and Neston	31	87	266	277	£322,144
Westminster	Westminster	237	287	16	178	£1,108,454

PCT (post reconfiguration)	PCT (pre reconfiguration)	Rank on Cost per DDD for Statins	Rank on Cost per DDD for Renin Angiotensins	Rank on Cost per DDD for Proton Pump Inhibitors	Rank on DDDs per 1000 STAR PUs for Clopidogrel	Potential Savings
Wiltshire	Kennet and North Wiltshire	198	245	101	92	£957,394
	South Wiltshire	25	45	83	68	£2,631
	West Wiltshire	70	129	5	99	£129,762
Wirral	Bebington and West Wirral	171	176	176	183	£654,157
	Birkenhead and Wallasey	84	137	103	209	£542,365
Wolverhampton City	Wolverhampton City	178	43	192	263	£1,099,924
Worcestershire	Redditch and Bromsgrove	40	58	143	96	£64,718
	South Worcestershire	20	289	182	67	£1,241,527
	Wyre Forest	3	207	12	94	£197,585
Total						£227,130,785

Results of the survey of Prescribing Advisors

Using lead prescribing advisor contact details provided by the National Prescribing Centre, we sent a survey to all of the 303 PCTs in England as of August 2006. We received 156 responses. The data generated by the answers to the closed questions is displayed below.

How long have you been in your current post as a prescribing advisor?

0 - 6 months	2	1.3%
6 months - 1 year	0	0.0%
1 - 2 years	10	6.4%
2 - 5 years	54	34.4%
More than 5 years	91	58.0%

Prior to your current role, what type of post did you hold?

Secondary Care	45	25.4%
Community Pharmacy	45	25.4%
Academia	5	2.8%
Pharmaceutical Industry	3	1.7%
FHSA/PCG Pharmaceutical advisor	42	23.7%
Health Authority Other advisory role	16	9.0%
Regional HA advisory role	2	1.1%
Other	19	10.7%

What do you consider the role of a prescribing advisor to be?

What aspect of your role do you spend most time on?

(Rank in order of priority with 1 being highest)

	Role	Time
Providing support and advice to GPs on cost efficient prescribing	1	1
Providing support and advice to GPs on current issues in prescribing	2	2
Analysing data and identifying areas for improvement	3	3
Working to influence prescribing in secondary care	4	4
Providing support and advice to other prescribers	5	5
Providing support and advice to GPs on implementing NICE guidance	6	6
Providing support on commissioning in relation to medicine	7	7
Horizon scanning to identify future issues	8	9
Providing support and advice to other primary care clinicians who influence prescribing	9	8

What methods do you employ to influence GPs' prescribing habits?

Regular Newsletter	122	78.2%
Occasional newsletter	78	50.0%
Targeted email	110	70.5%
Emails in response to individual needs	139	89.1%
Face to face meetings	151	96.8%
Teleconferencing	2	1.3%
Seminars	74	47.4%
Other	71	45.5%

How often is each GP practice in your PCT visited by a member of the prescribing advice team?

At least monthly	45	26.6%
At least every 2 months	10	5.9%
At least every 3 months	12	7.1%
At least every 4 months	5	3.0%
At least every 6 months	21	12.4%
At least every 12 months	41	24.3%
Other	35	20.7%

Do you target more of your resources towards those practices with the least efficient prescribing habits?

Yes	116	75.8%
No	37	24.2%

How often do you present on prescribing issues at other GP meetings, e.g. PBC consortia, locality forums, etc.

Never	10	6.6%
At least monthly	25	16.4%
At least every 2 months	26	17.1%
At least every 3 months	35	23.0%
At least every 4 months	17	11.2%
At least every 6 months	22	14.5%
At least every 12 months	17	11.2%

How often do you meet with drug company representatives in your area?

Never	17	11.3%
Not in my office but may encounter them at external events	30	19.9%
At least once every 12 months	14	9.3%
At least once every 6 months	14	9.3%
At least once every 3 months	39	25.8%
Less than once a week but more than once a month	31	20.5%
Once a week	6	4.0%
Several times a week	0	0.0%

How much influence do you feel you have over the prescribing habits of GPs?

No influence	0	0.0%
Little influence	1	0.6%
Some influence	103	66.5%
Considerable influence	51	32.9%
No influence	0	0.0%
Little influence	1	0.6%
Some influence	103	66.5%
Considerable influence	51	32.9%

What percentage of GPs in your area do you feel would change a patient's prescribed drugs on the basis of a recommendation by you?

I wouldn't recommend switching	2	1.4%
0-25%	5	3.4%
26-50%	28	18.9%
51-75%	74	50.0%
76-100%	39	26.4%

What percentage of GPs in your area do you feel would prescribe a new drug to new patients on the basis of a recommendation by you?

0-25%	12	8.3%
26-50%	38	26.2%
51-75%	66	45.5%
76-100%	29	20.0%

What would be the best way to influence GPs' prescribing habits if resources were not limited? (Please rank with 1 being the best)

Greater contact time with GPs	1
Financial incentives	2
Standardised national policies for prescribing in therapeutic areas	3
Other - please specify	4
Benchmarking against similar practices	5
Nationally produced marketing material to pharmaceutical industry standard	6

How would you describe your relationship with your Area Prescribing Committee?

Do not have an area prescribing committee	27	17.5%
Poor	3	1.9%
Reasonable	15	9.7%
Good	52	33.8%
Excellent	57	37.0%

How would you describe your relationship with the GPs in your area?

Poor	0	0.0%
Reasonable	5	3.2%
Good	81	52.3%
Excellent	69	44.5%

How cost efficient would you say GP prescribing is in your area?

Poor	4	2.6%
Reasonable	52	33.8%
Good	74	48.1%
Excellent	24	15.6%

Which kind of medication review is most commonly undertaken in GP practices in your PCT?

Prescription only	21	13.6%
Prescription plus patient notes	97	63.0%
Prescription plus patient notes plus patient present	20	13.0%
Don't know	16	10.4%

Who undertakes the majority of medication reviews in GP practices in your PCT?

General practitioners	122	76.7%
Nurses	8	5.0%
Pharmacists	17	10.7%
Pharmacy technician	3	1.9%
Don't know	9	5.7%

What percentage of practices in your PCT have achieved the maximum number of QOF points for medicines management?

Don't know	22	14.8%
0-25%	9	6.0%
26-50%	8	5.4%
51-75%	20	13.4%
76-100%	90	60.4%

How many GP practices in your area stayed within their prescribing budget in 2005-06?

Don't know	3	2.0%
0-25%	9	5.9%
26-50%	19	12.4%
51-75%	51	33.3%
76-100%	71	46.4%

Overall rankings (highest to lowest) of the usefulness and objectivity of various sources of information to Prescribing Advisors

Rank	Useful	Objective
1	PCT prescribing adviser/medicines management team	BNF
2	BNF	PCT prescribing adviser/medicines management team
3	Summary journals e.g. Drugs and Therapeutic Bulletin, Bandolier	Newsletters from PCT prescribing adviser/medicines management team
4	Newsletters from PCT prescribing adviser/medicines management team	London New Drugs Group
5	Area prescribing committee	Summary journals e.g. Drugs and Therapeutic Bulletin, Bandolier
6	London New Drugs Group	PCT local formulary
7	PCT local formulary	SMC guidance
8	Joint formulary with local hospitals	Area prescribing committee
9	Prodigy	Prodigy
10	NICE guidance on specific technologies (appraisals)	Joint formulary with local hospitals
11	NICE clinical guidance for specific conditions	NICE guidance on specific technologies (appraisals)
12	SMC guidance	NICE clinical guidance for specific conditions
13	National Service Frameworks and other Department of Health guidance	National Service Frameworks and other Department of Health guidance
14	Guidance from professional organisations such as the Joint British Societies' Guidelines on Prevention of Cardiovascular Disease in Clinical Practice	Scientific journals e.g. The Lancet, BMJ
15	Scientific journals e.g. The Lancet, BMJ	Guidance from professional organisations such as the Joint British Societies' Guidelines on Prevention of Cardiovascular Disease in Clinical Practice
16	GPs	GPs
17	Consultants	MIMS
18	MIMS	Consultants
19	Practice nurses	Practice nurses
20	Pharmaceutical companies reps	Magazines e.g. Pulse, GP, Doctor
21	Magazines e.g. Pulse, GP, Doctor	Pharmaceutical companies reps
22	Pharmaceutical companies literature (including advertisements)	Pharmaceutical companies literature (including advertisements)