CIVITAS HEALTH BRIEFING

NICE or NASTY: Has NICE Eliminated the 'Postcode Lottery' in the NHS?[1]

Mark Jones and Ben Irvine, Civitas Health Unit
September 2003

1. Introduction

The chief rationale for the creation of the National Institute for Clinical Excellence (NICE) early in 1999 by Secretary of State for Health Frank Dobson was that it would end the unfair 'postcode lottery in prescribing'.[2] Clearly in conflict with the NHS claim to provide equal access to care, politically damaging 'postcode prescribing' was again brought to public attention in November 1999 by the case of a gentleman who lived on the Norfolk/Suffolk border and suffered from motor neurone disease. He was unable to obtain Riluzole from his own health authority in Suffolk, but if he had lived a few miles away in the neighbouring county it would have been supplied. Instead, he was paying personally and shopping around for the best price from private companies. The response of then Secretary of State for Health, Alan Milburn, on the Today programme was to say that he would end the 'lottery of care'. But would he make Riluzole available everywhere or nowhere? [3] If the latter, then patients will still find themselves searching the internet for the best direct-mail deal. Moreover, even if NICE recommends a product, the power to decide how to allocate funds still rests with the local health organisations[4]; there is a steady trickle of examples, suggesting that variations in prescription remain entrenched. The most recently publicised examples have concentrated on treatments that are in the process of being examined by NICE[5], including variations in the funding of fertility treatment[6] and in the use of Xigris for the treatment of severe sepsis in intensive care units.[7]

---

[1] This briefing is based on research primarily carried out by Civitas intern Mark Jones, between May and early July 2003; it forms the first part of an ongoing Civitas research project on the effect of NICE.

[2] The work of NICE applies to health care in England and Wales; its Scottish equivalent was called the Health Technology Board for Scotland (HTBS (http://www.htbs.co.uk/home.asp?did=6)) until January 2003 at which point HTBS was subsumed into a new body, NHS Quality Improvement Scotland (http://www.nhshealthquality.org/).

[3] Also known as Rilutek, NICE subsequently gave approval for the drug Riluzole for motor neurone disease sufferers in January 2001.

[4] Since 1st January 2002 the NHS has had a statutory obligation to provide funding for NICE approved technologies once a doctor has recommended such a technology to his or her patient

[5] The phenomenon by which some providers decide not to recommend or cease to give treatments during the NICE appraisal process is known as 'NICE Blight'.

[6] A number of news reports on this followed the issuing of a NICE press release: NICE, 'Extension to the timescale for the fertility guideline', *Press Statement*, NICE, 25 July 2003. A further wave of media interest followed the publication on 26 August 2003 of the second draft for consultation of the NICE guideline on fertility treatment. The draft recommends that the NHS funds IVF treatment for those aged 23-39 (for further details see http://www.nice.org.uk/cat.asp?c=20092).

[7] Source: Prof David Bennett of St Georges Hospital, London, interview on Radio 4 Today programme, 24 July 2003. The fertility treatment appraisal is due in February 2004, while the Xigris appraisal is due to be published in August 2004. According to the Labour party website (April 2003): 'Sepsis is a life-threatening

The remainder of this introduction provides some background information on NICE. Specifically: What is NICE? What are its aims? How does NICE's guidance affect what treatment the NHS provides?

NICE was set up as a Special Health Authority for England and Wales on 1st April 1999. It is an independent organisation responsible for providing national guidance on treatments and care for those using the NHS in England and Wales. NICE's remit is to develop authoritative guidance on the clinical and cost effectiveness of treatments. This guidance is intended to provide information on best practice for frontline NHS staff.

NICE produces guidance based on relevant evidence of clinical and cost effectiveness in three areas:

- *Technology Appraisals* – the use of new and existing technologies.[8]
- *Clinical Guidelines* – the appropriate treatment and care of patients with specific diseases and conditions.
- *Interventional Procedures* – assessing whether procedures are safe enough and work well enough for routine use.[9] [10]

Aims of NICE

NICE was set up in order to promote the following key healthcare objectives:

- Faster uptake of new technologies
- Effective use of NHS resources
- Equitable access to treatments of proven clinical and cost effectiveness [11]

Faster uptake – Health professionals are constantly bombarded by information on treatments; it is estimated two million articles are published annually in the literature that are relevant to the practice of medicine.[12] Given this volume of information it is often difficult for health professionals to know which new treatments might help their patients.

---

blood condition resulting from an acute inflammatory response to an infection, and can lead to abnormally low blood pressure (septic shock). It affects at least 21,000 people a year. Drotecogin alfa-activated (Xigris) and afelimomab (Segard) are new treatments for severe sepsis and have shown evidence of some small but significant reduction in mortality in clinical trials. These are however likely to be expensive drugs.' (http://www.labour.org.uk/newtreatments)

[8] Technologies include medicines, medical devices, diagnostic techniques, surgical procedures and health promotion activities.

[9] The assessment of interventional procedures was added to NICE's remit following the Bristol Royal Infirmary Inquiry Report (Kennedy Report).

[10] NICE also funds four Confidential Enquiries into patient treatment and quality of care in particular areas; currently these are suicide and homicide by people with mental illness, maternal deaths, sudden infant deaths, and deaths relating to surgery.

[11] Department of Health website http://www.doh.gov.uk/nice/consultation2002/overviewdec02.pdf

[12] NICE speech to St Paul Healthcare http://www.nice.org.uk/article.asp?a=336

By providing authoritative guidance it was hoped that NICE would be able to cut through this noise and ensure professionals quickly start using new treatments.

Effective use of resources – NICE weighs up the cost effectiveness as well as the clinical effectiveness of treatments. New treatments may not be recommended for use because the benefit they provide is considered to be at too great a cost. Existing treatments may face cuts because NICE views them as being a poor use of finite NHS resources.

Equity of access - Access to healthcare in the UK is unequal. Some patients do not receive the care they need. This fact has been obscured from view because the decisions within the NHS on which treatments to fund are made largely away from public view, and because politicians continue to insist that all patients will receive the treatment that they need.[13] In fact neither currently, nor even after Gordon Brown's billions have arrived by 2007-08, will we be able to afford to pay for every suitable treatment for every single patient. Ignoring this unpalatable reality does not make the decisions disappear. It simply passes them on to the healthcare professionals within the NHS who are forced to choose which patients will receive the treatment that they need, and which patients will not. All 302 Primary Care Trusts, and 174[14] NHS Acute Trusts must make decisions about which treatments to fund. Different trusts make different decisions. This means that whether or not you receive the treatment that you need is determined *by where you live*. Recognising this, the Government determined that it could not continue with what is supposedly a national health service that allows such inequalities to persist. By providing national guidance NICE is designed to eliminate such inequities, and to do so beyond the influence of politicians.

How does NICE's guidance affect what treatment the NHS provides?

During the first two and a half years of NICE's existence its guidance was supposed to affect funding decisions within the NHS through the authority of the institution itself, and

[13] Back in 1998 Frank Dobson vowed 'that access to high quality NHS care and treatment will be guaranteed whoever you are, wherever you live, and whatever your sex, your income, or the colour of your skin (source: 'Further Drive Towards National Standards Of High-Quality Healthcare - Frank Dobson Tackles "Unacceptable Variation" In NHS Care And Treatment', DoH Press Release 98/144 Thursday 16 April 1998). National Service Frameworks (NSFs), were introduced by Dobson in *The New NHS – Modern: Dependable* (1997) (http://www.archive.official-documents.co.uk/document/doh/newnhs/newnhs.htm), and *A First Class Service - Quality in the New NHS (* http://www.doh.gov.uk/newnhs/quality.htm). NSFs were to be the 'drivers in raising quality and decreasing variations in service' (National Plan, 2000, (Chapter 14)). By July 2003 the Department of Health had published National Service Frameworks on mental health, coronary heart disease, diabetes and the care of older people, as well as the NHS Cancer Plan (2000).

[14] According to Binley's Directory of NHS Management, in Summer 2003, there are 174 acute trusts in England that provide care in hospital. According to the NHS Chief Executive's Annual Report 2002-03, in '2002-03 there were 248 NHS trusts and 302 PCTs providing healthcare services at one or more hospital and community sites. Of these: 154 were classed as acute trusts; 22 as multi-service offering both acute & community services; 29 specialist mental health trusts; 4 learning disability trusts; 33 community trusts; 6 primary care trusts (NHS Chief Executive's Annual Report 2002-03).

of the experts who were involved in the appraisal process. However since 1st January 2002 the NHS has had a statutory obligation to provide funding for NICE approved technologies once a doctor has recommended it to his or her patient.[15] This obligation falls on the Primary Care Trusts and NHS trusts since they now make the decisions on which treatments to fund; decisions on local formularies are usually made by prescribing teams / pharmaceutical advisors in each PCT or NHS trust. Funding decisions were effectively devolved down to them following the changes introduced on 1st April 2002 as part of the wider efforts to reform the NHS.

The Technology Appraisals Process

The key guidance with regard to NICE's aims to promote equitable access, faster uptake and effective use of resources comes from the Technology Appraisals. These consider the clinical and cost effectiveness of a treatment. It has been argued that there appears to be a rough cost effectiveness threshold of £30,000 per Quality Adjusted Life Year (QALY)[16]. However NICE itself insists it uses no explicit criteria. NICE had completed 60 Technology Appraisals by May 2003.[17] Each appraisal takes approximately 12-14 months and proceeds as follows:

1. The process begins when the Department of Health and the National Assembly for Wales refer a topic to NICE.[18]
2. NICE identifies the manufacturer or sponsor of the technology and professional and patient organisations who, with the Department of Health, National Assembly for Wales, the Health Technology Board for Scotland and two health authorities, will act as stakeholders or consultees.
3. The scope of the appraisal is then set with the input of the consultees.
4. NICE commissions an assessment report, normally from an academic centre, which reviews the clinical and cost effectiveness of the treatment. Consultees are invited to make submissions to the body producing the assessment report in order to inform their work.
5. The assessment report, comments on it from consultees and consultees' submissions form the evaluation report which is submitted to the Appraisal Committee.[19]
6. The Appraisal Committee meets and produces an Appraisal Consultation Document

[15] At NICE's annual conference in December 2001, then Health Minister Lord Philip Hunt announced that from the 1st of January 2002, the NHS would have 3 months from the date of publication of each technology assessment to provide funding, so that clinical decisions made by doctors involving NICE-recommended treatments would be funded. There had been criticism that even when drugs are recommended by NICE, authorities do not always have the money to pay for them. Note that this obligation does not imply that the overall NHS budget will increase following guidance. It simply means that existing expenditure plans must be adjusted to take into NICE guidance.

[16] NICE: faster access to modern treatments? Analysis of guidance on health technologies, *BMJ* 2001;323:1300-1303

[17] As of 12th May 2003.

[18] Since March 2002 it has been possible for NICE stakeholders to propose topics for consideration to the DH and NAW

[19] The Appraisal Committee is convened by NICE and includes experts from the health professions, patient organisations, health economists and NHS managers.

7. Following four weeks of consultation the Appraisal Committee meets again and produces the Final Appraisal Document setting out their guidance.
8. Appeals can be made against the Final Appraisal Document. If they are upheld the appraisal is typically referred back to the Appraisal Committee for further consideration.
9. If no appeal is made or all appeals are dismissed the Final Appraisal Document forms the basis of guidance on the use of the technology that is then disseminated within the NHS in England and Wales.

We have looked at a number of the technology appraisals issued by NICE to establish whether or not it succeeds in ending the 'lottery of care'. We also investigated whether the practical outcome of NICE may be to legitimise delays in the use of some treatments without speeding up patient access to recommended technologies. The remainder of this briefing summarises the evidence we have collated so far regarding the faster uptake of new technologies, effective use of NHS resources, and equitable access to treatments.

2. Faster uptake of new technologies

When NICE completes a technology appraisal, the guidance that it issues includes an estimate of the expenditure required by the NHS to ensure the technology is being used to the recommended extent. By comparing the *actual* expenditure to this level we can obtain a picture of whether the usage of a particular treatment is close to what is considered the appropriate level. By examining how rapidly this process occurs we can see whether NICE is succeeding in its aim of promoting rapid uptake of new technologies. This analysis is conducted below for 6 appraisals that NICE conducted between its inception and March 2001, namely:

- Rosiglitazone (*Avandia*) and Pioglitazone (*Actos*) for type 2 diabetes,
- Methylphenidate (Ritalin) for Attention Deficit/Hyperactivity Disorder (ADHD).
- Orlistat (*Xenical*) for the treatment of obesity.
- Ribavirin (*Rebetol*) and Interferon Alpha (*Intron A*) for Hepatitis C
- Donepezil (*Aricept*), Rivastigmine (*Exelon*), and Galantamine (*Reminyl*)) for the treatment of Alzheimer's Disease.
- Riluzole (*Rilutek*) for Motor Neurone Disease.

To determine expenditure, we use Prescription Cost Analysis (PCA) data, which includes all prescriptions dispensed in the community in England, but unfortunately does *not* include hospital drug use.[20] Table one shows that the vast majority of NHS drug expenditure in England occurs in the community.[21] We see that hospital-based expenditure has risen slightly at the expense of general pharmaceutical expenditure.[22] We also see that pharmaceutical expenditure has risen as a proportion of total NHS expenditure over the past decade. The reason that total pharmaceutical expenditure and hospital drug expenditure relative to community expenditure have risen is largely owing to the very high cost of many new drugs that are largely prescribed in hospitals – cancer drugs being a clear example. However these figures do not give us any insight into the site of use for any given drug.

---

[20] For details see: http://www.doh.gov.uk/stats/pca2002.htm

[21] In general, all licensed medicinal products may be prescribed by general practitioners on the NHS. However there is a negative list of drugs which may not be prescribed by GPs on the NHS, namely, Schedule 10 to the National Health Service (General Medical Services) Regulations 1992 known informally as the "blacklist". There is also a list of drugs which may only be prescribed by GPs on the NHS to patients of a description specified and the purpose specified. This is Schedule 11 to the same Regulations known informally as the "greylist" (http://pharmacos.eudra.org/F3/g10/docs/tse/UK.pdf). Items are typically on these lists either because they are borderline and not clearly medicinal or because there is a cheaper alternative that is therapeutically identical or better.

[22] One GP told us that hospitals will do anything to get costs down. Eg. giving out 2 tablets and expecting patients to immediately get repeat prescriptions from their GP. That is an extreme example, but is perhaps indicative of wider trends. The division between community and hospital prescribing, dispensing and funding is the subject of current NHS pharmacy reforms; in funding terms, one sector's financial gain will result in another's loss (see *Pharmacy in the Future – Implementing the National Plan* available at www.doh.gov.uk/medicines.htm see paragraphs 4.15-4.18).

Table 1. Estimated total NHS expenditure on pharmaceuticals at manufacturers' prices, UK, 1990-2001.

Year	Pharmaceutical Services		Dispensing Doctors		Hospital		Total NHS medicines	%Total NHS cost
	£m	% total exp	£m	% total exp	£m	% total exp		
1990	1,918	75.7%	121	4.7%	495	19.5%	2,533	8.9
1992	2,309	72.4%	192	6.0%	688	21.6%	3,189	9.0
1994	3,141	74.3%	259	6.1%	827	19.6%	4,227	10.6
1996	3,749	75.4%	241	4.8%	985	19.8%	4,975	11.4
1998	4,409	74.7%	276	4.7%	1,215	20.6%	5,901	12.3
2000	5,244	74.1%	321	4.5%	1,508	21.3%	7,073	12.4
2001	5,728	73.8%	350	4.5%	1,676	21.6%	7,753	12.3

Source: Table 4.46 OHE Compendium of health Statistics, 14 Edition, 2002.

Readers should note therefore that an apparently slow uptake in use might be at least partially owing to the fact that drug expenditure in question takes place in hospital; NHS hospital inpatients and outpatients may receive prescriptions to be dispensed in the hospital.[23] Following consultation with hospital and community providers, PCT prescribing advisors and manufacturers, we specify the main site of prescription for each technology (mainly community, mainly hospital, or shared prescription).[24] The responses from those we consulted demonstrate that prescribing patterns vary significantly across the country.[25]

Rosiglitazone and Pioglitazone

NICE issued guidance on the use of Rosiglitazone in the treatment of type 2 diabetes mellitus in August 2000.[26] It recommended that it be offered in combination therapy as an alternative to injected insulin. It estimated that 68,250 people in England are potentially suitable for treatment and that treatment would cost an average of £430 per year.[27] NICE's analysis thus predicted expenditure on Rosiglitazone to be £29.348m. However it then issued guidance on the use of Pioglitazone for treating type 2 diabetes in March 2001, where it stated that the two drugs "may be considered as alternatives." Given the two are comparably priced if NICE's guidance has been followed we ought to

[23] Hospital doctors can also write prescriptions for dispensing in the community (DoH, *Review of Prescribing, Supply and Administration of Medicines – Final Report*, 1999). Note that drugs initiated in hospital will often then be repeated and largely prescribed in the community.

[24] Because we do not yet have an exact breakdown of prescribing site for each technology, our conclusions must be treated with some caution.

[25] Of course much variation is caused by variation in population health status.

[26] According to NICE's Guidance: 'Rosiglitazone is effective at reducing blood glucose when added to oral monotherapy (meformin or sulphonylurea) for patients who have inadequate control of blood glucose on these conventional agents alone" (NICE Technology Appraisal Guidance No. 9 August 2000).

[27] NICE Guidance on Rosiglitazone for Type 2 Diabetes Mellitus, August 2000. This was based around a price assumption of £0.95 for a 4mg tablet. The price of the 4mg tablet in 2002 was indeed £0.95.

find annual expenditure of around £29m. We also ought to see a reduction in the use of insulin and expenditure on insulin.

Rosiglitazone and Pioglitazone Prescription Data for England[28]

	2000	**2001**	**2002**
Rosiglitazone Net Ingredient Cost[29] (NIC) £ m	1.197	10.026	17.408
Pioglitazone Net Ingredient Cost (NIC) £ m	0.210	1.729	4.920
Total Net Ingredient Cost (NIC) £ m	1.407	11.755	22.328

There is a clear increase in the use of the two drugs. We find that in 2002 the Net Ingredient Cost figure, which measures expenditure, was £22.328m, which is 76% of the expenditure that NICE predicted if its guidance were followed.

Although often initiated in hospital, these products are likely to be largely prescribed by GPs, as much maintenance of diabetic care is carried out by GPs. We have been told that some GPs don't prescribe Rosiglitazone and Pioglitazone often, having been pressurised by community pharmacists.[30]

Overall insulin use appeared to increase between 2000 and 2002 from 2.952m prescription items to 3.483m items. Net ingredient cost rose from £100,817,500 to £142,883,600. The figures shown in the following table disguise some important detail, but the general trends have been towards increased usage.

Insulin Prescription Data for England [31]

Insulin	Prescription Items Dispensed (thousands)		Net Ingredient Cost (NIC) (£ thousands)	
	2000	2002	2000	2002
Short-Acting Insulins	678.3	775.6	24,746.4	34,635.6
Total Intermediate + long acting	2,273.3	2,707.8	76,071.1	108,248.0
Total	2,951.6	3,483.4	100,817.5	142,883.6

[28] Prescription Cost Analysis data from Department of Health website
[29] Net Ingredient Cost (NIC). 'NIC refers to the cost of the drug before discounts and does not include any dispensing costs or fees. It does not include any adjustment for income obtained where a prescription charge is paid at the time the prescription is dispensed or where the patient has purchased a pre-payment certificate' (http://www.doh.gov.uk/stats/pca2002.htm).
[30] Personal correspondence with GPs.
[31] Prescription Cost Analysis data from Department of Health website (BNF 6.1 - Drugs used in diabetes)

Methylphenidate

NICE issued guidance in October 2000 on the use of Methylphenidate for Attention Deficit/Hyperactivity Disorder (ADHD) in childhood. In it NICE estimated that 69,000 6-16 year olds in Wales met the criteria for treatment with methylphenidate, and that on average 30% did not respond to treatment, thus giving us a figure of 48,300 who should continue with treatment. NICE further estimated that the cost of the drug for 45,000 children annually would be £7m. Thus we should expect the annual expenditure on methylphenidate to be £7.153m.

Methylphenidate Prescription Data for England[32]

	2000	**2001**	**2002**
Methylphenidate Net Ingredient Cost (NIC) £ m	3.755	4.298	6.462

Here we can see considerable progress has been made towards the expected prescription levels, the 2002 expenditure is 86% of the recommended level.

Methylphenidate is hospital initiated with GPs prescribing under shared care agreements, with the result that Methylphenidate is mainly prescribed in community. We were told that "many GP's would prefer not to prescribe this drug and there is an age-old adage in medicine he who initiates the drug should continue to be responsible for prescribing it. Consultants make the decision and then expect the GP to be responsible for prescribing."

Orlistat

NICE issued guidance on the use of Orlistat for the treatment of obesity in adults in March 2001. It estimated that drug costs "are likely to be in the region of £12 million in the first year."[33] It added, "if this guidance is observed strictly, this is likely to be an upper limit".

Prescription Cost Analysis for Orlistat [34]

	2000	**2001**	**2002**
Orlistat Net Ingredient Cost (NIC) £ m	6.604	17.631	23.462

For 2001 we can see that the expenditure has risen nearly threefold from its 2000 level. Indeed it is noticeably higher than the £12m upper limit, 47% higher. The expenditure goes on to rise yet further to £23.4m in 2002.

Orlistat is predominantly prescribed in primary care; following NICE guidance on weight loss before treatment, it can be initiated by GPs. Hospital use is for obese diabetics.

[32] Prescription Cost Analysis data from Department of Health website
[33] NICE guidance on the use of Orlistat for the treatment of obesity in adults, March 2001.
[34] Prescription Cost Analysis data from Department of Health website.

Interferon Alpha and Ribavirin

In October 2000 NICE issued guidance on the use of Ribavirin and Interferon Alpha for Hepatitis C. It recommended that the two drugs be used as combination therapy for the treatment of moderate to severe hepatitis C in those over 18. NICE concluded that the drug cost of implementing its guidance would be "about £18 million per year."[35]

Prescription Cost Analysis for Interferon Alpha and Ribavirin[36]

	1999	2000	2001	2002
Interferon Alpha Net Ingredient Cost (NIC) £ m	1.661	1.349	1.166	0.845
Ribavirin Net Ingredient Cost (NIC) £ m	0.050	0.143	0.337	0.179
Total Net Ingredient Cost (NIC) £ m	1.711	1.491	1.503	1.025

As the table shows, expenditure on these drugs is broadly declining despite NICE's guidance. There is a tiny increase in the year following NICE's guidance, however in 2002 it is only 5.7% of the expenditure NICE estimated.

Ribavirin and Interferon Alpha are virtually only prescribed in hospitals; 95-98% of prescriptions are dispensed in hospital with approximately 2% going into retail, mainly on for private prescriptions.

Donepezil, Rivastigmine and Galantamine

In January 2001 NICE issued guidance on the use of Donepezil, Rivastigmine and Galantamine for the treatment of Alzheimer's Disease. It recommended that the drugs be used "as one component of the management of those people with mild and moderate Alzheimer's disease."[37] It went on to estimate that "The total drug cost is… of the order of £42 million per year."

Prescription Cost Analysis for Donepezil, Rivastigmine and Galantamine

	1999	2000	2001	2002
Donepezil Net Ingredient Cost (NIC) £ m	2.917	4.178	8.815	16.078
Rivastigmine Net Ingredient Cost (NIC) £ m	0.297	0.681	1.309	1.998

[35] NICE Guidance on the use of Ribavirin and Interferon Alpha for Hepatitis C, October 2000.
[36] Prescription Cost Analysis data from Department of Health website. Note the expenditure on interferon alpha includes that on pegylated interferon which NICE did not consider in its guidance.
[37] NICE Guidance on the use of Donepezil, Rivastigmine and Galantamine, January 2001.

Galantamine Net Ingredient Cost (NIC) £ m	0.000	0.012	0.880	2.469
Total Net Ingredient Cost (NIC) £ m	3.214	4.871	11.004	20.545

We can see that the expenditure on drugs has risen significantly, but is considerably lower than the level predicted by NICE, at only 49% in 2002. In 2001, the year in which the guidance was issued, the level was only 26%. The Alzheimer's Society stated in its evidence to the Health Committee report during January 2002 that it 'continues to receive calls from people with dementia, their carers as well as their doctors, who experience difficulties in accessing these treatments.'[38]

Donepezil, Rivastigmine, and Galantamine are initiated in secondary care with prescribing generally under a shared care arrangement in primary care (some patients may have prescribing entirely undertaken by consultants in their Mental Health Trust). NICE guidelines envisage the drug treatment being supervised by hospital experts for at least three months to identify people who respond and those who do not. We were told that it is not clear whether hospital or GP has the responsibility for prescribing and funding and that practice is most likely to vary from place to place.[39] However, evidence submitted by the Alzheimer's society suggests that 'community purchases represent the bulk of the prescribing of these drugs at national level', amounting to 72 per cent. IMS Health who prepared the analysis of prescribing for the Alzheimer's society, also noted 'that for the absence of hospital data to make a significant difference, there would have to be significant variation in the amount of hospital prescribing per patient by Health Authority.'[40]

Riluzole

NICE recommended Riluzole for the treatment of individuals with the amyotrophic lateral sclerosis form of Motor Neurone Disease in guidance issued in Januray 2001. It estimated the cost of enacting this guidance to be "at maximum around £7.5 million per annum."[41]

[38] http://www.parliament.the-stationery-office.co.uk/pa/cm200102/cmselect/cmhealth/515/2011618.htm

[39] One consultant told us that in his area, 'GPs said quite clearly that they could not afford the drugs and we negotiated funding on the hospital budget for the trial period. Thereafter our GPs have been very good at picking up what remains of the tab after non-responders have been discontinued, but I always provided six monthly follow-up reviews to relieve the GP of any embarrassment in withdrawing the drug if it became no longer effective.

[40] Alzheimer's Society, Appendix 1, *Report on the impact of NICE guidance on the use of Donepezil, Rivastigmine and Galantamine for the treatment of Alzheimer's Disease*, Submission to Health Committee 20th June 2002 (http://www.parliament.the-stationery-office.co.uk/pa/cm200102/cmselect/cmhealth/515/2011619.htm).

[41] NICE guidance on the use of Riluzole (Rilutek) for the treatment of Motor Neurone Disease, January 2001.

Prescription Cost Analysis for Riluzole

	1999	2000	2001	2002
Riluzole Net Ingredient Cost (NIC) £ m	1.421	1.549	2.110	2.406

Again we find that actual expenditure is considerably lower than the amount predicted by NICE, this time at only 28% in 2001 and 32% in 2002.

According to those we have consulted, Riluzole is hospital-initiated with prescribing generally under a shared care arrangement in primary care (though some may have prescribing entirely undertaken by consultants). One PCT we consulted allows patients to decide where they want prescribing to take place on the basis of their condition and mobility problems getting to hospital.

What does this mean?

We can see a mixed picture emerging from the above analysis. Three treatments were some way from their recommended level around two years after guidance was published at 49% (Alzheimer's drugs), 32% (Riluzole for MND) and 5.7% (Ribavirin and Interferon Alpha for Hepatitis C). Two treatments were closer to their recommended level over the same timescale at 76% (Glitazones) and 86% (Methylphenidate) of the recommended level. One treatment (Orlistat) had exceeded its recommended level within the year that guidance was issued, and expenditure was almost twice that recommended after nearly two years. The treatments seem to split into two broad groups. The treatments that have seen significant uptake are those for diabetes, ADHD and obesity. Those that have grown more slowly or even declined are for Hepatitis C, Alzheimer's Disease and Motor Neurone Disease. The latter are diseases that arguably have a lower public profile and enjoy less political advocacy for their care. At first glance it appears from the above data that there is some mechanism that helps treatments for more prominent illnesses to promulgate rapidly.

However that suggestion ignores the fact that the treatments we have considered for Hepatitis C, and Motor Neurone Disease are *not mainly* prescribed in the community, though those for MND can be and certainly are community prescribed to a significant degree, accounting for 32% of NICE's predicted total NHS expenditure. Nevertheless, without hospital-based prescribing data[42] we cannot safely make any conclusion regarding speed of uptake for these two treatments.

[42] We are hoping to obtain these data from manufacturers. Though beyond the scope of this project at this stage, we are also seeking local data from DoH.

According to IMS Health analysis, the Alzheimer's Disease drugs we looked at are largely prescribed in the community (72 %), so an uptake of 49% of the expected prescribing level appears low.[43]

Overall the most obvious conclusion to draw, using PPA data (with its obvious limitations), is that *there is a link* between NICE's recommendation and the uptake of new treatments, but that that link is at best moderate and varies from treatment to treatment as well as by geographical area. If there were a stronger link, we ought not to see this wide distribution in uptake levels. On the positive side all but one treatment has increased in usage and some have come close to their desired level within a relatively short time span; but these increases in usage are not necessarily attributable to NICE guidance.

The only treatment that has apparently fallen in use (interferon A and Ribavirin), is almost entirely used in hospitals, and the decrease in use is probably due to two factors. Firstly, the standard Interferon, which is the only Interferon recommended by NICE, is being used less and less because the much more effective preparation is pegylated Interferon. This is not going to be considered by NICE until November 2003 with possible guidelines due in 2004/05, nevertheless the drug companies are making available at discounts and through clinical trials, substantial amounts of pegylated Interferon so as to achieve a market share. Secondly, GPs were advised that anti-viral therapy was no longer an area where they had sufficient expertise to prescribe, although they used to in the past. We have been told that this amounted to an attempt by Government to ensure the continued rationing of the drug by hospital authorities as the loophole previously was to get the GP to prescribe it.[44]

Nevertheless, anecdotal evidence from consultants suggests that the findings with respect to Interferon and Ribavirin, the recommended treatment for hepatitis C, are in accord with other data suggesting that less than 10 or 15% of people that should be treated for hepatitis in the country are currently getting the drugs; it is the very expensive drug regimes that go on for a long period of time - hepatitis C patients for instance have either a 6 or 12 month course of therapy - that come to be restricted most when requests are put forward in hospitals.[45] Despite this anecdotal evidence, the manufacturer informs us that total market since July 2001 has increased more than threefold (approximate 225% growth).

The unexpectedly rapid uptake of Orlistat is worthy of some comment. Orlistat is predominantly prescribed in primary care; following NICE guidance on weight loss before treatment, it can be initiated by GPs, and has been massively. We have been told that many GPs consider Orlistat ineffective and expensive, but patients demand it. We

---

[43] Alzheimer's Society, Appendix 1, *Report on the impact of NICE guidance on the use of Donepezil, Rivastigmine and Galantamine for the treatment of Alzheimer's Disease*, Submission to Health Committee 20th June 2002.
[44] Personal correspondence with NHS consultant.
[45] Personal correspondence with NHS consultant.

should take care over attributing increases in expenditure on Orlistat to the issuing of NICE guidance; pharmaceutical manufacturers' marketing plays a very important role.

It is difficult to suggest that increases in expenditure are through any action on NICE's behalf. In fact this point regarding marketing applies to all the treatments we have examined; newly licensed products that are the subject of NICE appraisals are very heavily marketed by companies. Whether or not the drug is then prescribed is dependent, as always, on whether the relevant committee in the hospital has sufficient power to insist on the drug being provided in relation to other priorities being faced by the hospital trusts concerned.

Nice Blight

NICE has also had a negative impact on the speed of uptake of new treatments through a process that is known as NICE blight. Mentioned briefly in our introduction, this occurs when funding for treatments is withheld by trusts while an appraisal is in progress. Given the fact that appraisals take an average of 12-14 months this can be a very serious issue.[46] Various submissions to the Health committee report on NICE mentioned the problem. CancerBACUP commented with relation to Herceptin and Camptosar, and the Association of the British Pharmaceutical Industry (ABPI) also mentioned Herceptin, as well as Visudyne. CancerBACUP claim 'there is much anecdotal evidence that some local commissioners do not fund treatments being appraised by NICE while an appraisal is ongoing.'[47] ABPI also notes that Health Authorities and Primary Care Organisations 'hold back decisions on funding of a product on the NICE work programme pending a decision by NICE.' It goes on to claim these bodies sometimes 'hold back funding for new treatments that are not short-listed for consideration by NICE on the assumption that they will at some stage be the subject of an appraisal.'[48] The extent to which this effect can be attributed directly to NICE is questionable, as indeed are all effects attributable to NICE. Nevertheless, the problem of NICE blight was tacitly acknowledged by the Department of Health when it felt the need to issue guidance that a treatment for chronic myeloid leukaemia should not be denied to patients on cost grounds while NICE completed its appraisal. It has also advised trusts that they "should recognise the scope for prescribing during the interim period between reference and NICE providing their guidance."[49] It is worth remembering that NICE blight is not simply an administrative problem, patients are suffering unnecessarily or even dying prematurely because of it.

NICE itself hopes eventually to be able to appraise treatments prior to their launch and thus to end the problem of blight. The pharmaceutical industry has criticised this desire on the basis that there is insufficient evidence to analyse new treatments at the time of launch. However some decision must clearly be made, and it seems sensible that this decision be made nationally and after suitable consideration. Is there reason to suppose NICE would inhibit the uptake of new treatments simply because the evidence base might be limited? Unfortunately, while NICE speeds up the appraisal process many patients will continue to suffer from poor access to new technologies.

---

[46] Note: prior to appraisal, it takes on average 10-12 years to develop a new medicine to the standards of quality, efficacy and safety laid down by law. Research and development costs of each new medicine now run at more than £350 million on average (ABPI media briefing).
[47] Point 4.3 Memorandum by CancerBACUP to Health Committee Report 20th June 2002
[48] Point 3.1, Memorandum by ABPI to Health Committee Report 20th June 2002,
[49] Department of Health, Primary Care Prescribing And Budget Setting 2003/04-2005/06

3, Effective Use of Resources

The data used above to examine the extent to which NICE has promoted faster uptake of new technologies is also relevant to analyzing its effect on effective use of resources. Effective use of resources includes increasing spending on worthwhile treatments as well as cutting expenditure on ineffective treatments. NICE is to be commended for not having simply become a body focusing solely on cost containment.[50] However the data above revealed a fairly patchy record, so in practice work still needs to be done.

Nevertheless, the other element of effective use of resources, namely cutting the use of ineffective treatments, is obviously critical to NICE's long term success. It is important that NICE not only helps promote new and effective technologies but that it also helps to root out established but ineffective practices. One example of this is the use of Rosiglitazone and Pioglitazone for the treatment of type 2 Diabetes. These drugs are used as a substitute for insulin therapy. NICE estimated eventual cost savings of £12m. We saw above that usage had reached 76% of the recommended level in 2002. This demonstrates that NICE has had some moderate success in this area. We now turn in more detail to two other examples when NICE's guidance recommended a reduction in the use of a treatment.

Proton Pump Inhibitors (PPIs)

Relatively unusually for NICE, its guidance on PPIs for treating dyspepsia[51], published in July 2000, was that their use particularly in terms of dosage level, be reduced from healing doses to maintenance doses for long-term patients.[52] They estimated the effect on the NHS of this guidance as follows. "This advice, if implemented fully, could lead to a reduction in the usage of PPIs of at least 15%, and therefore save the NHS some £40 to £50 million per year in drug costs in England and Wales."[53] If we look at the prescription data however we see a very different picture:

[50] NICE is not alone in this regard; France is currently removing certain drugs from its list of reimbursable products.

[51] The term Dyspepsia is used to describe a wide 'range of symptoms that occur as a result of eating or drinking, or the inability to digest food.' The NICE guidance notes that up to 40% of the population have troublesome dyspepsia symptoms each year (NICE Guidance on the Use of Proton Pump Inhibitors in the Treatment of Dyspepsia, Summary of Evidence, July 2000). Proton pump inhibitors are a family of drugs used to treat patients by completely blocking the production of stomach acid.

[52] NICE Guidance on the Use of Proton Pump Inhibitors in the Treatment of Dyspepsia, Summary of Evidence, July 2000 (pp16-18). PCA data from 2000-2002 does not show the major shifts in dosage levels that we might have expected.

[53] NICE Guidance on the Use of Proton Pump Inhibitors in the Treatment of Dyspepsia, July 2000.

Proton Pump Inhibitor Prescription Data for England [54]

	1999	2000	2001	2002
Items dispensed (PXS) millions[55]	9.527	11.126	13.211	15.252
PPIs Net Ingredient Cost (NIC) £ m	323.149	327.845	364.351	403.225

The number of prescriptions for PPIs has actually risen 37% and the expenditure has risen 23% between 2000 and 2002. It would appear that NICE's guidance has had very little impact upon the prescription level since instead of falling by £40 to £50 million, it actually rose by £75 million between 2000 and 2002. Potentially this rise could be explained by prescribing PPI for conditions other than dyspepsia, however the Prescription Pricing Authority concluded that data on dyspepsia prescribing "(suggests) that PPIs are being prescribed in place of other drugs for dyspepsia."[56] PCA data from 2000-2002 does not show the major shifts in dosage levels that we might have expected.[57] More positively, in 2002, PPI drugs prescribed *and* dispensed generically accounted for 3,068,600 items dispensed out of a total of 15,252,200, that is about one fifth of the total. This represents a significant increase on the 2000 figure of c.100 items dispensed. [58]

PPIs are mainly GP prescribed. A prescribing advisor we consulted suggested that there is a huge prescription volume of these drugs and that over 90% of PPI prescribing is in primary care, much of it inappropriate.[59] GPs receive lots of letters from community pharmacists urging them to prescribe the cheapest, however, we are told that GPs are more inclined to prescribe the drugs they know and consider effective.[60]

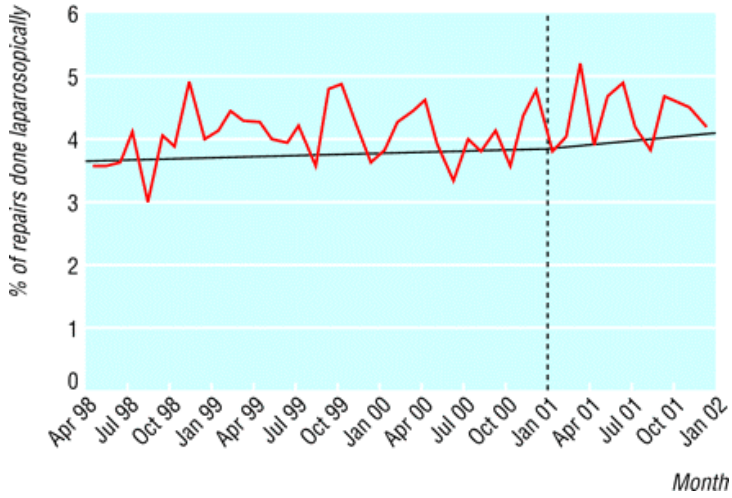
Laparoscopic surgery for primary inguinal hernias

In January 2001 NICE issued guidance on the repair of primary inguinal hernias. It recommended that the open mesh method 'should be the preferred surgical procedure.'[61] It appeared to prefer the open mesh method on cost grounds given that it found little difference in their comparative clinical effectiveness, but did find that Laparoscopic surgery cost around £300 more per patient. This preference for the open mesh technique entails that we ought to see a drop in the use of the alternative laparoscopic surgery. Bloor et al examined the percentage of surgery for the repair of primary inguinal hernias

[54] Prescription Cost Analysis data from Department of Health website
[55] Items dispensed (PXS) 'A prescription item refers to a single item prescribed by a doctor (or dentist) on a prescription form. If a prescription form includes three items it is counted as three prescription items' (http://www.doh.gov.uk/stats/pca2002.htm).
[56] PPA, Update on growth in prescription volume and cost year to December 2002.
[57] See PCA, 2000 and 2002 (BNF 1-3-5-0).
[58] See PCA, 2000 and 2002 (BNF 1-3-5-0).
[59] Personal correspondence with an NHS prescribing advisor
[60] Personal correspondence with an NHS GP.
[61] NICE Guidance on the Use of Laparoscopic Surgery for Inguinal Hernia, January 2001.

done laparoscopically before and after the NICE guidance was issued.[62] The graph showing their results is shown below.

Percentage of Hernias done laparoscopically over time (Bloor et al).



As you can see from the line of best fit the relative use of laparoscopic surgery increases rather than decreases after the NICE guidance. Bloor et al found that the rate of increase of laparoscopic surgery as a proportion of all repairs following the publication of NICE guidance was 0.14% (0.95% confidence interval _0.02% to 0.25%), compared to the pre-guidance rate of increase of 0.08% (0.95% confidence interval _0.09% to 0.26%).[63] This is only a small increase, but it is nevertheless an increase when, had NICE's guidance been implemented, we ought to have witnessed a decrease.

Credibility Gap?

It appears from the above examples that NICE has had limited success in helping the NHS to make effective use of resources by cutting back on ineffective treatments. Given that there is no equivalent to the statutory obligation to fund NICE recommended technologies, NICE must rely on its persuasive powers and authority to have an impact in this area. The two main areas to focus on are the content of the guidance and its dissemination.

With regard to the content there have been criticisms of the quality of the clinical assessment made by NICE. The details on a case-by-case basis are beyond the scope of this research. However, the systemic charge of too little input from expert practioners is damaging. The failure to liase fully with other expert assessment bodies such as the Drug and Therapeutics Bulletin and the British National Formulary noted in the Health

[62] Bloor, K, et al, 'Impact of NICE guidance on laparoscopic surgery for inguinal hernias: analysis of interrupted time series', *BMJ*, 2003;326:578 (15 March 2003) http://bmj.com/cgi/content/full/326/7389/578
[63] Bloor, K, et al, 2003.

Committee Report, 20th June 2002, was also negative, though now rectified. NICE is obviously a relatively new body and it has an extensive workload. This makes it difficult to ensure that its guidance is always of the highest standard. However, if it is here to stay, it is critical that it builds credibility and authority within the NHS. Without this status there will be a constant tension between national guidance and those pharmaceutical advisors and physicians operating at the local level. More importantly, patients may receive poor quality care as a result of poor quality guidance.

The issue of dissemination is also vital, and NICE gives communication a high profile within its overall remit. Before criticising we should remember it is hard to be heard above the constant white noise of guidelines and advice that doctors are subjected to. However, if NICE is to truly grow into its role it must find a way to ensure its guidance does reach doctors. Part of this is through an effective communications strategy, but ultimately it is the issue of credibility that must be dealt with. No matter how successful NICE is at getting documents into doctors' hands, if it lacks credibility, they will simply be put straight in the bin.

4. Equitable Access

Before turning to some detailed evidence about access to treatment based upon where you live it is worth teasing out some implications about equitable access from the information that we have covered already. The fact that 'fashionable' conditions seemed to experience greater growth in treatment is a serious concern for equitable access. It would appear that those patients with less of a voice are failing to get the treatment NICE recommends. There is also the issue of topic selection. The Department of Health and the National Assembly for Wales decide which treatments are assessed by NICE, now with input from NICE itself. It seems likely that here too 'unfashionable' conditions will not be sent to NICE for appraisal. There will not be a statutory obligation to fund them and they might suffer cuts in provision in order to fund those treatments that are NICE recommended. In fact, it is likely that in the short term these treatments will grow in absolute terms since there is a projected growth of 8.8% in NHS spending in 2002/3, but they will fall in relative terms since the forecast increase in drug expenditure for 2002/3 is higher at 11-13%[64], and the majority of NICE recommended treatments are drugs. This affect will recur annually and slowly shift treatment away from these conditions. This problem is clearly not NICE's responsibility but it is a serious issue for the appraisal system as a whole. NICE must appraise a wider range of treatments to ensure we do not end up with a covertly politicised system of rationing.

Another serious issue regarding equity of access directly is NICE blight. As stated above this is the process whereby some trusts refuse to fund a treatment while it is undergoing appraisal. The key point to note is that it is only *some* trusts. Others will fund the treatment. This means we will inevitably see inequitable access while NICE blight persists. The Department of Health has acted before to try and eliminate this problem with relation to chronic myeloid leukaemia, it must take more general action to root out the problem before it becomes entrenched practice for some trusts.

There are great differences in prescribing between PCTs; which is perhaps unsurprising given that each PCT has its own formulary. There are also significant variations in prescription patterns when individual practices are compared. These are partially owing to the medical requirements of differing populations, however, those differing populations demand drugs.[65]

Geographical Variation in Treatment for Alzheimer's

The Alzheimer's society submitted data to the Health Committee on the usage of Donepezil, Rivastigmine and Galantamine before and after NICE had issued guidance recommending their use. The data splits up the country into small geographical units and then compares the combined level of prescription of the three drugs before and after NICE's guidance. The results are summarised in the table below.

[64] Audit commission, Primary Care Prescribing, March 2003, http://www.audit-commission.gov.uk/subject.asp?CatID=ENGLISH^HEALTH^SUBJECT^H-PRIM-COMM-SERV
[65] Source: interview with GP.

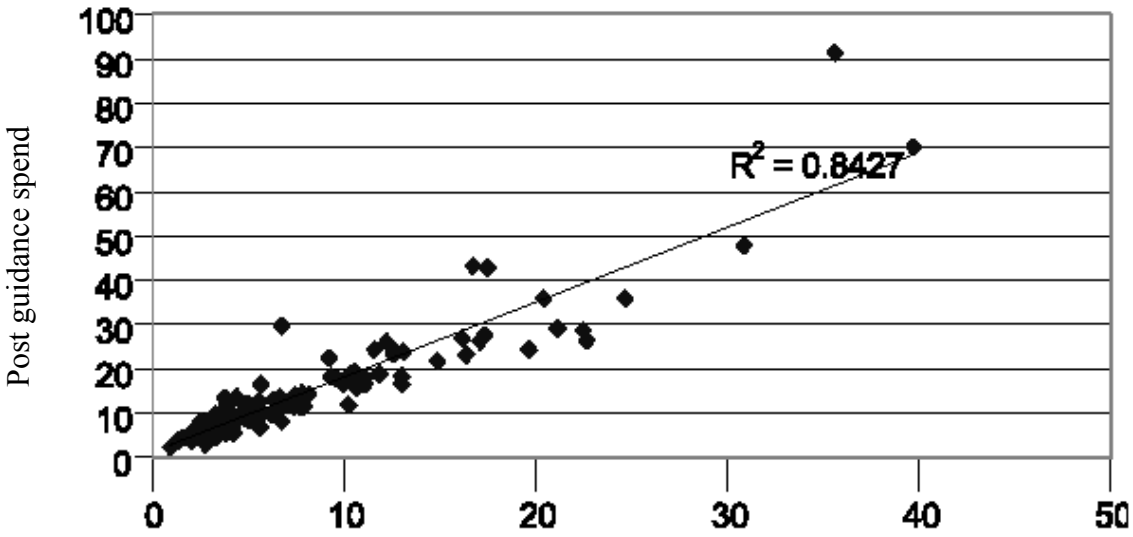
Expenditure Per Patient With Dementia[66]

	Pre-guidance (£)	Post guidance (£)
Mean	8.77	16.06
Range	38.78	89.22
Minimum	0.9	2.24
Maximum	39.68	91.46

Source: Alzheimer's society submission 2002.

One trend we can observe is the increase in expenditure following NICE's guidance, though our earlier analysis revealed that there is still some way to go to reach the recommended level. However the data also reveals serious and widening geographical iniquities. The range has increased considerably following NICE's guidance which means that there is more variation in expenditure than before the guidance. This result is clearly illustrated in the graph below, which plots each geographical unit's spending before guidance against expenditure post guidance.

Pre and post NICE guidance expenditure per person with dementia.[67]



The general trend we can observe from the graph is that those areas that were spending the most before guidance was issued are still spending the most, and those that were spending the least are still spending the least. There is no observed movement towards a recommended level, such a movement would appear on the graph as a broadly straight

[66] Data from Appendix 1, *Report on the impact of NICE guidance on the use of Donezepil, Rivastigmine and Galantamine for the treatment of Alzheimer's Disease*, Submission to Health Committee 20th June 2002) go to: http://www.parliament.the-stationery-office.co.uk/pa/cm200102/cmselect/cmhealth/515/2011619.htm

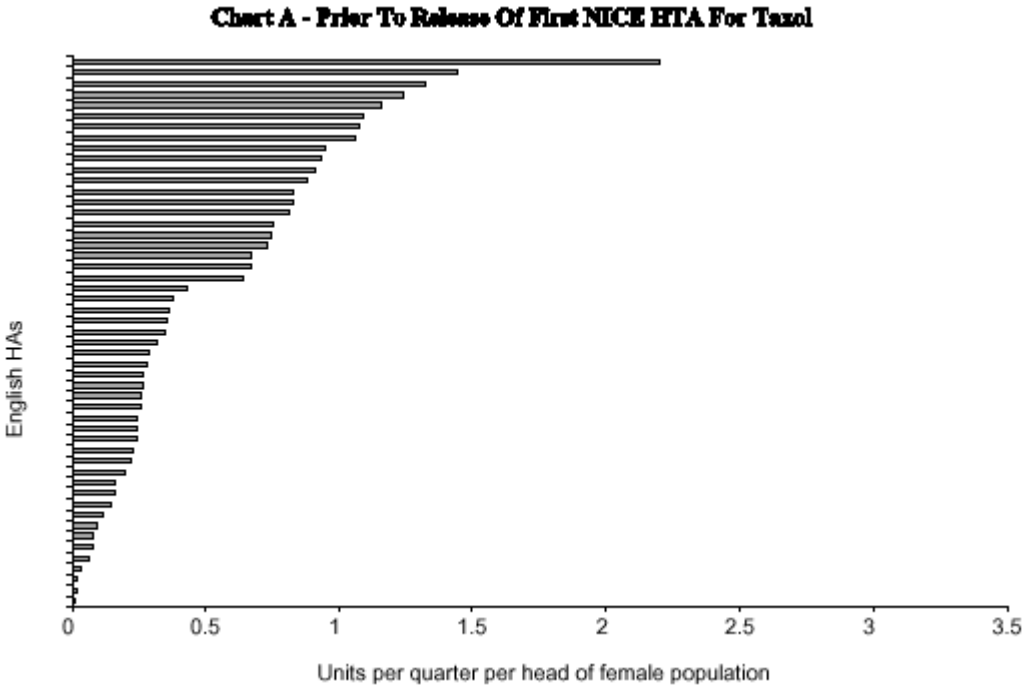
[67] Source: Alzheimer's society submission 2002.

horizontal line at a particular post guidance expenditure level. It would appear that NICE's guidance has the most impact in those areas that were already positive on these drugs, and least impact in those areas that were less keen to prescribe them. While this result is unsurprising and it is easy to preach to the converted, it is nevertheless a failure. Patients with Alzheimer's are not getting access to treatment that could alleviate the symptoms of dementia because of where they live.

Geographical Variations in use of Taxol

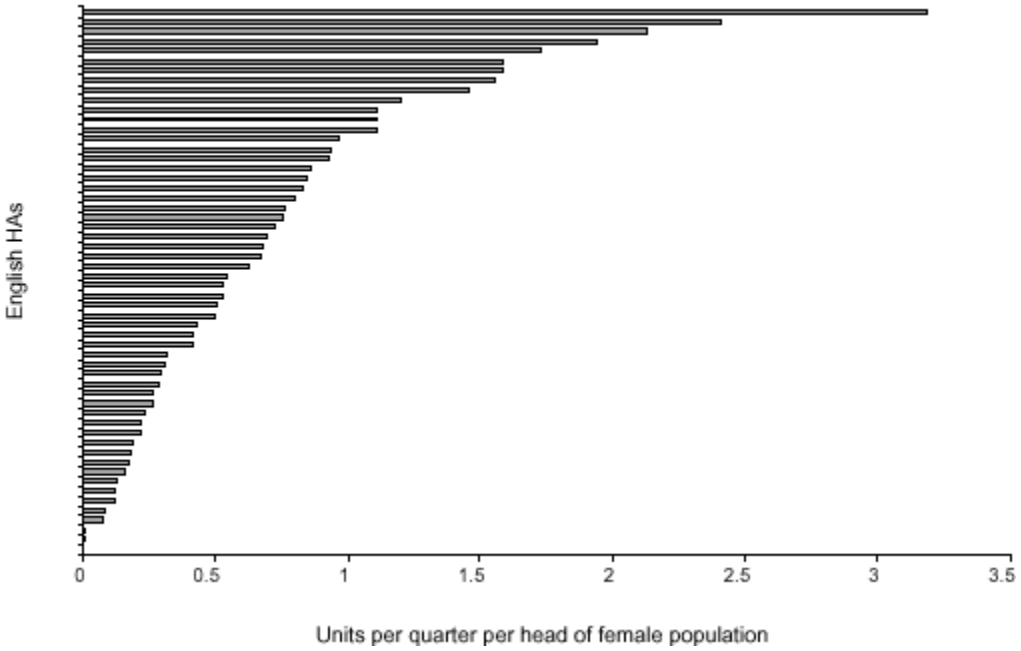
The ABPI submitted data to the health committee regarding the use of Taxol, a treatment for breast cancer before and after NICE recommended it. The results are shown in charts A and B below.[68]

Chart A – Prior To Release Of First NICE HTA For Taxol



[68] Source: ABPI, Submission from the Association of the British Pharmaceutical Industry, to the House of Commons Health Select Committee, Inquiry into the National Institute for Clinical Excellence, 10 January, 2002

Chart B – Following Release Of First NICE HTA For Taxol



There is clearly extensive disparity in use even after NICE has issued its guidance. We can at least note that use has risen after NICE's guidance, but the inequality of access remains. Again this means that because of where they live women are not getting access to a treatment that could potentially extend their lives.

5. Discussion

Unsurprisingly, NICE has not proved an immediate panacea for the various woes it was ostensibly set up to alleviate. Despite weaknesses in our data collection methodology which we are endeavouring to iron out, the above examination of its impact on the faster uptake of new technologies and elimination of the postcode lottery reveals a patchy record at best and at worst no apparent effect at all. Indeed across all products the results are random and suggest that there is no effect whatsoever that can be attributed to NICE. Many who looked at earlier draft of this paper argue that the sales growth we report for the glitazones, methylphenidate and Orlistat, can be attributed to a number of effects, particularly the strength of the marketing effort expended by the manufacturers, and not specifically to the advice promulgated by NICE. So we are entitled to be fairly critical of its actual achievements in implementing its aims (faster and more equitable access and greater efficiency); though we should bear in mind the scale of the task it was set and give credit to those who have carried out the tasks with which they were charged.

Clinicians' view of NICE

Most doctors will agree with the recommendations as produced by NICE because these are usually already well known, having been the subject of published multi-centre trials.[69] However assent is not always guaranteed. A BMA news survey published in May 2001 found that: "Seven out of ten doctors believe the National Institute for Clinical Excellence fails to act independently and more than eight out of ten would ignore NICE guidance if they thought it was wrong….[and] seventy-four per cent have disagreed with at least one of NICE's decisions."[70] In October 1999 NICE issued guidance on the use of zanamivir (Relenza) for treating influenza, having been asked by the government to rapidly appraise it before the flu season. NICE recommended that in the absence of new evidence zanamivir should not be prescribed on the NHS. The pharmaceutical industry reacted by writing a letter to Tony Blair saying the decision "has potentially devastating consequences for the future of the British-based pharmaceutical industry"[71] and suggesting they might have to move abroad to develop their drugs. NICE reviewed this guidance in November 2000 and recommended that zanamivir should be used on the basis of new evidence from the manufacturer. Many GPs thought NICE had caved in to the manufacturer and its credibility still suffers. One doctor described the review as 'sloppy' and complained that the new evidence coming from the manufacturer's trial is 'hardly an unbiased source of evidence'. Another said the about face 'raises concern regarding the creditability of NICE and leaves one wondering about external influence'.[72] One PCT prescribing advisor echoed the concern about excessive influence from the pharmaceutical industry but did suggest recent that efforts to make appraisals more transparent might help.

[69] Personal correspondence with NHS consultants.
[70] http://www.bma.org.uk/ap.nsf/Content/EXT-Press+Release+Archive-Public
[71] http://news.bbc.co.uk/1/hi/business/the_company_file/466563.stm
[72] http://bmj.com/cgi/eletters/321/7273/1363#11230

A misconceived institution?

Before one looks at the possible effects NICE has had on medical practice in general and the use of pharmaceuticals in particular, one has to question whether NICE could have any significant effect at all. The aims of NICE are to introduce good medical practice by doctors through the implementation of treatment guidelines and to take over from politicians the task of introducing rational prescribing, i.e. the use of the most appropriate pharmaceutical product for the patient irrespective of any external non-medical influence.

It has been argued by physicians and the pharmaceutical industry (both groups with vested interests), that NICE is a misconceived institution charged with two roles which ought to be kept totally separate. Firstly it emulates the role of The European Agency for the Evaluation of Medicinal Products (EMEA), that is, it ascertains whether a drug is safe and effective. Second, it forms a pharma/ health economic judgment based on the much criticised new science of health economics. Those of this view argue that this dual role should not be sustained – and isn't elsewhere. Though not advocating their system of price controls at all, the French (See box 1 below) separate the medical scientific evidence function from economic considerations. This enables drugs to get to patients quickly (one of the core aims of NICE).[73]

What troubled Secretary of Health, Frank Dobson, when he set up NICE in 1999, was the possibility that the NHS could not cope financially with the inflow of ever more expensive pharmaceutical products and, as a consequence, restrictions on their use in the NHS would have to be decided by politicians. Postcode prescribing was bad enough, but the likelihood of having to make unpopular political decisions about new drugs for Alzheimer's, breast cancer, AIDS and the like did not bear thinking about. What could be better than to establish an independent body to take on this task?

Unfortunately for the Government and Mr Dobson, the basis on which NICE was established was not that which was needed to do the job it was expected to perform. First, NICE is not a statutory body and has no powers of compulsion. NICE is yet another example of the British political compromise whereby the government gives its dirty work to an independent body, whose task it is to achieve political objectives through persuasion and advice rather than legislation. Unfortunately, in this instance, this formula is not appropriate for the task.

Second, the consequence of this first point is that, when it comes to pharmaceutical products, NICE can only provide advice on the use of pharmaceutical products. The independent general practitioners who provide the bulk of the primary care services to the National Health Service are effectively under no obligation to follow NICE advice.[74] They can effectively take it or leave it; NICE is not the right body to introduce rational

[73] Source: pharmaceutical industry expert.

[74] 'In January 2002 the Government announced a statutory obligation for the NHS to provide funding for treatments and drugs recommended by NICE as a part of its technology appraisals work programme, but only if the patient's doctor, having discussed the options with them, thinks that this is the right choice for that person. There is no statutory requirement to fund the other areas of NICE work and the local NHS should explain any decisions they have made.'(source: http://www.nice.org.uk/cat.asp?c=57703)

medical treatment and rational prescribing because it lacks the powers needed for the job. So should we scrap NICE and start again?

Box 1. French Drug Market Access

Admission to the French social health insurance drug market is a three-stage process. Drugs must be registered, admitted to the reimbursable list and finally, have prices set.

Registration

Registration results in a marketing authorisation - *Autorisation de Mise sur le Marche* (AMM). Since 1998 the AMM is delivered by the Health Safety Agency for Healthcare Products, (*'L'Agence française de sécurité sanitaire des produits de santé (Afssaps*)'), following advice by the *Commission d'autorisation de mise sur marche.* The AFSSAPS assesses the efficacy, safety and quality of a drug, based on clinical trials.[1] At this stage the company is free to market its medicine if it wishes to do so. However, the product will only be reimbursed if it is registered on the list of reimbursable medicines, and will only be authorized for sale to public or private hospitals if it is registered on the positive list to this effect.

Inclusion on the positive list of reimbursable drugs

The decision by the Ministry of Health, to include a drug on the positive list is based on advice by the Transparency Commission, which assesses the value of the drug from two perspectives:[1] firstly to determine whether it should be reimbursed under the public healthcare system - *absolute* value assessment; and secondly to assess the extent to which it provides an increase in medical service rendered (*Amelioration du Service Medical Rendu* ASMR), by the new drug over existing products for the same therapeutic indications i.e *comparative* value assessment.

Price Negotiation

Pharmaceutical companies negotiate product prices with the Economic Committee which is composed of civil servants from the Ministries of Health, Finance and Economy. In setting prices, the committee attempts to assess the economic advantage in terms of treatment costs. For innovative products, the Economic Committee may refer to other European countries.[1]

If accepted the drug is placed on one of 3 reimbursable schedules. The reimbursement decision for new products is based on the recommendation of the Transparency Commission and the outcome of price negations with the Economic Committee.[1] At the end of the three-stage process outlined above, a decree registers the drug on the list of reimbursable products and fixes the reimbursement rate and the price.[1]

Should we abolish NICE?

Abolishing NICE and returning to decisions being made entirely on a local basis is probably not a wise solution. Such an alternative is exceedingly inefficient in that it replicates the same task in the hundreds of different trusts. It is also likely to lead to poor quality guidance since the expertise available to each trust is highly unlikely to match that available to NICE. Furthermore, given the multitude of claims on resources, we should not expect hard pressed trusts to rapidly fund new and expensive treatments without an external impetus. Abolishing NICE would also lead to further widespread and divisive post-code prescribing. Overall local decisions would likely worsen the situation with regard to all of NICE's key aims, something no government is likely to want to be seen to do. A national body is arguably the best way to ensure speedy uptake of new treatments, effective use of resources and equitable access. Also, there is merit in having an independent body which proffers advice on best medical practice provided it is not expected to deliver results that are not within its powers to do. Other countries arguably see NICE for what it really is – a cost control or rationing mechanism – and are legitimising this method by copying the NICE model; in Germany for example Health and Social Security Minister Ulla Schmidt is in the course of pushing through a "Health Care Modernisation Act", which includes a proposal for a 'German Centre for Quality in Medicine', modelled upon NICE.[75] Nevertheless, changes must be made or we will continue to find that NICE is failing to deliver on its aims. Perhaps we could learn from the French model?

It is unlikely that this government would abolish NICE since it is its brainchild, but if it did, it would have to be very clear from the outset what it wanted a replacement body to do and what powers it would need in order to achieve its objectives.

So where do we go from here? In our opinion, we would leave the present organisation in place for the time being, leaving it to work out for itself how to advise doctors on best medical practice and rational prescribing, and measure the impact of this advice on a regular basis.

Reforming NICE

We have already mentioned that some commentators argue that NICE must appraise treatments as early as possible; in relation to drugs, guidance could be issued at time of launch. Decisions must be made about the use of such treatments and it is perhaps best that this decision be made nationally and by a thorough and informed process. Such a reform would at least eliminate NICE blight. However NICE would have to be careful that guidance should be sensitive to the limited quantity of evidence available; this is the

[75] See Busse R, and Worz, M., 'German plans for "health care modernisation", *Eurohealth,* Vol 9 Number 1, Spring 2003. At present, the Statutory social insurance service catalogue as well as the (compulsory) treatment guidelines are fixed by the MoH, based on recommendations form the 'Gemeinsame Selbstverwaltung' who also evaluates the catalogue on an ongoing basis. Ulla Schmidt considers this a sub-optimal solution and favours the establishment of a 'Zentrum für Qualität in der Medizin' (comparable to NICE), consisting of *independent* experts, which will not only establish the GKV service catalogue and treatment guidelines, but also evaluate the therapeutic effectiveness and cost-efficiency of new pharmaceuticals which are to be included into the 'positive list'. Germany has also introduced 'Disease Management Programmes' which in many respects reflect our National Service Frameworks.

main fear raised by the industry. They argue persuasively that NICE should not carry out appraisals before launch, nor immediately after launch, as sufficient evidence does not exist until a product has been used widely. Pre-launch appraisals would therefore risk being inaccurate – not based on sufficient data. Pre-launch appraisals might also prevent the emergence of secondary and tertiary uses for drugs. Is there are solution? In the medium term, perhaps sponsors of new treatments should be encouraged to gather more evidence for appraisal at the time of launch.

NICE must involve the NHS more in the appraisal process. Given the NHS will be implementing guidance its input can only improve the quality of guidance. It will also help to ensure that guidance is locally-owned. Despite the statutory obligation to follow guidance, access can still be limited; smoothing the relationship between NICE and the NHS may result in NICE recommended treatments actually being funded by trusts. Hopefully increased interaction between NICE and the NHS would also serve to bolster NICE's credibility and reputation. Unfortunately we have had reports that there have been problems in obtaining the full support of the medical Royal Colleges, the very independent bodies which run medicine. Since NICE has no real authority, the Royal Colleges are free to decide on whether and the extent to which they will co-operate.[76]

Improving credibility is perhaps the most critical step NICE needs to take. Health professionals must respect the guidance NICE issues. Without this credibility trusts will continue to limit access and doctors will simply ignore guidance. Improvements in the transparency of the appraisal process, and the greater involvement of other expert bodies have helped. However, more should be done to ensure relevant experts are involved in each appraisal. The link between evidence and guidance should always be made clear and steps must be taken to assuage doubts about undue influence from the pharmaceutical industry. Ultimately, credibility must build up over a period of time. This credibility is essential for its success; without it, trusts will not readily comply and NICE would require centrally ring-fenced funding to deliver on its aims, a step at odds with the general direction of NHS reform.

Appraisals of a wider range of treatments should be made. By looking at older less effective treatments NICE could deliver on its aim of effective use of resources and gain standing with trusts by helping them to cut services and free-up funds.[77] By looking at a wider range of treatments NICE could also avoid inadvertently skewing resources to 'fashionable treatments'. Of course given topic selection remains ultimately out of NICE's hands responsibility for this change lies with the Department of Health and the National Assembly for Wales, but influence should be exerted.

[76] Personal correspondence with pharmaceutical services expert.
[77] In France all technologies are reviewed

ANNEXE

List of drugs examined:

- **Rosiglitazone** (*Avandia*) and **Pioglitazone** (*Actos*) for type 2 diabetes.
- **Methylphenidate** (Ritalin) for Attention Deficit/Hyperactivity Disorder (ADHD).
- **Orlistat** (*Xenical*) for the treatment of obesity.
- **Ribavirin** (*Rebetol*) and **Interferon Alpha** (*Intron A*) for Hepatitis C.
- **Donepezil** (*Aricept*), **Rivastigmine** (*Exelon*), and **Galantamine** (*Reminyl*)) for the treatment of Alzheimer's Disease.
- **Riluzole** (*Rilutek*) for Motor Neurone Disease.
- **Proton Pump Inhibitors** (There are currently five PPIs: Esomeprazole *(Nexium),*Lansoprazole *(Zoton),* Omeprazole *(Losec),* Pantoprazole *(Proium),* Rabeprazole (*Pariet*)) for treating dyspepsia.

Admission To The French Drug Market

Admission to the French social health insurance drug market is a **three-stage process**. Drugs must be registered, admitted to the reimbursable list and finally, have prices set:

Registration

Registration results in a marketing authorisation - *Autorisation de Mise sur le Marche* (AMM). Since 1998 the AMM is delivered by the Health Safety Agency for Healthcare Products, (*'L'Agence française de sécurité sanitaire des produits de santé (Afssaps*)'), following advice by the *Commission d'autorisation de mise sur marche.* The AFSSAPS assesses the efficacy, safety and quality of a drug, based on clinical trials.[78] At this stage the company is free to market its medicine if it wishes to do so. However, the product will only be reimbursed if it is registered on the list of reimbursable medicines, and will only be authorized for sale to public or private hospitals if it is registered on the positive list to this effect.

Inclusion on the positive list of reimbursable drugs

The decision by the Ministry of Health, to include a drug on the positive list is based on advice by the Transparency Commission.

- The Commission assesses the value of the drug from two perspectives:[79]
  - to determine whether it should be reimbursed under the public healthcare system - *absolute* value assessment ;
  - and to assess the extent to which it provides an increase in medical service rendered (*Amelioration du Service Medical Rendu* ASMR), by the new drug over existing products for the same therapeutic indications i.e *comparative* value assessment..
- **First. *Absolute* value assessment** The Commission's experts base assessments on clinical data, and particularly the phase-3 clinical trials on which the Health Safety Agency bases its market authorisation.[80]
- The law states that for a drug to be reimbursed, it must either improve medical service or be cheaper than identical existing drugs.[81] Accordingly, the Commission's approach is comparative, usually relying on:
  - The French market leader in the therapy area
  - The product with the lowest treatment cost
  - The most recently reimbursed product.[82]

---

[78] Bellanger, M., 'The effects of the Introduction of Market Forces into Health Systems' '*France' "*Rennes, 2000 [p 14-15].
[79] Furniss, J., 'Price controls in France; Budgeting for medical benefit?' *Eurohealth Volume 7 Number 2, Summer*, 2001.
[80] Furniss, J., 'Price controls in France; Budgeting for medical benefit?' *Eurohealth Volume 7 Number 2, Summer*, 2001.
[81] Bellanger, M., 'The effects of the Introduction of Market Forces into Health Systems' '*France' "*Rennes, 2000 [p 14-15].
[82] Furniss, J., 'Price controls in France; Budgeting for medical benefit?' *Eurohealth Volume 7 Number 2, Summer*, 2001.

- The Commission's recommendation on reimbursability is expressed in a three point *Service Medical Rendu* (SMR) scale. The 3 SMR levels are 1 - Major / important; 2 - Moderate; and 3 - Low therapeutic value.[83] (Drugs can also be classed as of no value).
- Products in SMR classes 1 and 2 are reimbursed. Those in class 3 are not.
- **Second.** Transparency Commission also provides **comparative therapeutic value assessment**.[84] The performance of the new drug is compared with existing products for the same therapeutic indications (*Amelioration du Service Medical Rendu* ASMR), There are 5 ASMR ratings
  - 1 – major therapeutic advance
  - 2 – important advance
  - 3 – modest improvement in efficacy or reduction of side effects
  - 4 – minor improvement in efficacy or convenience
  - 5 – no improvement

Price Negotiation

- **Thirdly, Price negotiation.** Pharmaceutical companies negotiate product prices with the Economic Committee. The Economic Committee is composed of civil servants from the Ministries of Health, Finance and Economy. In setting prices, the committee attempts to assess the economic advantage in terms of treatment costs. For innovative products, the Economic Committee may refer to other European countries.[85] Additionally, the ***Accord Sectoriel*** **[AS]** was signed in July 1999 by the Economic Committee and the SNIP – it binds the pharmaceutical industry – tying reimbursement of drugs directly to the ODNAM. It agrees that the Economic Committee annually decides sales growth targets for different classes of reimbursable drugs.[86]

- If accepted the drug is placed on one of 3 reimbursable schedules
  - 100 percent reimbursement for irreplaceable medical products
  - 35% for disorders that are generally not serious
  - 65% for other products.[87]
- The reimbursement decision for new products is based on
  - the SMR recommendation of the Transparency Commission.
  - and the outcome of price negations with the Economic Committee.
- Negotiations reflect a number of elements:
  - Only products with an ASMR of 1, 2, or 3 have any real prospect of achieving a price premium over the comparator products against which they have been assessed.
  - Cost of main therapeutic alternatives
  - Size of the target patient population

[83] Redwood, H., Why Ration Health Care? 2000.
[84] Duriez, M, Ministry of Health 2000.
[85] Duriez, M, Ministry of Health 2000.
[86] Redwood, H., Why Ration Health Care? 2000.
[87] USITC 2000 Report [p 4-16 – 4-19]

- Expected budgetary impact of the new therapy
- The ONDAM – which is broken down by therapeutic area[88]

At the end of the three-stage process outlined above, a decree registers the drug on the list of reimbursable products and fixes the reimbursement rate and the price.[89]

[88] Furniss, J., 'Price controls in France; Budgeting for medical benefit?' *Eurohealth Volume 7 Number 2, Summer*, 2001.

[89] The official determination of the price of a reimbursable medicine either by the conclusion of an agreement or the issuance of an *arrêté*, is published in the *Journal Officiel* concomitantly to its registration on the relevant list. Publication of the price of the medicine must occur within 180 days as specified in a *décret* in application of Directive 89/105/CEE on "transparency".[89]