

Keep taking the medicine?

Antipsychotics and the Over Medication of
Older People. Its Causes and Consequences.



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Appendix 1: Number of prescription items dispensed in the community in England for atypical antipsychotic drugs, 1999 and 2000 by Health Authority

Appendix 2: Number of prescription items dispensed in the community in England for all antipsychotic drugs, 1999 and 2000 by Health Authority

Keep taking the medicine: Antipsychotics and the Over Medication of Older People. Its Causes and Consequences was commissioned and edited by Paul Burstow MP and researched and written by Richard Stokoe.

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1. Introduction

1.1 The over medication of older people is a form of abuse. It can result in death and it denies older people their dignity. The consequences of over medication have been extensively studied and well reported. Despite the evidence, poor practice has persisted in the UK and prescribing of antipsychotic medication continues to rise.

1.2 Some older people in care homes and other care settings are the victims of a ‘chemical cosh’ used as a management tool. While such practice is not the norm, it is clearly the case that elderly people are regularly administered with chemical cocktails of drugs whose interactions are poorly understood by care home staff. The health and well being of elderly people is being jeopardised. This report analyses the causes and consequences of inappropriate medication and makes recommendations for change.

2. Summary and Recommendations

Overview

2.1 All antipsychotics have a sedating and calming effect. Their major use is to reduce psychotic thinking and behaviour, or to pacify a person. Older people tend to be more sensitive to the effects of this medication. They are more likely to suffer side effects such as constipation, dizziness, drowsiness, fainting, thirstiness, dry mouth, and uncontrolled movements of the mouth, tongue and other parts of the body. It can also cause the misdiagnosis of ailments and, on rare occasions, lead to death.

2.2 Over the last twenty years, concern has grown about the inappropriate use of antipsychotic medication in the care of elderly people. Drugs that were developed for one purpose, the treatment of people with schizophrenia, have been turned to another purpose. **While in some cases antipsychotic medication has beneficial effects, a succession of studies both in the UK and abroad, have demonstrated that the levels of prescribing far exceed the numbers of elderly people exhibiting conditions that are treatable by the drugs.**

2.3 Prescribing has doubled in the space of a decade. New figures from the Department of Health suggest that the trend is still continuing. In the space of one year alone prescribing of all antipsychotics has risen by 6 percent.

2.4 Research suggests that around 10% of residents in care homes have psychotic symptoms such as hallucinations, paranoid ideas etc. Yet around 30% of residents in care homes are regularly prescribed antipsychotic medication. **More than 35,000 people in nursing homes and possibly as many as 53,500 elderly people in residential homes are being kept in a state of sedation for no medical reason.**

2.5 An elderly person living in a care home is likely to receive four times as many prescription items as a person living in their own home. As many as 1 in 5 admissions to hospital are linked to inappropriate drug therapy.

2.6 Particularly at risk are elderly people with dementia. Behaviour such as wandering, poor self-care, restlessness, impaired memory, depression without psychosis, uncooperativeness and agitation that is not dangerous, are common features of the disease. There are no medical reasons for prescribing antipsychotics in such cases. Managing challenging behaviour without trained staff is no excuse for reliance on chemical solutions. **Until more trained staff are in post, there will continue to be calls for even more use of antipsychotic medication, to the detriment of the patients well-being.**

2.7 In December 2001, following direction by the Labour Government, the National Institute of Clinical Excellence were set to issue guidance concerning the cost and clinical effectiveness of atypical antipsychotic medication for people with schizophrenia. This guidance has now been postponed until March 2002.¹ Older people that do not suffer from schizophrenia have been left out. The National Service Framework for Older People and the National Minimum Standards published in March 2001 are steps in the right direction. But they will fail to deliver change for older people unless there is rigorous monitoring and enforcement, yet there are scant resources to do this. Furthermore, international evidence suggests annual reviews of prescribing to older people are inadequate, and that harm can be done to an older person in far less time than a year.

2.8 Successive studies have demonstrated the need for a step-change in the way medication is used in the care of the elderly. The chemical management of older people is a scandal. It denies older people their dignity, and robs them of a better quality of life. Pressure on care providers is not an excuse for inappropriate use of medication. GPs and care home managers should be jointly accountable for safeguarding the interests of the vulnerable elderly people in their care.

Recommendations

2.9 The Department of Health must commission urgent quantitative and qualitative research into the extent and reasons for the overuse of antipsychotic medication in different care settings.

2.10 The National Institute for Clinical Excellence must prepare and publish guidance on the use of antipsychotic drugs and non-drug alternatives in the care of older people. This would include the development of a model for drug list revisions in care homes, to automatically evaluate drug lists according to a quality indicator, and keep track of the drug lists and changes made to that list. The quality indicator should also serve as guidelines for prescribers.

2.11 Review the National Service Framework and National Minimum Standards for care homes to ensure that the standard on medication, (standard 9), provides for prescribing reviews at least every three months. All prescribing decisions must be clearly documented with the reasons for the use of the medication set out in full. By evaluating the Scottish

¹ 13 November 2001, Health Questions HoC, Hansard Column 710

legislation which gives the power of attorney to make decisions on medical decisions, the standard should also be reviewed to include a requirement that protocols are developed to ensure the recipient of the drug, or a person with power of attorney, ***gives informed consent***, and that carers are consulted on the use of drugs in care homes.

2.12 Revise the National Minimum Standards target for training care staff, (standard 28) from 50% to 75% of care workers in residential settings by 2005 and 90% by 2007 to NVQ level II. The Department of Health must urgently commission work to review the level of pay and conditions necessary to encourage recruitment and retention.

2.13 The Department of Health should launch an awareness campaign targeting General Practitioners, healthcare staff, psycho-geriatricians, community pharmacists and care staff to alert them to the potential risks and effects of antipsychotic medication. This should also include a review of the information provided to all care staff concerning the use of antipsychotic medication and their side effects and benefits.

2.14 The Department of Health should provide the appropriate training and guidance to enable an increased role for community pharmacists and specialist nurses in the review of medication for older people.

2.15 The Department of Health must urgently examine the adequacy of current care home fee levels of state funded residents to ensure that care homes can provide appropriate levels of care staff.

3. What are antipsychotic drugs?

3.1 There are two types of antipsychotic drugs available on the market today – traditional and atypical antipsychotics. Both work by blocking sites in the brain that are usually stimulated by a neurotransmitter chemical called dopamine.

3.2 Atypical antipsychotic medication block several different dopamine receptors and can block, and also alter, the way serotonin receptors operate. These newer atypical antipsychotics are seen as the best approach by doctors of dealing with people with schizophrenia who have failed to respond to any other forms of treatments.²

3.3 All antipsychotic medications have sedating and calming effects. Their major outcome is to reduce psychotic thinking and behaviour, or to pacify a person. When a psychotic person first takes an antipsychotic there is an immediate calming effect that makes many feel more comfortable and decreases management problems.³ This effect can be seen in all consumers of antipsychotic medication, whether suffering from schizophrenia, any other psychotic conditions or from no form of mental incapacity.

3.4 Traditional antipsychotic medication was first licensed in 1956 for treatment of people with schizophrenia.⁴ The first atypical antipsychotic (clozapine) for people with

² <http://b.health-center.com/pharmacy/antipsychotics/clozapine/default.htm>

³ Ronald J Diamond, M.D., University of Wisconsin Department of Psychiatry, <http://www.lowellgeneral.org/html/Antipsychotics.html>

⁴ http://www.viterbo.edu/personalpages/faculty/DWillman/p431_antipsy.htm

schizophrenia was in use in 1960.⁵ This was seen as an important new development in the way patients affected by psychosis could be treated. In 1975 clozapine was withdrawn from use after several people with schizophrenia in Finland died of infections caused by a side effect.⁶

3.5 Research in the 1990's led to a series of new atypical antipsychotic drugs being developed. By 2001 new drugs included olanzapine (Zyprexa), quetiapine (Seroquel), risperidone (Risperdal), remoxipride (Roxiam) and sertindole (Serlect).

4. Research findings reviewed

4.1 Recent research has shown that in the UK, an older person living in a nursing home is likely to receive four times as many prescription items as a person living in their own home.⁷ There have also been studies in the UK that show up to 19% of admissions of elderly people may be due to inappropriate drug therapy, consequently making care home residents particularly at risk from the medicines they take.⁸

4.2 In 1997 the Royal College of Physicians warned of the over prescription of antipsychotic drugs and stated:

“Over 90% of older patients in continuing care accommodation receive medication and polypharmacy is frequent. Prescribed drugs may be inappropriate or hazardous, dispensing practices in homes may be unsafe, and more than one community pharmacist may be involved in dispensing prescriptions. The use of sedation is all too common and can result in a high incidence of oversedation, confusion and anticholinergic effects”⁹

The use of several medications (polypharmacy) can lead to increased risks in older people falling. If the NSF standard on falls is to succeed, then it is critical that issues addressing these implications are taken into consideration.

4.3 Research published in 1995 also warned that there was already massive over prescribing of antipsychotic drugs for the inappropriate reasons as set out in Section 7 below, with up to 88% of people taking antipsychotic medication for an incorrect reason.¹⁰

4.4 A survey of carers published in 1997, found that over half of all respondents said that they were not consulted on drug use in care homes.¹¹ Further studies in 2000 found that in a review of nursing homes in South Manchester, 30% of all residents were taking at least one antipsychotic medication.¹²

⁵ Novartis Communications 30 August 2001

⁶ The side effect made patients lose white blood cells (agranulocytosis). It was later discovered that this could be reversible or preventable as long as patients received a weekly blood test for the first 4-5 months of treatment.

⁷ Waller T, Scott AK. Prescribing in the elderly. *Postgrad Med J* 1995;71:466-71

⁸ Medicines Use in Nursing Homes, L Furniss MSc, MRPharmS, Primary Care Pharmacy December 2000, Vol 1 P 125

⁹ Medication for Older People 2nd Edition May 1997 The Royal College of Physicians of London P21

¹⁰ Survey of Neuroleptic Prescribing in Residents of Nursing Homes in Glasgow, Alice M McGrath & Graham A Jackson, *BMJ* 1996; 312:611-612 (9 March)

¹¹ Alzheimer's Society Survey, 1997

¹² Furniss L, Burns A, Craig SKL, Scobie S, Cooke J, Farragher B. Effects of a pharmacist's medication review in nursing homes - randomised control trial. *Br J Psych* 2000; 176:563-7

4.5 Following the publication by Paul Burstow MP of the most recent prescribing figures for atypical antipsychotics, *Community Care Magazine* undertook a poll that found 85% of social care specialists believed, in their experience, older people are given too many antipsychotic drugs.¹³

4.6 Despite the findings of these independent studies and reports, successive Governments have failed to address the warnings that have been highlighted to them.

5. Trends in prescribing

5.1 Following written questions by Paul Burstow MP and the Liberal Democrats, the Department of Health released figures for prescribing of both traditional and atypical antipsychotics. The figures show that between 1999 and 2000 there has been a **70% increase in the use of atypical antipsychotic drugs in one year** alone for people 60 years old and over.¹⁴ This is an increase of 149,700 prescription items. At the same time, the prescribing of traditional antipsychotics fell by only 2.9%, which constitutes a drop of only 53,900 prescription items. (*See Appendix 1*)

5.2 There has clearly been some substitution of atypical for traditional antipsychotics. This trend has probably been accelerated by the traditional antipsychotic *melleril* losing its license. However, the trend remains an upward one, which confirms previous research findings. **Between 1999 and 2000, overall prescribing of all anti-psychotic drugs rose by 6%, or 122,200 prescription items. Eighty-two out of ninety-nine Health Authorities recorded increases.** This can also be seen in *Appendix 2*.

Number of prescription items dispensed in the community in England for all anti-psychotic drugs by broad age group 1999 and 2000¹⁵

Prescription items dispensed by community pharmacists and appliance contractors only (thousands)

	1999	2000
Children aged 0-15 years	21.7	24.8
Elderly people aged 60 and over	2071	2193.2
Aged 16 to 59 years ¹	1966.9	2061.6

Prescription items dispensed by dispensing doctors and items personally administered (thousands)

All ages	432.5	463.1
<i>All prescription items dispensed in the community</i>		
All ages	4689	4939.7

Number of prescription items dispensed in the community in England for atypical anti-psychotic drugs by broad age group 1999 and 2000¹³

Prescription items dispensed by community pharmacists and appliance contractors only (thousands)

¹³ Community Care Magazine 2-8 August 2001 P4

¹⁴ Parliamentary Question - Paul Burstow - Antipsychotic Medication 19 Jul 2001: Column: 442W

¹⁵ Lords Question – Baroness Barker – Antipsychotic Medication 14 Sept 2001: Column WA18

	1999	2000
Children aged 0-15 years	6.5	9.7
Elderly people aged 60 and over	252.7	428.8
Aged 16 to 59 years 1	405.4	555.1
Aged 16 to 59 years 2	81.5	117.4
Prescription items dispensed by dispensing doctors and items personally administered (thousands)		
All ages	26.5	38.4
All prescription items dispensed in the community		
All ages	772.6	1,149.4

Number of prescription items dispensed in the community in England for traditional anti-psychotic drugs by broad age group 1999 and 2000 ¹⁶

Prescription items dispensed by community pharmacists and appliance contractors only (thousands)

	1999	2000
Children aged 0-15 years	15.2	15.1
Elderly people aged 60 and over	1818.3	1764.4
Aged 16 to 59 years	1480	1389.1
Prescription items dispensed by dispensing doctors and items personally administered (thousands)		
All ages	406	424.7
All prescription items dispensed in the community		
All ages	3916.4	3790.3

Notes:

1. The age related information is based on an analysis of those not required to pay a charge indicated by the categories completed on the back of the prescription form. This is based on a 1 in 20 sample of all prescription items submitted to the Prescription Pricing Authority by community pharmacists and appliance contractors only. Dispensing doctor prescriptions were not analysed into categories for 1999 and most of 2000. Personally administered items are free of charge.
2. Atypical anti-psychotics are defined within British National Formulary paragraph 4.2.1, antipsychotic drugs, and cover the drugs Amisulpride, Clozapine, Olanzapine, Quetiapine, Risperidone and Zotepine.

5.3 The figures supplied by the Department of Health suggest that the trend reported in research for over a decade is continuing.

6. Prescribing practice

Inappropriate prescribing

6.1 Research into prescribing levels in nursing homes in Glasgow states that behaviours for which antipsychotics are considered **inappropriate** are wandering, poor self care, restlessness, impaired memory, depression without psychosis, uncooperativeness and agitation that is not dangerous.¹⁷

6.2 **Projecting the over medication of older people research from the United Kingdom and from abroad (see Section 8 below), it can be shown that that over 35,000 elderly people in nursing homes, and up to 53,500 in residential homes are being given antipsychotics inappropriately.**¹⁸

¹⁶ Taken by subtracting Parliamentary Question - Paul Burstow - Antipsychotic Medication 19 Jul 2001: Column: 442W from Lords Question – Baroness Barker – Antipsychotic Medication 14 Sept 2001: Column WA18

¹⁷ Survey of Neuroleptic Prescribing in Residents of Nursing Homes in Glasgow, Alice M McGrath & Graham A Jackson, BMJ 1996; 312:611-612 (9 March)

¹⁸ Care of the Elderly, Market Survey 2001, Laing and Buisson page 87.

6.3 As can be seen below, antipsychotic medication in older people must be used extremely carefully and only if absolutely necessary. The prevalence of the conditions, and the likelihood of older people being administered other drugs (polypharmacy), makes it even more important that there is a coherent approach to the prescribing of antipsychotic medication.

6.4 There is also strong evidence to suggest that the use of inappropriate medication can lead to people being misdiagnosed as suffering from dementia or mental incapacity. This can lead to further inappropriate and unnecessary medication being prescribed. It may also lead to infringements on basic human rights, such as being incorrectly sectioned, or being subject to appointeeship or guardianship.

6.5 Existing clinical guidance states that if a person exhibits any of the medical conditions or symptoms listed in the table below, that no antipsychotic drugs should be prescribed because of the dangerous side effects they can cause.¹⁹

Medical conditions that can result in side effects if anti-psychotics are prescribed		
Alcohol abuse	Lung disease	Kidney disease
Liver disease	Blood disease	Breast cancer (now or in the past)
Overactive thyroid, goiter, or other thyroid disease	Reye’s syndrome	Diabetes
Stomach ulcers	Epilepsy or other seizure disorders	Parkinson’s disease
Difficult urination or enlarged prostate	Glaucoma	Infection
Psoriasis	Leukaemia (now or in the past)	Dementia with Lewy bodies

6.6 It is not only the side effects that may arise when antipsychotics are prescribed to people with the conditions in the table above. Caution also must be exercised when other medication is already being taken. Adverse reactions to what has been described as a ‘chemical cocktail’ can be life threatening.

Medications where an adverse reactions may result if antipsychotics are also prescribed	
Other antipsychotic drugs	Central nervous system (CNS) depressants such as medicine for allergies, colds, hay fever, and asthma; sedatives; narcotic pain medicine; muscle relaxants; medicine for seizures; sleep aids; barbiturates and anaesthetics

¹⁹ http://www.findarticles.com/cf_dls/g2601/0001/2601000121/p2/article.jhtml?term=

Antidepressants	Epinephrine, also known as Adrenaline
Levodopa (Larodopa), or levodopa-carbidopa (Sinemet) used to treat Parkinson's disease	Blood pressure medicines such as reserpine
Pimoline (Cylert), used to treat ADHD	Certain medicines for pain inflammation such as Lithium
Certain medicines for asthma, bronchitis, emphysema, and other lung diseases. ²⁰	

The Side Effects

6.7 In 1994 the UK Medicine Control Agency issued guidance that stated:

“If neuroleptics [antipsychotics] are used in elderly patients with dementia, **very low doses** should be given with cautious titration [solution strength] against the clinical state. Particular care should be taken in patients with features suggestive of Lewy-body dementia²¹ because sudden life-threatening deterioration may occur.”²²

6.8 If good practice is not followed, the risks of side effects are considerable. The table below sets out the side effects of both traditional and atypical antipsychotics.

Side effects caused by inappropriate use of antipsychotics		
Cognitive impairment	Uncontrolled involuntary movements (Tardive Dyskinesia)	Sedation and depression
Loss of spontaneity, slowing up or shuffling (Akinesia)	Muscular rigidity (Pseudoparkinsonism)	A low red and white blood cell count (Blood Dyscrasias)
A combination of catatonic rigidity, stupor, unstable blood pressure, fever, profuse sweating and incontinence (Neuroleptic Malignant Syndrome)	Constant pacing, moving of hands and feet or a feeling or nervousness (Akathasia)	Cardiovascular effects
Eye problems	Constipation	Seizures
Weight gain	Sexual dysfunction	Photosensitive reactions (skin becomes sensitive to sunlight)
Muscle spasms (Dystonia)	Temperature regulation	Jaundice

6.9 Some of these side effects are common to all patients that are prescribed antipsychotic medications, but some of these side effects are more life threatening or occur more frequently in older people. According to the Gale Encyclopaedia of Medicine:

“Older people may also be more sensitive than others to the effects of this medicine. Side effects such as constipation, dizziness, drowsiness, fainting, thirstiness, dry mouth, and

²⁰ http://www.findarticles.com/cf_dls/g2601/0001/2601000121/p2/article.jhtml?term=

²¹ Lewy body dementia was first described in 1961 and has been increasingly recognized over the past 5-10 years. Sometimes it occurs alone as the presenting illness and sometimes it occurs simultaneously with Alzheimer's or Parkinson's disease. Lewy body dementia is very similar to Alzheimer's disease with progressive loss of memory, language, calculation and reasoning as well as other higher mental functions. However the progress of the illness may be more rapid than seen in Alzheimer's disease.

²² Medical Control Agency - “Current Problems in Pharmacovigilance” Volume 20, May 1994, P6

uncontrolled movements of the mouth tongue and other parts of the body are especially likely in this age group.²³

6.10 The involuntary movements known as Tardive Dyskinesia (TDs) include movements of the tongue, lips, face, trunk, and extremities. It occurs in people treated with long-term dopaminergic antagonist medications, i.e. when medication that affects the dopamine receptors are used.²⁴ It has been estimated that between 15-20% of people using antipsychotic medication are affected by Tardive Dyskinesia. It appears more frequently in women, in older people, and in those having a diagnosis other than schizophrenia.²⁵

Appropriate Prescribing

6.11 There are certain conditions where antipsychotic medication have been found to be beneficial to prevent a person from causing harm, either to themselves or to others in care settings. These include the following: -

Conditions where antipsychotic medication is beneficial		
Schizophrenia	Schizoaffective disorder	Delusional disorder
Psychotic mood disorder (including mania and depression with psychotic features)	Acute psychotic episodes	Brief reactive psychosis
Schizophreniform disorder	Atypical psychosis	Tourette's syndrome
Huntington's disease		
Organic mental syndromes (including delirium and dementia) with associated psychotic and/or agitated features defined by:		
1. Specific behaviours quantitatively (number of episodes) and objectively (i.e. biting, kicking, scratching) documented by the facility which cause the resident to: (a) present a danger to themselves; (b) present a danger to others (including staff);		
2. Continuous crying out, screaming, yelling or pacing if these behaviours cause impairment in functional capacity, and if they are quantitatively (e.g. periods of time) documented by the facility; or		
3. Psychotic symptoms. ²⁶		

7. Causes of over or inappropriate prescribing

7.1 There have been several reasons cited for this large rise in the use of antipsychotic medication in care settings.

Explanations of the inappropriate use of antipsychotic medication in care settings		
The lack of guidance and	The lack of trained staff skilled in	Poor training and lack of

²³ http://www.findarticles.com/cf_dls/g2601/0001/2601000121/p2/article.jhtml?term=

²⁴ <http://www.emedicine.com/neuro/topic362.htm> (17 August 2001)

²⁵ Ronald J Diamond, M.D., University of Wisconsin Department of Psychiatry, <http://www.lowellgeneral.org/html/Antipsychotics.html>

²⁶ <http://www.mayo.edu/geriatrics-rst/AntiPsiLTC.html>

information provided to General Practitioners and psycho-geriatricians regarding the prescribing of antipsychotics to older people.	dementia care. The shortage of specialist staff may result in a reliance on antipsychotic medication to stop residents from wandering or causing more work for already overstretched staff. ²⁷	information provided to care staff on the prescription of antipsychotic medication.
The lack of funding provided by the Government for the provision of nursing and residential care.	The lack of information provided to patients and relatives on the effects of antipsychotic medication.	The failure of the Government to direct the National Institute for Clinical Excellence (NICE) to issue guidance for the use of prescriptions of antipsychotic medication to older people.
The lack of funding for care homes to provide the necessary alterations to care homes to meet the criteria set out in the Care Standards Act 2000.	The poor wages of care staff making the profession unattractive and leaving a serious recruitment and retention problem.	The lack of a review body that can monitor the possible inappropriateness of the prescription of medication.

8. Lessons from abroad

Sweden

8.1 The Swedish Board of Health and Welfare established the Kungsholmen Project in 1987. It has been an ongoing, longitudinal, population-based study on ageing in Sweden, and its purpose has been to investigate the medical, psychological, and social aspects of ageing, with emphasis on dementia. The work has included significant amounts of research on the use and appropriateness of antipsychotic medication in care settings.

8.2 According to recommendations put forward from the Kungsholmen Project research, antipsychotics should be used only for the treatment for psychotic symptoms (hallucinations, paranoid ideas etc). A study by the Swedish Board of Health and Welfare reported that the prevalence of such symptoms in nursing homes was around 10%, and yet they discovered there to be a 25%-30% use of antipsychotic medication in the care settings reviewed. From these two studies, it has been demonstrated that at least 60% of prescribed antipsychotic medication is being prescribed for incorrect reasons.²⁸

8.3 Following these findings, increased research was then carried out to find the best methods for reducing the reliance in care settings of inappropriate antipsychotic medication. In follow up studies, it was found that: -

“Intentional and long-term quality programmes improve drug use. The study shows lasting effects on drug use in those nursing homes that in 1994-95 initiated intervention in the form of regular drug utilisation review using the team care model.”²⁹

8.4 Since these conclusions have been published; education for care-staff, nurse assistants, nurses and other staff in care institutions has been initiated, to reduce the reliance of

²⁷ Out of Sight: The Forgotten Elderly, April 2001, Paul Burstow MP

²⁸ “Quality of Drug Use in Swedish Nursing Homes – A Follow Up Study” Ingrid K. Schmidt and Johan Fastbom PhD, Clinical Pharmacoeconomics, Clin Drug Investment 2000 Dec: 20(6) 433-446

²⁹ “Quality of Drug Use in Swedish Nursing Homes – A Follow Up Study” Ingrid K. Schmidt and Johan Fastbom PhD, Clinical Pharmacoeconomics, Clin Drug Investment 2000 Dec: 20(6) 433-446

antipsychotic medication in care settings. Further projects have been started to inform patients and relatives of the uses and side effects of this and other medication.

8.5 A further project to ensure appropriate prescription of antipsychotics, has been the adoption of a model for drug list revisions in nursing homes, centrally available and universally accessible. This has been developed alongside the National Corporation of Swedish Pharmacies, and ensures that all prescribers of medication are fully aware of changes to drug lists and up to date information on quality indicators.

8.6 The success of these trials would appear to suggest that these measures alone are significantly reducing inappropriate prescribing in test-case nursing homes by up to 20%.³⁰

Australia

8.7 The Australian Government addressed this issue in the mid 1990's with significant results. In 1993, over 50% of the residents in Sydney nursing homes were taking antipsychotic drugs or benzodiazepines. A repeat survey in 1998, after educational interventions, found a significant and appropriate reduction in these prescriptions. Prescriptions of psychotropic drugs fell from 59% to 48.5%.³¹

8.8 The Australian government has set up initiatives such as the Australian Pharmaceutical Advisory Council and the Pharmaceutical Health and Rational Use of Medicines Committee, that encourages judicious, appropriate, safe and evidence-based drug prescribing.

The United States

8.9 The US Government has taken legislative action to tackle the over-prescribing of antipsychotic drugs. In 1987 the Nursing Home Reform Act was passed. The stimulus for the change in US policy came in 1983, when Congress asked the Institute of Medicine of the National Academy of Sciences to make recommendations for improving the quality of care in nursing homes. The Institute's final report highlighted many of the problems that are still current in the UK care system. This included various types of abuse that had led to '*a culture of fear and unnecessary suffering while in a care setting*'. Many of the report's recommendations centred on setting higher standards of care to improve the well being of residents. This included the Institute's proposal that fewer antipsychotic drugs should be prescribed.

8.10 Further US research found that up to 74% of residents in nursing homes were being administered psychotropic medication for six months or more, with 21% of those residents receiving this type of medication not having a documented mental illness.³²

³⁰ "Quality of Drug Use in Swedish Nursing Homes – A Follow Up Study" Ingrid K. Schmidt and Johan Fastbom PhD, Clinical Pharmacoepidemiology, Clin Drug Investment 2000 Dec: 20(6) 433-446

³¹ Older people and medications: what is the right prescription? B. Nair, Professor and Director, Geriatric Medicine, John Hunter Hospital, Newcastle, N.S.W.

<http://www.australianprescriber.com/magazines/vol22no6/editorial.htm>

³² Buck JA. Psychotropic drug practise in nursing homes. J Am Geriatric Soc 1988;36:409-18

8.11 The majority of the Institute's recommendations were included in the final Act. In particular guidelines for drug treatment in care homes. This included regulations that require extensive documentation to justify the prescription of antipsychotic drugs. The Act also enshrined the principle that no resident's drug regime should include any drugs that are not medically necessary.

8.12 The Act coincided with residents' rights regulations that came into force at the same time in 1990. This included reviews of prescriptions on a monthly or quarterly basis, with the appropriateness of the drugs evaluated by a consultant pharmacist. The US legislation also placed a duty on the pharmacist to report any irregularities of prescribing to the attending doctor and director of nursing. This system of checks and balances was put in place to ensure that homes did not become dependent on medication as a way of 'caring' for residents.

8.13 The change in law has had a dramatic effect on prescribing behaviour in nursing homes. Following the implementation of the Nursing Home Reform Act in 1990, the prescribing of antipsychotic drugs decreased by approximately 33%, with only a small increase in antidepressants and no increase in any other substitute drug.³³

9. What has the UK Government done?

9.1 As the lessons from abroad demonstrate there is much that can be done to change prescribing practice. The results can be life transforming. But the record of successive UK Governments has been characterised by inaction. Paul Burstow MP first raised the issues covered in this paper in 1997, when he asked the then Minister of State for Health, Alan Milburn MP, about plans for research. The response was disappointing:

"We have no plans to commission specific research into the use of sedatives in nursing and residential homes. The responsibility for prescribing, including repeat prescribing and the prescribing of sedatives, rests with the doctor who has clinical responsibility for that particular aspect of a patient's care."³⁴

9.2 Over the last four years concerns about over prescribing have been raised in the House of Commons on a number of occasions. During the passage of the Care Standards Act 2000, Paul Burstow MP tabled an amendment to the Bill calling for monitoring of medical records. The amendment had two aims. Firstly, to establish a system to verify the distribution of prescribed medicines by care homes and managers, so that the prescribing doctor could know what drugs the older person had been given. **Secondly, to put in place a system of inspection and advice on medication to ensure that prescriptions are appropriate to the needs of the individuals in the care homes, rather than being geared to the desires of the people running them.**³⁵

9.3 Concerns have been raised by other MPs. In 2000, a Private Members Bill was introduced under the 10 Minute Rule. Paul Flynn MP, Paul Burstow MP and eight other MPs sponsored the Bill. The Residential Care Homes and Nursing Homes (Medical Records) Bill

³³ Impact of legislation on nursing home care in the United States: lessons for the United Kingdom **Carmel M Hughes**, Harkness fellow in healthcare policy, **Kate L Lapane**, assistant professor in epidemiology, **Vincent Mor**, director. <http://www.bmj.com/cgi/content/full/319/7216/1060>

³⁴ Parliamentary question Hansard, 17 Nov 1997 col 60

³⁵ Care Standards Bill, Standing Committee Official Report, 15th June 2000

would have required persons registered to run a residential care home or nursing home to keep records concerning medicines and their use. The Bill would also have provided for inspection of such records by medical practitioners. The Bill secured an unopposed second reading but failed to make further progress due to a lack of parliamentary time.³⁶

9.4 In March 2001, the Department of Health published the National Service Framework for Older People. Whilst acknowledging the risks of inappropriate prescribing, the NSF contains confusing and contradictory advice on the use of anti-psychotic drugs. The NSF states that treatment of dementia always involves the prescribing of antipsychotic drugs for more serious problems associated with dementia. However, as this report has demonstrated there are serious risks associated with prescribing such drugs. **In a recent letter to Paul Burstow MP, Minister of State for Health, Jacqui Smith MP, accepted that some of the wording in the NSF was “indeed unfortunate”.**³⁷

9.5 While the NSF is contradictory, it does acknowledge that inappropriate prescribing remains a serious issue. In the accompanying document on *‘Polypharmacy, Medicines and Older People: Implementing Medicines-Related Aspects of the NSF for Older People’*, it states:

“More recent UK research indicates that inappropriate neuroleptic prescribing in nursing homes continues to be an issue. Such medicines used to treat behavioural complications may hasten cognitive decline.”³⁸

Despite this, successive Governments have failed to commission research into why there is inappropriate prescribing of antipsychotics, how this affects older people in the care system, and how prescribing could be reduced. In a written answer in October 2001, Health Minister Jacqui Smith MP, told Paul Burstow MP that £1.4 million had been spent on research into antipsychotic drugs in the last four years. However, the research had concentrated on clinical and cost effectiveness, treatment of schizophrenia, and only makes *‘some reference to older people’*.³⁹

9.6 The National Service Framework sets milestones in 2002 and 2004, for addressing the medication of older people. By 2002 the NSF states that:

“All people over 75 should normally have their medicines reviewed at least annually and those taking four or more medicines should have a review 6-monthly”⁴⁰

While the introduction of such reviews is welcome, it falls short of the regime now in place in the US. Regulations in the US require a monthly review for those taking four or more medicines, and at the very least a quarterly review for those people on fewer medications. The frequency of reviews for people taking less than four medicines proposed by the NSF milestone, is not sufficient to ensure that the inappropriate use of antipsychotic medications is reduced.

³⁶ Hansard, 27 Mar 2000, column 38

³⁷ Letter to Paul Burstow MP from Jacqui Smith MP, Minister of State, 17th October 2001

³⁸ Medicines and Older People: Implementing medicines-related aspects of the NSF for Older People March 2001 P15

³⁹ Hansard, 15th October 2001, written answers.

⁴⁰ Medicines and Older People: Implementing medicines-related aspects of the NSF for Older People March 2001P27

9.7 Also in March 2001, the Department of Health published Care Homes for Older People, National Minimum Standards. Standard 9 aims to protect people from inappropriate medication through clear policies and procedures for dealing with medicines. This goes some way to meet the concerns raised during the Committee stage of the Care Standard Bill, but still fails to address concerns about who and how effectively this standard will be monitored. Given that research evidence concerning inappropriate use of antipsychotics has been known for a long time, unless there is strict monitoring to ensure compliance with standards, nothing will change with the prescribing trends reported in section 4 continuing.

10. Alternatives to drugs

10.1 All neuroleptic drugs have some kind of side effect; therefore any antipsychotic medication must only be used as a last resort. As has been demonstrated in previous sections, neuroleptics are often used to 'control' behaviour, rather than attempting to understand or investigate the causes.

10.2 For people who suffer from dementia, these causes will include distress, feelings of humiliation, or fear. This can be caused by a variety of factors and is particularly exasperated when people suffering from dementia are moved from one home to another. This can cause a great deal of confusion. The aggression that can be displayed by those with dementia is often a result of this. Consequently, the use of neuroleptics may mask any underlying problem rather than help resolve it, and in some cases may well worsen it.

10.3 There are alternatives to the use of antipsychotic medication. Rather than drugs, the use of a person-centred approach will reduce the need to use neuroleptics. According to the Alzheimer's Society⁴¹, an attempt by staff or carers to understand what is causing the anxiety in the older person, will alleviate the particular concern the older person has, and consequently reduce the aggression. This should also take the form of adequate training and awareness for those who work in the care sector. With the appropriate numbers of trained care staff, much of the prescription of neuroleptics could be avoided to the benefit of the older person, the family and the carer.

11. Conclusions

11.1 The appropriate use of antipsychotic medication can make a significant contribution to the well being of older people. However, prescribing trends over the last decade have seen a doubling in the use of such drugs. The figures published in this report suggest that the trend is continuing. This increase cannot be explained just in terms of increased psychosis, schizophrenia amongst the elderly or an increase in the elderly population. Evidence from the UK and abroad, still points to a disturbingly high level of inappropriate prescribing.

11.2 Despite the compelling evidence and decisive action overseas, successive UK Governments have failed to take the steps necessary to tackle over medication. The focus of Government research has been into cost and clinical effectiveness in the treatment of people with schizophrenia. Older people have been left out. The National Service Framework for

⁴¹ http://www.alzheimers.org.uk/society/p_neuroleptics.html

Older People and the National Minimum Standards published in March 2001 are steps in the right direction. But they will fail to deliver unless there is rigorous monitoring and enforcement, yet there are scant resources to do this. Furthermore, international evidence suggests annual reviews of prescribing to older people are inadequate, and that harm can be done to an older person in far less time than a year.

11.3 Successive studies have demonstrated the need for a step-change in the way in which medication is use in the care of the elderly. The chemical management of older people is a scandal. It denies older people dignity and robs them of a better quality of life. Pressures on care providers are not an excuse for inappropriate use of medication. GPs, psycho-geriatricians and care home managers should be accountable for safeguarding the interests of the vulnerable elderly people in their care.

Glossary

- The terms antipsychotic, neuroleptic and psychotropic medications are interchangeable and refer to the prescription of medication that is described in section 3 of this document.
- The term ‘care home’ used in this document refers to all institutionalised care settings i.e. residential and in particular nursing homes.
- The use of NSF in this document always refers to the National Service Framework for Older People published in March 2001 by the Department of Health

Appendix 1: Number of prescription items dispensed in the community in England for atypical antipsychotic drugs, 1999 and 2000 by Health Authority

West Midlands	ATYPICAL ANTIPSYCHOTIC DRUGS Prescription items (thousands)			
	1999	2000	Change '99/00	Percentage rise '99-00
B'ham	16.7	25.3	8.6	51.5
Coventry	7.8	12	4.2	53.85
Dudley	3.1	4.3	1.2	38.71
Herefordshire	1.3	2.1	0.8	61.54
North Staffs	5.2	7.9	2.7	51.92
S Staffs	5.9	9.5	3.6	61.02
Sandwell	4.5	4.7	0.2	4.44
Shropshire	6.3	9.2	2.9	46.03
Solihull	3.2	4	0.8	25
Walsall	4.8	5.7	0.9	18.75
Warwickshire	8.1	11.8	3.7	45.68
Wolverhampton	5.1	5.5	0.4	7.84
Worcestershire	4.8	7	2.2	45.83
Total	Total		Total change	%age change 1999/2000
	76.8	109	32.2	41.92
Trent	Prescription items (thousands)			
	1999	2000	Change 99/00	%age rise 99-00
Barnsley	2.6	4.1	1.5	57.69
Doncaster	4	5	1	25
Leicestershire	11.6	16.8	5.2	44.83
Lincolnshire	6.5	10.2	3.7	56.92
North Derbyshire	3.9	5.8	1.9	48.72
North Nottinghamshire	4.2	5.6	1.4	33.33
Nottingham	2.7	3.1	0.4	14.81
Rotherham	5.1	7.1	2	39.22
S Derbyshire	4.1	6.1	2	48.78
S Humber	4.5	5.9	1.4	31.11
Sheffield	5.5	7.1	1.6	29.09
Total	Total		Total change	%age change 1999/2000
	54.7	76.8	22.1	40.4
South West	Prescription items (thousands)			
	1999	2000	Change 99/00	%age rise 99-00
Avon	13.4	21.7	8.3	61.94

Cornwall & Isles of Scilly	6.2	8.5	2.3	37.1
Dorset	10.3	13.8	3.5	33.98
Gloucestershire	5.4	8.3	2.9	53.7
North and East Devon	9.1	12.8	3.7	40.66
S & W Devon	9.8	17.4	7.6	77.55
Somerset	4.5	8.3	3.8	84.44
Wilts	10.3	14.1	3.8	36.89
Total	Total		Total change	%age change 1999/2000

	69	104.9	35.9	52.02
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South East

Prescription items (thousands)

	1999	2000	Change 99/00	%age rise 99-00
Berkshire	11.2	16.2	5	44.64
Buckinghamshire	9.4	14.7	5.3	56.38
East Kent	12	16.5	4.5	37.5
East Surrey	5.8	7.3	1.5	25.86
East Sussex, Brighton and Hove	15.5	22	6.5	41.94
Isle Of Wight	3.3	4.9	1.6	48.48
North and Mid Hampshire	10.2	14.2	4	39.22
Northamptonshire	8.6	10.8	2.2	25.58
Oxfordshire	9.5	14.5	5	52.63
Portsmouth & S E Hants	8.6	12.7	4.1	47.67
Southampton & S W Hants	9.7	17.2	7.5	77.32
W Kent	12.8	21.4	8.6	67.19
W Surrey	8	13.1	5.1	63.75
W Sussex	11.2	16.6	5.4	48.21
Total	Total		Total change	%age change 1999/2000

	135.8	202.1	66.3	48.82
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Northern & Yorks

Prescription items (thousands)

	1999	2000	Change 99/00	%age rise 99-00
Bradford	6.8	10.5	3.7	54.41
Calderdale & Kirklees	8.5	14.3	5.8	68.24
County Durham and Darlington	8.5	13.7	5.2	61.18
East Riding & Hull	10.1	14.5	4.4	43.56

Gateshead & Sth Tyneside	6.5	8.9	2.4	36.92
Leeds	17.1	23.5	6.4	37.43
Newcastle and North Tyneside	15.6	21.6	6	38.46
North Cumbria	5.9	8.9	3	50.85
North Yorks	7.8	12.6	4.8	61.54
Northumberland	6	7.6	1.6	26.67
Sunderland	5.2	6.7	1.5	28.85
Tees	7.8	12.6	4.8	61.54
Wakefield	6.1	9.1	3	49.18
Total	Total		Total change	%age change 1999/2000
	111.9	164.5	52.6	47

North West	Prescription items (thousands)			
	1999	2000	Change 99/00	%age rise 99-00
Bury & Rochdale	6.4	9.6	3.2	50
East Lancs	9.3	13.9	4.6	49.46
Liverpool	12.8	18.1	5.3	41.41
Manchester	12.7	18.7	6	47.24
Morecambe Bay	6.2	9.1	2.9	46.77
North Cheshire	3.8	5.6	1.8	47.37
North West Lancs	7.5	14.5	7	93.33
S Cheshire	11.3	17.9	6.6	58.41
S Lancs	4	7	3	75
Salford and Trafford	9	13.8	4.8	53.33
Sefton	6	10.5	4.5	75
St Helens & Knowsley	6.2	10.9	4.7	75.81
Stockport	5.8	8.9	3.1	53.45
W Pennine	6.9	8.8	1.9	27.54
Wigan & Bolton	10.2	16	5.8	56.86
Wirral	9.2	13.6	4.4	47.83
Total	Total		Total change	%age change 1999/2000
	127.3	196.9	69.6	54.67

London	Prescription items (thousands)			
	1999	2000	Change 99/00	%age rise 99-00
Barking and Havering	5.1	8	2.9	56.86
Barnet	6.9	10.1	3.2	46.38
Bexley & Greenwich	5.7	8.1	2.4	42.11

Brent & Harrow	8.7	12.6	3.9	44.83
Bromley	4.8	6.6	1.8	37.5
Camden & Islington	8.2	11.4	3.2	39.02
Croydon	7.5	10.9	3.4	45.33
Ealing, Hammersmith & Hounslow	10.7	15.6	4.9	45.79
East London & City	12.4	17.4	5	40.32
Enfield & Haringey	8.6	13.2	4.6	53.49
Hillingdon	2.5	3.5	1	40
Kensington & Chelsea & Westminster	7.6	11.1	3.5	46.05
Kingston & Richmond	5.4	8.4	3	55.56
Lambeth, Southwark & Lewisham	15.7	22.8	7.1	45.22
Merton, Sutton & Wandsworth	12.9	18.4	5.5	42.64
Redbridge & Waltham Forest	8.1	11.7	3.6	44.44
Total	Total		Total change	%age change 1999/2000
	130.8	189.8	59	45.1
Eastern			Prescription items (thousands)	
	1999	2000	Change 99/00	%age rise 99-00
Bedfordshire	4.7	10.3	5.6	119.15
Cambridgeshire	8.6	13.2	4.6	53.49
East and North Hertfordshire	6.8	10.3	3.5	51.47
Norfolk	9.1	15.5	6.4	70.33
North Essex	12.9	19	6.1	47.29
S Essex	9.3	13.8	4.5	48.39
Suffolk	6.7	11.4	4.7	70.15
W Herts	8.4	12.1	3.7	44.05
Total	Total		Total change	%age change 1999/2000
	66.5	105.6	39.1	58.8
England	252.7	428.8	176.1	69.68

Appendix 2: - Number of prescription items dispensed in the community in England for all anti-psychotic drugs, 1999 and 2000 by Health Authority

		ALL ANTIPSYCHOTIC DRUGS Prescription items (thousands)			
West Mids	1999	2000	Change '99/00	Percentage rise '99-00	
B'ham	42.1	44.3	2.2	5.23	
Coventry	16.2	14.5	-1.7	-10.49	
Dudley	13	14.7	1.7	13.08	
Herefordshire	5.2	5.8	0.6	11.54	
North Staffs	24	25	1	4.17	
Sandwell	12.5	13.5	1	8	
Shropshire	16.8	16.6	-0.2	-1.19	
Solihull	5.3	7.3	2	37.74	
South Staffs	22.2	24.2	2	9.01	
Walsall	16.1	16.4	0.3	1.86	
Warwickshire	19.3	20.2	0.9	4.66	
Wolverhampton	10.5	11	0.5	4.76	
Worcestershire	21.6	23.6	2	9.26	
Total	Total		Total change	%age change 1999/2000	
	223.7	238.2	14.5	6.48	
Prescription items (thousands)					
Trent	1999	2000	Change 99/00	%age rise 99-00	
Barnsley	11	10.8	-0.2	-1.82	
Doncaster	13.4	13.5	0.1	0.75	
Leicestershire	30.6	32.3	1.7	5.56	
Lincolnshire	27.5	27.7	0.2	0.73	
North Derbyshire	16	16.3	0.3	1.88	
North Nottinghamshire	20.9	21	0.1	0.48	
Nottingham	27.2	29.1	1.9	6.99	
Rotherham	17.3	23.5	6.2	35.84	
S Derbyshire	25.6	25.8	0.2	0.78	
S Humber	13	14	1	7.69	
Sheffield	24	23.7	-0.3	-1.25	
Total	Total		Total change	%age change 1999/2000	
	226.5	239.5	13	5.74	
Prescription items (thousands)					
South West	1999	2000	Change 99/00	%age rise 99-00	
Avon	41.6	43.7	2.1	5.05	

Cornwall & Isles of Scilly	19.9	19	-0.9	-4.52
Dorset	34.1	33.7	-0.4	-1.17
Gloucestershire	19.5	21.2	1.7	8.72
North and East Devon	20.3	21.1	0.8	3.94
S & W Devon	29.4	32.4	3	10.2
Somerset	18.5	20.2	1.7	9.19
Wilts	23.3	26.1	2.8	12.02
Total	Total		Total change	%age change 1999/2000

206.7 216.2 9.5 4.6

South East	1999	2000	Change 99/00	%age rise 99-00
Berkshire	24.1	26	1.9	7.88
Buckinghamshire	20	23.1	3.1	15.5
East Kent	27.9	26.8	-1.1	-3.94
East Surrey	16.9	17.3	0.4	2.37
East Sussex, Brighton and Hove	36.1	38.6	2.5	6.93
Isle Of Wight	7.5	7.3	-0.2	-2.67
North and Mid Hampshire	18.8	19.1	0.3	1.6
Northamptonshire	19.7	19.5	-0.2	-1.02
Oxfordshire	14.8	16.8	2	13.51
Portsmouth & S E Hants	26.3	27.9	1.6	6.08
Southampton & S W Hants	24.6	26.6	2	8.13
W Kent	33.8	35.2	1.4	4.14
W Surrey	21.9	22.9	1	4.57
W Sussex	40.3	42.1	1.8	4.47
Total	Total		Total change	%age change 1999/2000

335 349.2 14.2 4.24

Prescription items (thousands)

North & Yorks	1999	2000	Change 99/00	%age rise 99-00
Bradford	21.7	23.7	2	9.22
Calderdale & Kirklees	28.9	31.1	2.2	7.61
Durham	26.7	30.1	3.4	12.73
East Riding & Hull	26.2	26	-0.2	-0.76
Gateshead & Sth Tyneside	18.4	19.7	1.3	7.07

Leeds	37.5	38.8	1.3	3.47
Newcastle and North Tyneside	28.5	30.4	1.9	6.67
North Cumbria	13.2	14.7	1.5	11.36
North Yorks	27.6	28.9	1.3	4.71
Northumberland	11.4	11.8	0.4	3.51
Sunderland	13.2	12.7	-0.5	-3.79
Tees	27.5	25.9	-1.6	-5.82
Wakefield	15	16.2	1.2	8
Total	Total		Total change	%age change 1999/2000

297.8 313 15.2 5.1

Prescription items (thousands)

North West	1999	2000	Change 99/00	%age rise 99-00
Bury & Rochdale	21.1	22	0.9	4.27
East Lancs	26.2	27.1	0.9	3.44
Liverpool	26.1	26.7	0.6	2.3
Manchester	22.8	23.8	1	4.39
Morecambe Bay	18.8	20	1.2	6.38
North Cheshire	15.2	15.1	-0.1	-0.66
North West Lancs	27.8	29.1	1.3	4.68
S Cheshire	32.7	33.8	1.1	3.36
S Lancs	12.8	13.3	0.5	3.91
Salford and Trafford	29.7	34.2	4.5	15.15
Sefton	17.9	20.9	3	16.76
St Helens & Knowsley	17.5	19.4	1.9	10.86
Stockport	26.5	26.5	0	0
W Pennine	19.8	21.6	1.8	9.09
Wigan & Bolton	28.5	31.1	2.6	9.12
Wirral	17.9	21.5	3.6	20.11
Total	Total		Total change	%age change 1999/2000

360.3 386.5 26.2 7.27

Prescription items (thousands)

London	1999	2000	Change 99/00	%age rise 99-00
Barking and Havering	14	15.3	1.3	9.29
Barnet	16.3	16.4	0.1	0.61
Bexley & Greenwich	15.8	15.7	-0.1	-0.63
Brent & Harrow	12.7	13.1	0.4	3.15
Bromley	11.9	12.5	0.6	5.04

Camden & Islington	9.5	9.6	0.1	1.05
Croydon	11.9	13.6	1.7	14.29
Ealing, Hammersmith & Hounslow	20.2	20.2	0	0
East London & City	13.5	14.7	1.2	8.89
Enfield & Haringey	16.3	16.2	-0.1	-0.61
Hillingdon	5.8	7.2	1.4	24.14
Kensington & Chelsea & Westminster	7	7.4	0.4	5.71
Kingston & Richmond	11.5	12.6	1.1	9.57
Lambeth, Southwark & Lewisham	25.5	27.6	2.1	8.24
Merton, Sutton & Wandsworth	21.8	25.2	3.4	15.6
Redbridge & Waltham Forest	16.9	18.7	1.8	10.65
Total	Total		Total change	%age change 1999/2000
	230.4	246.9	16.5	7.16
Eastern	Prescription items (thousands)			
	1999	2000	Change 99/00	%age rise 99-00
Bedfordshire	16	17.6	1.6	10
Cambridgeshire	20	24.1	4.1	20.5
East and North Hertfordshire	18.1	18.4	0.3	1.66
Norfolk	30.1	33.6	3.5	11.63
North Essex	32.1	35.1	3	9.35
South Essex	23.9	24.7	0.8	3.35
Suffolk	27.6	29.2	1.6	5.8
W Herts	19.4	22.4	3	15.46
Total	Total		Total change	%age change 1999/2000
	190.6	205.1	14.5	7.61
England	2071	2193.2	122.2	5.9

To obtain figures for traditional antipsychotics, subtract the atypical (Appendix 2) from the total antipsychotics figures (Appendix 1).