compile figures on the actual costs of psychotropic medication in one district over a one year period.

The Hergest Unit in Ysbyty Gwynedd, Bangor, is a DGH unit serving a population base of 250 000. It has 52 acute beds and 6 intensive care beds, which during the course of 1994 had a mean occupancy of 48 beds. The total charge to this Unit for all central nervous system agents, prescribed for all patients by all consultants during 1994 was £18 934.43. This includes the costs of major tranquillisers, both depot and oral, as well as minor tranquillisers, hypnotics, antidepressants and anticholinergic compounds, but excludes the cost of clozapine. If we subtract from this the costs of risperidone for the Unit for the year (£8868.86) we get a figure of £10 065.57 for all drugs other than risperidone. The services in Gwynedd have in addition, during the course of 1994, maintained 10 patients on clozapine, the direct costs of which were £25 870.47.

The population in Gwynedd is widely dispersed so that taking blood from patients to check for agranulocytosis, and delivering medication requires up to 50 km per patient travel per week. This leads to a considerable amount of dead time, which has been estimated elsewhere to come to at least half of a full time equivalent F grade community psychiatric nurse (CPN) (£8400) (Healy, 1993*b*). In the course of keeping patients on clozapine, owing to requirements as to when blood samples are taken, CPNs or junior doctors have regularly to miss ward rounds, team meetings and out-patient sessions. Thus, there are opportunity costs that accrue as a result of not having a patient's key worker at the above meetings and these can be estimated at 30% of 20 members of a team × £10 (mean hourly rate) × 4 (as per national half day per week). This comes to £12 400 per year. These calculations are a conservative estimate, which have been worked on the basis that all patients are looked after by one catchment area team within the county only.

In addition to the above, there is considerable pharmacy time involved in the dispensing of clozapine – liaising between the company, and community team personnel. At present for 10 patients in Gwynedd this works out at one half day per week for a principal pharmacist, the cost of which is £2500. There are, furthermore, opportunity costs in that the pharmacist would otherwise be employed in answering prescriber enquiries, nursing enquiries and ward staff enquiries were he/she not involved in co-ordinating the clozapine service.

Summing all of these costs, it can be seen that the bill for clozapine comes to something in excess of £50 000 per annum. While all of the 10 patients above have considerably less side effects on clozapine than they had on their former regimes, and in the case of 4 of those patients this has meant the possibility of discharge from hospital, none has been restored to the level of functioning that would permit them to seek gainful employment, for instance, in a manner that might offset some of the above costs.

A number of observations can be made about these figures. One is the considerable increase in costs for mental health budgets, that might be brought about by the widespread use of clozapine. There are both the direct costs, which are substantial and the indirect costs, which may vary from area to area and in some areas may amount to a sum as great again as the direct costs. A consideration of these costs suggest that while a substantial proportion of the costs might have been discountable, in an economic model, on the basis of offsets not normally considered by mental health staff, and arguments made that the increase is self-financing, the absolute level of the costs are such that a service may not find it feasible to sustain those costs. While such a consideration may not apply to the SSRIs at present, the widespread prescription of antidepressants does suggest that at some point some relatively modest hike in costs could produce an unsustainable burden of cost.

In contrast, however, the second point that these figures suggest is how little is actually being spent in mental health units on psychotropic medication, if clozapine and risperidone are discounted. The drug costs in delivering a psychiatric service would appear to be much less that the 10% of NHS spend that is usually quoted for a drugs budget for the NHS as a whole.

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Self-measure of neuroleptic side-effects

SIR: I wish to point out one weakness in the study by Day *et al* (1995) which might pose a question for the construct validity of the scale LUNSERS.

It appears that nearly half (23/50) the patients in the study were on concomitant anticholinergic medication. Quite a few items of LUNSERS which are meant to measure neuroleptic side-effects are a result of their anticholinergic properties (i.e. dry mouth, constipation, difficulty in passing water, blurred vision, restlessness, etc.). Hence, it must be very difficult to deliberate how much of these could be attributed to neuroleptics alone and how much to the additional anticholinergic medication. Perhaps a differential analysis of the scale for those who were and those who were not on anticholinergics would help increase the validity of the scale as a reliable self-measure of neuroleptic side-effects.

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Dystonia and neuroleptic medication

SIR: Psychiatrists should know more about the possible, but rare, dystonic side-effects of neuroleptic medication, with which I have had an unpleasant experience, to say the least.

Twelve years ago I suffered a severe breakdown, diagnosed as schizophrenic, and was hospitalised for 4 months. I made a good recovery but I have been on a small dose of Depixol almost constantly since then, despite numerous attempts to wean myself off it.

Nine years ago, I started developing problems with my voice. It began as an intermittent and fairly mild affliction, but degenerated over the next three years to a serious condition which affected every area of my life profoundly including my career. At times when it became so bad that I could hardly speak, I became a semi-recluse. Over the years I was seeing several different psychiatrists. They described the voice as an anxiety-related speech disorder. I saw two speech therapists who said it was a psychological problem. An ENT consultant could detect no physical problem. One of the speech therapists referred me to a psychologist, who told me that I would probably never be free of the problem.

Eventually, under pressure from my mother, I got myself referred to a third speech therapist, early last year. She suspected from the beginning a condition called spasmodic dysphonia, or laryngeal dystonia. The question of whether this could be caused by Depixol arose, on my instigation, but research by her produced no positive answer. My current psychiatrist, who was consulted, declared that he doubted that there was a connection.

On 24 January of this year I went to the National Hospital of Neurology and my voice problem was diagnosed as laryngeal dystonia. The neurologist confirmed that it must have been caused by my neuroleptic medication. I was injected in the laryngeal area with Botulinum toxin, and within 48 hours I was speaking with an ease and lack of embarrassment that I had not known for years. My self-esteem has soared and I was quickly able to reduce my medication due to lack of stress when speaking.

My psychiatrist for the last three years has since admitted that he has come across one identical and one similar case in his career, so I don't understand why he had doubted the Depixol link, or why, indeed, he had not twigged long ago. But my experience is that there is general ignorance in psychiatric circles about the various manifestations of dystonia, which, as you will know, is a well-known side-effect of neuroleptic medication.

So please do something about this ignorance in psychiatric circles. I would not wish anyone else to go through unnecessarily what I have suffered, especially as people on neuroleptic medication are by definition a mentally fragile group.

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Charles Bonnet syndrome

SIR: I read with interest the findings of Teunisse *et al* (1995) and wish to report a case of Charles Bonnet syndrome (CBS) in an elderly woman with no visual impairment.

LL, a 83-year-old woman, was well until two and a half years ago when she started having isolated visual hallucinations. She experienced these hallucinations at night just before falling asleep. On several occasions she called her neighbours and police having seen strange things around her, for instance a small white robot standing in her room, which turned to look at her and then suddenly disappeared; a large tree which stood in her doorway; a giant spider and ducks that flew in to her room through a closed window. She had full insight and described these as imaginary experiences which seemed very real. She denied history suggestive of hallucination in any other sensory modality, other disorder of thought or perception or cognitive dysfunction. She had normal eye sight and used glasses only for reading purposes. On examination