Regional audit of depot neuroleptic usage in adults with learning disabilities

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A previous survey (Gravestock, 1996) assessed factors associated with depot neuroleptic usage in 79 adults with learning disabilities using mainly community-based services. The data informed consensus standard setting and this audit focusing on 32 out of 79 original subjects. At two year follow-up, five subjects had been withdrawn from depots; there was a significant ($P < 0.001$) reduction in subjects' median depot dosage and reduced concomitant usage of oral neuroleptics and anticholinergics. The importance of completing the audit cycle and other psychotropic medication monitoring studies in community learning disabilities services are discussed.

Previous UK psychoactive medication surveys mainly studied heterogeneous hospital populations of adults with learning disabilities (LD) rather than community LD service users. Surveys estimate the prevalence of psychotropic drug usage in diverse hospital and community populations as 30–50% and 10–36% of adults with LD respectively (Aman, 1987; Clarke *et al*, 1990). Other studies showed that 8–10% of mental handicap hospital in-patients (Wressell *et al*, 1990; Kohen *et al*, 1993) and 5% of adults with LD resettled in the community (Thinn *et al*, 1990) receive depot neuroleptics.

Despite concerns about fatalities (Craft & Schiff, 1980), various depot neuroleptics are used as antipsychotics and as adjunctive treatments for the wide range of behavioural disturbances occurring in adults with LD. Broader concerns have been raised about the extent and monitoring of depot usage in generic psychiatric services (Crammer & Eccleston, 1989).

The study

The author devised a semi-structured checklist to be completed by consultants or their trainees for each survey subject. The 1992 survey identified 79 adults with LD receiving depot neuroleptics under the in- or out-patient care of ten district consultants in the psychiatry of LD in the South East Thames Region (Gravestock, 1996). Data feedback and discussion at a Regional Psychiatry of Learning Disabilities Specialist Sub-Committee meeting resulted in consultants reaching consensus agreement about the following clinical practice standards:

(a) All patients are to be reviewed by a consultant or trainee psychiatrist at least every six months.

(b) All patients satisfying one or more of the below criteria are to receive the minimum depot dosage needed to stabilise their mental state and behaviour:
  (i) aged over 60 years
  (ii) severe LD
  (iii) known to have epilepsy
  (iv) not known to have a functional psychotic disorder
  (v) receiving doses outside *British National Formulary* (*BNF*; British Medical Association & The Pharmaceutical Society, 1993) 1993 limits.

Applying these standards to the 1992 survey we identified 32 out of 79 original subjects (Gravestock, 1996), to be monitored over 24 months to audit changes in clinical practice (see Table 1). Consultants or trainees completed another checklist to update data on each subject for 1994. As in previous studies (Wressell *et al*, 1990), all depot dosages were converted into daily oral chlorpromazine milligramme equivalents (CPZE) to allow comparison. Checklist data from 1992 and 1994 were compared statistically using the SAS/STAT programme (SAS Institute, 1989).

Findings

Of the 32 audit subjects 24 were male and 8 were female; their modal age was 32 years [range 22–77]; 13 had mild LD, 12 moderate LD, and seven severe LD. While 18 lived in staffed residences, seven lived with their families or independently and seven were in-patients at mental handicap hospital units. Their depots were fluphenazine decanoate (n=14), zuclopenthixol decanoate (n=9), flupenthixol decanoate (n=5), haloperidol decanoate (n=3), and pipothiazine palmitate

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(*n*=1). They had received depots for a median of five years [range 0.5–16].

Their ICD–9 (World Health Organization, 1978) psychiatric diagnoses were: atypical childhood psychoses (autism) (*n*=10); schizophrenic psychoses (*n*=8); affective paranoid or unspecified psychoses (*n*=6); and other diagnoses (*n*=2; one obsessive–compulsive disorder and one explosive personality disorder). Six subjects had no psychiatric diagnosis but exhibited chronic overactive, aggressive, self-injurious or destructive challenging behaviours.

Table 1 shows the inclusion criteria of the 32 1992 audit subjects and the changes occurring by 1994 when 27 subjects remained on depots. Table 2 shows the changes in subjects' clinical condition and psychiatrists' clinical practice over 1992–94. Medication side-effects included tremor, dribbling saliva, weight gain and tardive dyskinesia.

Concerning their reported attitudes towards depot injections, in 1992, 19 subjects and 20 carers had positive attitudes, 11 subjects and eight carers were uncertain, while two subjects and four carers had negative attitudes. By 1994, 19 subjects and 23 carers had positive attitudes, six subjects and four carers were uncertain, while two subjects had negative attitudes.

Table 1. Audit subjects

Inclusion criteria	1992 (*n*=32)	1994 (*n*=27*)
Psychiatric diagnoses		
Autism	10	8
Other	2	2
None	6	3
Epilepsy	14	9
Depot dosages outside *BNF*[1] limits	8	5
Psychiatric review *not* every 6 months	8	3
Severe LD	7	5
Aged over 60 years	3	3

*5 subjects withdrawn from depots by 1994
1. *BNF, British National Formulary*

Comment

These findings may be cautiously compared with those of larger hospital (Wressell *et al*, 1990) and community (Thinn *et al*, 1990) medication monitoring surveys and a regional audit in primary care, out- and in-patient populations with normal intellect (Crammer & Eccleston, 1989). As expected, study subjects with LD had a broader range of psychiatric diagnoses and challenging behaviours than those without LD. This audit also suggested the wide range of depots and dosages used and the greater use of zuclopenthixol in LD services (Gravestock, 1996).

As in mental handicap hospitals (Craft & Schiff, 1980), the audit showed no specific problems with depot usage in adults with LD and epilepsy. However, as all five patients withdrawn from depots had epilepsy and three still exhibited unstable behaviour, future audit focusing on withdrawal from depots would be useful.

In spite of statistically significant medication reductions, the stability of subjects' mental state and behaviour was clinically maintained or improved over two years. These findings also reflect the chronic and fluctuating natural course of psychotic and behavioural disorders in LD patients over time (Fraser & Nolan, 1994).

Compared with similar surveys (Crammer & Eccleston, 1989; Kohen *et al*, 1993) this audit found higher baseline and follow-up concomitant prescription of oral neuroleptics and anticholinergics and a high occurrence of side-effects. The data supports ongoing controversies about prescribing neuroleptics for people with LD and non-specific disturbed behaviours (Manchester, 1993). On the other hand, few subjects and their carers had clearly negative attitudes towards depot injections.

The audit data showed the following improvements in clinical practice over two years:

(a) an increase from 24/32(75%) to 23/27 (85%) subjects for whom the minimum standard was met for the frequency of psychiatric reviews
(b) an overall statistically significant reduction in depot dosages with better adherence to *BNF* dose limits
(c) an overall reduction in concomitant oral drug usage
(d) despite (b) and (c), a modest decrease in subjects with unstable mental state and behaviour.

Improvement (a) above indicated better follow-up practices than in Crammer & Eccleston's (1989) audit which revealed uncertain follow-up arrangements for two-thirds of general adult psychiatric patients.

Unlike a similar more sophisticated audit (Harvey & Cooray, 1993) this audit did not include monitoring the use of as required psychoactive medications, but both audits emphasised the necessity of completing the audit cycle and establishing ongoing medication monitoring systems. This way, improvements in clinical practice can be both achieved and maintained by setting higher standards for further audits.

Future psychotropic medication audits could include: concomitant usage of similarly acting drugs; usage of anticholinergics; usage of as required medications; usage of zuclopenthixol acetate; lithium and carbamazepine monitoring; usage of hypnotics and sedatives; monitoring the

Table 2. Clinical condition and practice

	1992 (*n*=32)	1994 (*n*=26*)	*P*
Subjects' condition			
Mental state and behaviour			
Stable	20	20	
Unstable	12	6	
Medication side-effects	12	8	
Clinical practice			
Median depot dosage (CPZE)			
All subjects (range)	255 (25–2386)	119	$P< 0.001$**
Subjects without functional psychoses (range)	308 (51–2386)	170	$P=0.037$**
Median frequency (months) of psychiatric reviews (range)	2 (0.03–24)	3	$P=0.77$**
Concomitant oral medication			
Neuroleptics	20	16	
Anticholinergics	25	20	

*1 subject on depot lost to follow-up
**Wilcoxon signed rank test

provision of user-friendly information to patients and carers on the risks and benefits of each medication; and ensuring regular assessment and documentation of both informal and detained patients' consent to treatment (Curran & Hollins, 1994).

As more adults with LD are resettled from mental handicap hospitals or remain living in the community, purchasers and providers are likely to expect high standards of psychiatric practice. Developing effective medication monitoring systems will become an essential part of clinical audit and quality assurance activities (Gravestock, 1994), particularly so in diverse dispersed multi-agency community-based LD services.

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References

AMAN, M. G. (1987) Overview of pharmacotherapy: current status and future directions. *Journal of Mental Deficiency Research*, **31**, 121–130.

BRITISH MEDICAL ASSOCIATION & THE PHARMACEUTICAL SOCIETY (1993) *British National Formulary* (*BNF*), No. 26. London: BMA & Pharmaceutical Society.

CLARKE, D. J., KELLEY, S., THINN, K., *et al* (1990) Psychotropic drugs and mental retardation: 1. Disabilities and the prescription of drugs for behaviour and epilepsy in three residential settings. *Journal of Mental Deficiency Research*, **34**, 385–395.

CRAFT, M. J. & SCHIFF, A. A. (1980) Psychiatric disturbance in mentally handicapped patients. *British Journal of Psychiatry*, **137**, 250–255.

CRAMMER, J. & ECCLESTON, D. (1989) A survey of the use of depot neuroleptics in a whole region. *Psychiatric Bulletin*, **13**, 517–520.

CURRAN, J. & HOLLINS, S. (1994) Consent to medical treatment and people with learning disability. *Psychiatric Bulletin*, **18**, 691–693.

FRASER, W. & NOLAN, M. (1994) Psychiatric disorder in mental retardation. In *Mental Health in Mental Retardation* (ed. N. Bouras), pp. 79–92. Cambridge: Cambridge University Press.

GRAVESTOCK, S. (1994) Quality assurance for adults with mental retardation and mental health needs. In *Mental Health in Mental Retardation* (ed. N. Bouras), pp. 319–327. Cambridge: Cambridge University Press.

— (1996) Depot neuroleptic usage in adults with learning disabilities. *Journal of Intellectual Disability Research*, **40**, 17–23.

HARVEY, R. J. & COORAY, S. E. (1993) Neuroleptic usage in a community mental handicap unit. *Psychiatric Bulletin*, **17**, 657–660.

KOHEN, D., MATHEW, G. & FERNANDO, L. (1993) Survey of psychotropic medication: usage in a large mental handicap hospital. *Psychiatric Bulletin*, **17**, 137–139.

MANCHESTER, D. (1993) Neuroleptics, learning disability and the community: some history and mystery. *British Medical Journal*, **307**, 184–187.

SAS INSTITUTE (1989) *SAS/STAT User's Guide, Version 6* (4th edn, Vol. 1). Cary NC, USA: SAS Institute.

THINN, K., CLARKE, D. J. & CORBETT, J. A. (1990) Psychotropic drugs and mental retardation: 2. A comparison of psychoactive drug use before and after discharge from hospital to community. *Journal of Mental Deficiency Research*, **34**, 397–407.

WRESSELL, S. E., TYRER, S. P. & BERNEY, T. P. (1990) Reduction in antipsychotic drug dosage in mentally handicapped patients: a hospital study. *British Journal of Psychiatry*, **157**, 101–106.

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