

Investigating the quality of psychotropic drug prescriptions at Accra Psychiatric Hospital

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Quality of prescribing is an important aspect of clinical practice. In a study of the effect of electronic prescriptions on prescription quality in the UK, Donyai *et al* (2008) found errors in 3.8% of their sample before the introduction of electronic prescription. In a psychiatric setting in Leeds in the UK, Nirodi & Mitchell (2002) found that 16.1% of prescriptions written for a cohort of elderly patients were illegible, and a third lacked information on dose, frequency or indication of use of medications. They found that only 18% were legible and free of all errors.

The quality of prescriptions has also been subject to study in Africa: Akinola *et al* (2008) found that 53.5% of in-patient prescriptions were written in non-generic form and a significant minority involved polypharmacy.

Accra Psychiatric Hospital is a 700-bed facility in the centre of the city of Accra, the capital city of Ghana on the west coast of Africa. It has 1200 in-patients and holds regular out-patient clinics. The hospital pharmacy is a busy unit dealing with hundreds of prescriptions a day. After discussions with the psychiatrists and pharmacists, there was an agreed need to audit the quality of prescriptions.

Method

Because of the large number of prescriptions submitted to the pharmacy every month, it was deemed pragmatic to focus on one randomly chosen month in the year preceding the study. All prescriptions dispensed by the pharmacy in April 2008 were reviewed to find out whether the following criteria were met:

- The patient's age or date of birth should be mentioned.
- The prescription should be written legibly and not abbreviated.
- The spelling of the drug name should be correct.
- The dose of the drug should be stated without any ambiguity.
- The route of administration should be documented.
- The duration of treatment should be clear.
- Monotherapy should be preferred to polypharmacy.
- The generic name should preferably be used.

The above criteria were adopted from the *British National Formulary* (BNF) guidelines and modified *a priori* in consultation with the chief psychiatrist and chief pharmacist of the hospital.

A prescription was deemed illegible if all attempts failed to unravel the name of the medication. Where prescriptions contained more than one drug, the prescription was

considered illegible if just one drug was written illegibly. The spelling of the drug name was checked using the *BNF*. The dose of medication had to be clear and legible. For the route of medication, phrases like p.o., oral, Tab, Cap and IM were all accepted.

Naturally, some patients were diagnosed with more than one condition and therefore needed to be on more than one medication. In this audit, polypharmacy was defined as the use of more than one psychotropic. Two categories of polypharmacy were also investigated *a priori* following discussions with the chief psychiatrist and chief pharmacist. One was the use of antipsychotics with or without anticholinergics. According to guidelines from the UK National Institute of Health and Clinical Excellence (2002), anticholinergics should not be prescribed routinely with first-generation antipsychotics and there should be minimal need for them with second-generation antipsychotics. The second category of polypharmacy was where more than one antipsychotic had been prescribed.

Results

In April 2008, 2410 prescriptions were issued. The results of the audit are summarised in Table 1.

In this investigation, 1226 antipsychotic prescriptions were issued in April 2008, 1106 of which were for conventional antipsychotics, 96 were for atypical antipsychotics and 24 included both conventional and atypical antipsychotics. In 871 (71%) of the 1226, the antipsychotic was prescribed along with an anticholinergic drug. Of the 355 prescriptions where antipsychotics were prescribed without anticholinergics, 63 were atypical antipsychotics and the rest were conventional ones.

There were 120 prescriptions of atypical antipsychotics (including the 24 combined with a conventional antipsychotic), and 57 (47%) of these also prescribed an anticholinergic. Finally, 826 (74%) of the prescriptions of conventional antipsychotics included an anticholinergic drug.

The audit results were presented to the medical staff of the hospital, as part of the audit cycle.

Discussion

This study showed that there is room for improvement in the quality of prescription writing. In many of the prescriptions, the age of the patient was not specified. This might not be

Table 1 Results of the review of the quality of prescriptions ($n = 2410$)

	Number	Percentage
Patient age recorded	410	17%
Legible prescription	1949	81%
Correct spelling	1525	63%
Clear documentation of the dose	2104	87%
Clear documentation of the route	2104	87%
Clear documentation of the duration	2397	99%
Polypharmacy	859	36%
Multiple antipsychotics in a prescription	116	3%
Unable to determine polypharmacy because of illegibility	314	13%
Use of generic name	309	13%
Use of generic name undetermined because of illegibility	397	15%

a significant problem in adults, but with children and the elderly, for whom the dosage is different, documentation of age is particularly important.

The legibility of prescriptions was questionable in a significant minority. Of note, the criteria chosen for assessing legibility were strict. Nonetheless, it must be acknowledged that prescriptions are legal documents and therefore should be legible. In 13% of prescriptions, the dose of the medication was not specified clearly, which could have jeopardised patient care.

One conspicuous practice was the use of non-generic names of drugs (87%). One report from Nigeria has shown a similar pattern of practice (Akinola *et al*, 2008). This can incur unnecessary costs, as it limits the drugs to ones produced by the original pharmaceutical company. However, no financial analysis was undertaken in the present study.

A third of prescriptions used two or more psychotropic medications and in 3% there was more than one antipsychotic prescribed. Although polypharmacy is not recommended in day-to-day practice, lack of pharmacological resources, such as not having access to drugs like clozapine, means many patients who do not respond to initial treatments end up being on more than one psychotropic medication.

There was a high prevalence of concomitant use of anticholinergic drugs with antipsychotics. As most of the prescriptions were for conventional antipsychotics, one might have expected anticholinergic co-prescribing, which was indeed the case in 94% of anticholinergic prescriptions. What is perhaps more alarming is that 47% of atypical antipsychotic prescriptions included an anticholinergic drug, something not endorsed by the guidelines (National Institute for Health and Clinical Excellence, 2002) and in fact discouraged. In the case of first-generation antipsychotics, the prevalence of extrapyramidal side-effects is 10% for acute dystonic reactions (American Psychiatric Association, 1997) and 20% for Parkinsonism (Bollini *et al*, 1994). Therefore, the high percentage (74%) of co-prescribing anticholinergics with first-generation antipsychotics is surprising. This practice should be subject to regular review and patients should

not receive anticholinergics unnecessarily. It also increases the financial burden. This fact was confirmed by the chief pharmacist.

Conclusion

Considering the outcomes detected in this study regarding the quality of prescribing, there is a need for developing standards that are suitable for local practice. The standards chosen for this study were adopted from British ones and modified to suit local needs. They will not substitute for standards produced by local practitioners. This point was agreed when the results of the audit were presented at the Accra Psychiatric Hospital.

Having regular workshops for prescribers to update themselves with current standards of practice is worth considering. The hospital was in the process of organising one. Also, re-auditing the quality of prescriptions and regular feedback should be carried out, as this has been shown to have a beneficial effect. Ved & Coupe (2007) discovered after three audit cycles that 99.5% of the prescriptions in one mental health setting were legible.

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