Xmas™ (brand substitution not permitted)

Jonathan Bromley and Nicholas A Buckley

ABSTRACT

Objective: To study drug prescribing by brand name versus generic name in an Australian teaching hospital.

Results: Overall, 53% of drugs were prescribed by brand name. Brand names were preferred when they were shorter and easier to remember and spell, when there was only one brand on the market, and when the brand name ended in an x.

Conclusion: Doctors might be encouraged to prescribe generically if generic names were devised using the same principles marketers use for devising brand names.

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All independent sources of drug information use generic names, and prescribing by brand name has been a cause of a potentially fatal adverse drug event.[1] Brand name prescribing is common at our hospital, despite a hospital policy mandating generic prescribing. There has been little published research on when and why brand names are preferred in prescribing. Although pharmaceutical companies give a range of reasons for devising certain types of brand names (eg, a short name, a name beginning in x or z),[2] these appear to be based on unpublished market research. We explored the reasons behind the pharmaceutical industry's choice of brand names by looking for factors that appear to contribute to use of brand names in prescribing.

METHODS

We performed a retrospective study of prescriptions at the Canberra Hospital (December 2002 and February 2003). We reviewed the records of 600 admitted patients and recorded 1392 episodes of prescribing, using only data on the top 30 drugs prescribed in Australia, by volume.[3]

RESULTS

Overall, 53% of drugs were prescribed by brand name. We found little difference in rates of brand name versus generic name prescribing by unit to which patients were admitted (data not shown). However, we found substantial variation in the frequency with which different drugs were prescribed generically.

The reasons for choosing to prescribe by brand name instead of generic name appeared to be multifactorial. While a few doctors prescribed exclusively by either brand or generic name, the vast majority used a combination of both. A preference for using brand names was most apparent when these were much shorter and easier to remember and spell than the corresponding generic names. Strong associations were also found with brands that had clear market dominance and with those ending in x (Box).

Factors influencing choice of generic or brand name prescribing

	Brand name/ total scripts (%)	Odds ratio (95% CI)
No. of brands on the market		
> 6	284/600 (47%)	1.0
2–6	280/529 (53%)	1.24 (0.98–1.58)
1	176/263 (67%)	2.24 (1.64–3.07)
Length of generic name		
< 15 letters	538/1185 (45%)	1.0
> 15 letters	202/207 (98%)	48.6 (20.2–152.0)
Spelling of brand name*		
Not ending in x	123/197 (62%)	1.0
Ending in x	53/66 (80%)	2.45 (1.21–5.23)

* Only drugs with one brand were reviewed. ◆

DISCUSSION

Faced with a choice of writing either "irbesartan/hydrochlorothiazide" (29 letters) or "Avapro HCT" (nine letters), most doctors opted for the latter. Only a Queenslander or someone excessively influenced by advertising would request "XXXX", when they could be drinking "beer". However, if people had to ask for (and the waiter had to write) "*Humulus lupulus*–*Saccharomyces cerevisiae*–ethanol–sucrose–water", it is clear what would happen after a few orders. In the same way, more doctors might be encouraged to prescribe generically if generic names were devised with the same principles used by marketers for devising brand names.[2]

A common argument for prescribing by brand name is that it avoids patient confusion, as patients are most likely to use brand names for identifying drugs and usually have a poor knowledge of corresponding generic names.[4] However, this is irrelevant in the hospital setting, as a cheaper generic drug is often substituted anyway, and nurses administer the drugs.

Other issues such as the quality and bioequivalence of generic substitutes are often mentioned.[5] An understanding (as opposed to a concern) about bioequivalence was clearly not the issue in our study. Warfarin is the only drug on the list we reviewed for which bioequivalence between brands is a rational concern. However, of the 37 warfarin scripts reviewed, all were prescribed by generic name!

The x-factor is puzzling (perhaps a reflection that gender is usually unremarkable, but sex sells), as many drugs ending in x have had a stormy history — Bex (withdrawn due to analgesic nephropathy), Debendox (withdrawn due to birth defect litigation), Luvox (linked to youth suicide), Paradex and Capadex (removed from market in the United Kingdom due to possible cardiotoxicity), and Vioxx (withdrawn due to thrombotic adverse effects). In a recent review, six of 18 brand names with major United States Food and Drug Administration safety warnings ended in x.[6]

Perhaps an x should be regarded as a warning. It could be a graphical representation of how sales plummet as adverse reaction reports accumulate. Or it could simply be the final "kiss of death".

COMPETING INTERESTS

None identified.

AUTHOR DETAILS

Jonathan Bromley, MB ChB, Registrar
Nicholas A Buckley, MD, FRACP, Consultant Toxicologist and Clinical Pharmacologist
Department of Clinical Pharmacology and Toxicology, Canberra Hospital, Canberra, ACT.
Correspondence: jonathan.bromley@act.gov.au

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