How should we prescribe?

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Summary

Approved names, though often bulky, are preferable on balance to brand names because they identify drugs precisely by compound, often revealing derivation and class of action as well. Brand names at present have the advantage of identifying a preparation. This affirms bio-availability, if that is known, and safeguards the consumer's legal position. But both advantages are against drug defects. It should therefore be hoped that they will become obsolete through pharmaceutical progress, and so do not constitute a lasting reason to confound prescribing accuracy with financial expediency.

PRESCRIBING is a form of naming. Traditionally, and for practical reasons, names are given to ensure a precise identity, to show a lineage, or to establish some characteristics or reputation.

It is reasonable to adopt the same principles in naming remedies, since the objectives are the same. The doctor wants to be as precise as he can be in identifying the drug. The manufacturer will want to guarantee its true reputation for quality; a motive which the doctor should wish to share. Everyone will find it useful if the naming also reveals the drug's lineage, that it is a sulphonamide, or a phenothiazine for example. This has prominent gains in anticipating cross-allergenicity or other adverse effects.

So the complexities which are inevitable in naming remedies are just two; it is difficult to go on finding satisfactory names for large numbers of new remedies, and prescribing has more dimensions than naming people. A personal name has only one dimension; a prescription must have at least four, drug identity, the timing and route of its administration, and the quantity administered.

Having said this, it still seems right to use the same objectives in naming a remedy as in naming a person, with one vital ethical exception. The most important 'interested party' in prescribing is not the drug named, or its manufacturer or the doctor, though the last two have their proper interests. It is for the patient that the drug is primarily named.

Modern prescribing methods have achieved con-

siderable success reaching these objectives. The basic principle involves isolation of the distinctive parts of prescribing so that each can be considered separately, thus improving precision. The greatest compliment to the new system at the London Hospital was paid by the unwitting houseman who said 'I don't like your scheme, it forces me to think about my prescribing all the time'. Schemes like this have been shown several times greatly to reduce drug administration errors. However, such schemes are only aids to prescribing, clarifying means of a purely technical kind. They cannot fully influence untidy minds, nor are they an adequate defence against weaknesses in drug names. This is the second real problem; which names can people use and which should they use to fulfil these stated objectives?

Here, despite many good efforts, there are great frustrations too. Approved names have the overwhelming advantages of establishing chemical identity and revealing chemical lineage. Those are advantages that take a lot of beating. They fail to establish an individual product's reputation or rewards. They also fail in their clumsiness—who would say 'sulphamethoxypyridazine' if he could say 'Midicel'? Also alliterations, which arise from lineage, can bring serious hazards. We have noted occasions when chlorambucil was read as chloramphenicol, phenindamine as phenindione, and even atropine as adrenaline because the names were so similar and illegible handwriting was used. Hence block letters are used in most of the new prescribing schemes. Even with clear printing, however, there is a real problem in remembering official nomenclature with accuracy.

Then there is the problem of mixtures. They say that those whose parents are unmarried used to be guaranteed both identity and lineage by the prefix 'Fitz-' and to make matters more clear their coats of arms were also adjusted to ensure precision. For today's drugs the prefix 'co-' is used by an updated heraldic college. Again, most people prefer Septrin or Bactrim to designate these products of subterfugeous union, but there are some housemen who believe that 'Septrim' is the official name for either.

I do not believe that the bio-availability argument,

pressed as it now is by some, will make more than a transitory dent in the battlements of approved names. True, one product has scored an almost incredible success by turning a proven inhomogeneity of potency into an advertisement; indeed it seemed at the time, into an advertisement in whose free circulation even government was persuaded to share. But, looked at in another way, this was among the first public honest admissions of such a defect. Presumably every manufacturer of that compound will now make strenuous efforts to remove that defect in his own product, so annihilating any disadvantage inherent in that simple word 'digoxin', and any advantages any branded products might possess as well.

This leads naturally to a fuller consideration of brand names and their alleged advantages. I hope to show that in terms of patient care and prescribing accuracy—our agreed first interests—these names may really have priced themselves out of the market. Consider the objectives one by one. Precision of chemical identity and lineage are substantially lost. 'Penidural' may be one, or three very different penicillins, depending on succeeding words. So here is a name by which three drugs can masquerade as one. 'Parabal', described as 'detoxicated phenobarbitone' is certainly less toxic than ordinary phenobarbitone tablets. It contains only 10 mg of phenobarbitone per tablet (as the dihydroxyaluminium acetate) rather than the 30 mg of the standard preparation, so here is a name which obscures identity and potency together. The doctor who has painfully learned that phenylbutazone is an important cause of occasional, fatal blood dyscrasia, may not have his suspicions aroused by its close relative 'Tandacote'. Even amidopyrine has slipped back as Irgapyrine for a while, along with phenylbutazone in the mixture. So these are names which may confuse lineage as well as identity. And who would guess that Moduretic contains a first rather than a second generation thiazide unless he looked it up? Here is a name which seems to conceal identity, lineage and reputation.

Now look at brand name situations which do not involve mixtures and similar oddities but do reflect on the question of drug reputation. Figure 1 shows the rise and fall of the thiazide empire, drugs which have proved outstanding for efficacy and safety. The left hand side shows introductions, in each year, of brand names whether for a new or old drug, and novel compounds. The later peaks seem to be associated with increasing use for hypertension, and to long-acting compounds like polythiazide. The data are those available from the British market so far as I could ascertain. Remember that it is thought to be a free, competitive market. How fascinatingly precise is the relationship of brand to generic names

FIG. 1. The rise and fall of the thiazide empire, showing numbers of new brands and compounds marketed between 1958 and 1965. (●, new brands; ▲, new compounds).

Cumulative totals	Survivors	
	to 1962	to 1965
New brands:	17	21
New compounds:	9	13
ratio:	1.89	1.61
	at 1972	
	15	9
	1.67	

FIG. 2. Thiazides; cumulative total numbers of brands and compounds marketed up to 1962 and 1965 and the numbers still available in 1972.

—they are not in proportion, but clearly rise and fall in a simple exponential relationship. Now, it seems reasonable, to theorize that generation of new compounds and branded innovations will follow a natural growth and decay curve, and that it is a good thing when many novelties are thrown up so that the public can select those found to be most beneficial. However, if different brand names were truly related to clinical needs, it would seem likely that, by some evolutionary selection, only the most successful brands would survive. If so, the numbers of brand names should fall relative to the numbers of compounds with time.

Figure 2 shows the position 10 years after the acme of the thiazide epidemic. (These figures exclude all potassium mixtures.) Of thirteen new generic compounds produced then, nine still survive. Only a tenth, clopamide, appeared since 1965. The nine survivors have fifteen brand names, of which fourteen were alive in the original epidemic. In the original 'epidemic', thirteen new compounds received twenty-one brand names, a ratio of 1.61 names/compound. Of the survivors in 1972, nine drugs carried fifteen names, a ratio of 1.67 names/compound. So the ratio of brand to generic names had not fallen. Clearly, new brand names proliferate most at a time when most new compounds are appearing; but having proliferated they survive, the fall out being compounds and not names.

These very limited data can only suggest that factors other than the patient's interest, no doubt quite legitimate factors, determine brand numbers. I admit that I have not drawn a similar diagram for other classes of compound; that would be a worthy exercise. But it must be agreed that, even if it is to the consumer's advantage to have a number of brands from which to choose, he does not seem in fact to do so, at least with thiazides. Such evolutionary theories must stand or fall by the subsequent demonstration that a choice was or was not made in fact.

Other advantages of brand names to prescribers have been mooted, though I assume that it is now agreed that the balance of advantage to the patient lies in his knowing which remedies he takes and that

for most patients it is better not to use brand names which conceal the identity of their drugs from them. The use of brands to identify the less expensive drugs is an advantage if quality be guaranteed as well. Few doctors seem to think of this. Lastly, it happens in our financial system that some manufacturers who undertake expensive research look to brand names to assure future returns on their investment. However, this attitude stems from the financial arrangements; it is not dictated by consideration of good prescribing.

In summary, it seems that approved names win on points, though there are a few exceptions where it is wiser on balance to use a brand name. Convincing evidence that brands help the patient's interest is lacking. Perhaps the best solution would be to adopt a suggestion, not my own, that a sensible approved name be used, followed by a brief code which identifies the manufacturer. If brand names are at present needed to sustain research then society should consider other ways to do this which do not obfuscate prescribing, for at present I believe we 'do evil that good may come'. Can no method be found which safeguards prescribing in the patient's interest? I believe that the problem largely centres around the fact that the patients' clinical interest and the financial interests of others have become inextricably confused and that progress can only be made when these are disentangled. That is the direction in which I think we should move.