

What's in a Name?

■ BY ANITA SLOMSKI // INFOGRAPHIC BY FLYING CHILLI

Drug naming is serious business for the pharmaceutical industry. A catchy name is essential not only to compete in a universe of 12,000 drugs but also to linger in the minds of consumers and practitioners long after the medication goes off patent (about 10 years after it goes to market). What's more, the value of a drug brand can run into the millions. Here's the long christening process.

First, a drug is given a chemical name that reflects the compound's structure and is used primarily by researchers.

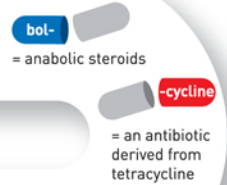
7-chloro-1,3-dihydro-1-methyl-5-phenyl-2H-1,4-benzodiazepin-2-one

(a.k.a. Valium)

The drug enters clinical trials.
Some companies apply for a name when the drug is still in the petri dish, while others wait until they have a potentially viable product.

The U.S. Adopted Names Council assigns a generic name that

- contains a recognizable stem that groups it with other drug families that have the same therapeutic action. For example:



Certain consonants are in high demand.



conveys speed (Zyban).

L,R,S

are soothing (Lunesta).



leaves a high-tech impression (Xanax).

P,T,K

connote effectiveness and power (Prozac).

The manufacturer develops a blockbuster trade name.

After its basic safety is established, the drug is tested for efficacy on 100 to 300 people.



- does not begin with H, J, K or W (those sounds are not present in some languages).



- is approved by the World Health Organization to ensure that it isn't too similar to generic names used elsewhere in the world.

Ideally, the name suggests what the drug treats so consumers will remember it.



- Lunesta, the sleep medication, conjures up the Latin word *luna*, for moon, and the Spanish *siesta*.



- Viagra, the erectile dysfunction drug, starts with *Vi* for vigor and vitality and rhymes with *Niagara* for a reason.



- Angeliq, a drug used to alleviate the effects of menopause, sounds feminine.



Deadly Snafus

The U.S. Pharmacopeia, which sets standards in quality, purity, strength and consistency for all drugs sold in this country, found that 1,470 commonly used medications have been implicated in errors because of confusion over their names. The confusion can result between:

- Generic names: A 19-year-old nearly died when he took clozapine instead of olanzapine, which are both drugs for treating schizophrenia.
- Brand and generic names: Pain medication Toradol could be harmful if confused with tramadol, also an analgesic.
- Brand names: A 50-year-old woman had severe complications after taking Flomax (which treats enlarged prostate) instead of Volmax (for bronchospasm).

From a list of hundreds to thousands of potential names, marketing teams choose favorites.



The names cannot

- imply medical efficacy. (Rogaine, the treatment for hair loss, was originally called Regaine, which was rejected as misleading.)

- promise more than they can deliver.

- suggest unapproved uses for the drug.

- be "of a fanciful nature." (The FDA nixed the name Bonviva; the osteoporosis drug then became Boniva.)

The FDA's Division of Drug Marketing, Advertising, and Communications evaluates the names.

The manufacturer may hire a medication safety consultant to ask doctors and pharmacists to write and speak the names (to determine whether they look or sound too much like those of other drugs).



- Lawyers conduct trademark searches in every country where the drug will be marketed, eliminating about 40% of the names.

Names that pass muster go to the Division of Medication Error Prevention Analysis, which does simulation studies of oral orders and written prescriptions and checks drug databases to rule out names that might be confused with those of other drugs.



Yet despite such care, some drug names end up being problematic (see "Deadly Snafus") and the FDA requires that they be changed.

Drugs with a new molecular formula—which are potentially more effective than previous ones—may get their trade names approved quickly, whereas other drugs may wait up to a year.