



Private prescription:

A thought-provoking tonic on the lighter side

Column by Raymond C. Rowe, AstraZeneca, UK

Please note that these are the personal opinions of the author and do not necessarily represent those of AstraZeneca.

An echo from the past – a vision of the future

It is customary at the beginning of each new year to look back and comment on the events of the preceding year and make some predictions for the future. I am not going to conform to precedent but to look back even further in time, 25 years ago to 1977, to an article in *The New England Journal of Medicine* [1]. Entitled *The Formulary Song* and written by Mark Cohen from the Pennsylvania State University College of Medicine (Hershey, PA, USA) it is, in essence, a list of 69 proprietary pharmaceutical preparations then on the US market, set in rhyming couplets intended to be sung to the tune of Gilbert and Sullivan's *I Am The Very Model Of A Modern Major General* from their operetta *The Pirates of Penzance*:

There's Aldomet and Atromid and
Antivert and Atarax
And Dexamyl and Donnagel and
Demerol and Dulcolax.
There's Tylenol and Tegretol and
Riopan and Regitine
And Pentofrane and Pavabid and
also Pyribenzamine.
Now if you're down there's
Dexedrine and Benzedrine and
Elavil,

And if you're up there's Librium
and Valium and Vistaril.
There's Thorazine and Stelazine for
calming schizophrenics with;
There's Seconal for sleeping and
for mania there's Eskalith...
There's Benadryl and Gelusil and
Placidyl and Peritrate
And Decadron and Parafon and
Sinequan and Sorbitrate
And Miltown, Motrin, Medrol,
Maalox, Myleran and Miradon
And Mycostatin, Micrinor,
Mandelamine and Mylicon.
There's Omnipen and Principen
and Tegopen and Torecan
And Versapen and Betapen and
Pyopen and Percodan.
There's Robitussin, Garamycin, also
Butazolidin
And Furadantin, Coricidin, even
Triaminicin.
There's Dimetane and Dimetapp
and Dymelor and Dimacol
And Diuril and Dialose and Diamox
and Disophril.
There's Darvocet for headaches
when you really want to stay at
home,
But if the other end is sore, the one
you need is Protofoam...

I know you must be weary and this
song is getting pretty grim
With all these pharmaceuticals
from Actifed to Zylloprim.
But just imagine what would
happen if I tried to fan the flames
By starting over once again and
using all generic names!

When I first came across this last year, it fascinated me, not only because of Cohen's clever use of the brand names to obtain the right rhyme and rhythm, but also the fact that it provided a snapshot of the products then available on the US market. Two questions immediately came to mind: first, are the products listed being actively marketed today and, second, where Cohen has mentioned specific conditions, are those products listed used today?

Little appears to have changed much over the past quarter century.

A careful perusal of the American Drug Index for 1977 and 2000 [2,3] revealed no reference to Protofoam and that of the 68 products left, a further seven, Pentofrane (desipramine hydrochloride), Benzedrine (amphetamine sulphate), Butazolidin (phenylbutazone), Mandelamine (hexamine mandelate), Pyopen (carbenicillin sodium), Tegopen (cloxacillin sodium) and Versapen (hetacillin potassium) are no longer being actively marketed.

An interesting feature of the list is that only seven have changed manufacturers over the past 25 years: Elavil (amitriptyline hydrochloride) has changed from Merck Sharp and Dohme to AstraZeneca; Dialose (docusate sodium) has changed from Stuart Pharmaceuticals to J&J-Merck; Furadantin (nitrofurantoin) has changed from Eaton Laboratories to Dura Pharmaceuticals; Dulcolax (bisacodyl) has changed from Boehringer Ingelheim (Ingelheim, Germany) to Novartis

Consumer Health; Mycostatin (nystatin) and Principen (ampicillin) have changed from Squibb to Apothecon; Actifed (tripolidine hydrochloride and pseudoephedrine hydrochloride) has changed from Burroughs Wellcome to Warner Lambert Consumer Healthcare.

The remainder of the products have either stayed with the original manufacturers or are now marketed by new companies formed by mergers. Of course, many of the original manufacturer's names, along with their distinctive trademarks, have disappeared without trace. Who could forget the unicorn of Burroughs Wellcome?

Regarding the use of the products, little has changed. Although Elavil (amitriptyline hydrochloride) is still widely used in the treatment of depression, Dexedrine (dextroamphetamine sulphate) is now only used in attention deficit hyperactivity disorder. Librium (chlordiazepoxide hydrochloride), Valium (diazepam), and Vistaril (hydroxyzine palmoate) are all still used as anxiolytics. Thorazine (chlorpromazine hydrochloride) and

Stelazine (trifluoperazine hydrochloride) are still used in the treatment of psychotic disorders and Eskalith (lithium carbonate) is still used to treat mania. Seconal (secobarbital) is still used in specific cases of insomnia and Darvocet (propoxyline napsylate) is still used to treat moderate pain, although not general headache.

Of course, because of the small sample size, it is impossible to extrapolate and predict whether the trends seen are indicative of the whole picture. However, with the exception of the changes in companies' names because of mergers little appears to have changed much over the past quarter century. The old products are still being used; although a detailed study of the market will be needed to determine the use of old products compared with new products. There is also no reason to assume that the trends will continue into the future, although many pundits believe that further consolidation within the pharmaceutical industry is inevitable, and that to maintain growth companies will have

to bring a significantly larger number of new products to market.

All of this belies the fact that Cohen has put together a clever, interesting lyric that is technically correct and enjoyable to sing! Perhaps someone should take the plunge and publish a new lyric based on some of the modern products for someone else to comment on 25 years later!

References

- 1 Cohen, M.L. (1977) The Formulary Song. *New Engl. J. Med.* 296, 520
- 2 Billups, N.F. and Billups, S.M. (1977) *American Drug Index*, Lippincott
- 3 Billups, N.F. and Billups, S.M. (2000) *American Drug Index: Facts and Comparisons*, St Louis (Accession no: s655636005)

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