

## Scientists Respond to Tylenol Crisis

Surely, all of the writers who prepare "year-end wrap-up articles," in which they list and summarize the big news stories of 1982, will include the Tylenol incident and related product tampering as one of the most notorious events of the year.

The episode constituted a major "happening" just in itself. But beyond the effect it had on the victims and their families and friends, the tragic incident has had a profound impact that is far broader. For example, it is little exaggeration to say that (a) it has affected human behavior for many, if not most, Americans; (b) it has shaken public confidence in the quality and reliability of many common products; and (c) it has revolutionized the packaging of consumer products and particularly nonprescription drug products.

Consequently, considerable attention has been devoted to the reaction and performance of the health care professions in the days and weeks following the initial Tylenol news reports.

Almost without exception, all those involved—from individual practitioners to the overall drug industry—behaved admirably. Virtually everyone kept "calm, cool, and collected," as per the standard recommendation for dealing with emergencies. Suitable advice, in keeping with the degree of information available at the time, was generally given by pharmacists and other practitioners. Panic was avoided despite the fertile conditions that prevailed.

The American Pharmaceutical Association issued a statement entitled "The Tylenol Issue in Perspective," and it seemed to go a long way toward helping to generate rational thinking and sensible reaction. Many other organizations undertook comparable or analogous efforts.

But what about scientists? Where were they? What did they do? And how well did they perform?

To date, we have not heard nor read of any effort to analyze or assess such performance by the scientists involved. Hence, it seems timely and appropriate to do so in this column.

Initially, it was medical scientists who made the diagnosis and clinical laboratory scientists who confirmed cyanide as the causative agent. Unquestionably, this prompt detective work was instrumental in holding down the number of deaths by enabling the authorities to issue bulletins and warnings expeditiously and for the press and broadcast media to communicate that alarming information so quickly on a nationwide basis.

Secondly, scientists effectively participated in the testing and analytical phases of the massive screening and monitoring program to assess the extent of the tampering in terms of geography, product line, manufacturers involved, and so on. No drug, cosmetic, or packaged food distributor could feel secure in those early days of the tragedy, and the responsibility for decisions as to what testing was needed, as well as the burden of conducting the testing itself, fell squarely on scientists in industry. Similarly, comparable decisions and follow-up testing were

expeditiously handled by regulatory scientists in government service.

Thirdly, scientists quickly and correctly pointed out that any effort to make products "tamper-proof," or to require such product packaging through legislation, was doomed to failure. They convincingly explained that it is impossible to achieve such a result in any way that approaches being pragmatic.

Finally, scientists and engineers have quickly come up with workable designs and the necessary technology to implement them, whereby millions upon millions of individual packages can be made tamper-resistant—and at an extremely high level of reliability.

Hence, scientists not only participated and responded in this time of crisis, but they have made critical contributions in minimizing the tragedy itself as well as in proceeding toward workable, prompt, and effective solutions to avoid the possibility of any reoccurrences.

Indeed, through it all, we are aware of only one disappointing action on the part of the scientific community.

A prominent toxicologist sent off a letter calling "for legislation restricting and controlling the availability of potent poisons." But since (a) the letter was personally addressed to U.S. President Ronald Reagan, (b) it urged the President "to appoint a Presidential Task Force to study the situation and recommend appropriate restrictive legislation," and (c) it was publicly distributed with a news release to the press, we suspect that it was done more as a grandstand publicity play than as a serious recommendation.

Cyanide salts alone are widely used in many industrial processes, as well as in medical, scientific, and manufacturing laboratories. And beyond cyanide, there are numerous poisonous substances used to produce common, everyday, important products; in many instances, these poisonous substances may be an ingredient or even the sole ingredient of those products. Household cleaners—such as bleach, ammonia, and drain cleaners containing sodium hydroxide—are just a few examples. Garden products such as pesticides, herbicides, and fertilizers; and fuels such as gasoline, kerosene, and methyl alcohol are several others.

Obviously, it is totally impractical to restrict and control all poisons. The approach being implemented by the Food and Drug Administration with regard to requiring tamper-resistant packaging seems to be well conceived and carefully balanced. And again, it was scientists—this time government regulatory scientists—who assisted the legal people in drafting the proposed regulations.

The bottom line is that all scientists can be proud of the contributions their scientific colleagues have made in resolving one of the major crises of recent times.

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