

(5) College of American Pathologists 1977 Special Toxicology Set T-C Laboratory Survey Specimen T-14.

DAWN DEATH DATA

We have been asked to comment on DAWN death data. (1) We can only comment on material available to us. It appears that a great deal of the data is generated on "mentions" of drugs. In our experience drugs mentioned by emergency room personnel or by medical examiners which we assume have been mentioned by the patient or others may be entirely different from those found by toxicological analysis. As for the medical examiner DAWN data, it is our opinion that it is hopelessly confused in the "Drug Induced" or "Drug-Related deaths by naming drugs which may be present but may not be enough to cause death or to be a contributory cause. This is further complicated by allowing a Cause of Death Determination to be supported by factors other than "Toxicological Lab. Report" (p. 8 DAWN VI). The data would be meaningful if it was based on the cause of death as certified by the medical examiner where the determination was based on the finding of a toxicologically significant concentration of substance in the body of the deceased. Table 4.7 page 57 of DAWN VI indicates that there were 308 diazepam-induced deaths and 209 codeine-induced deaths. A national survey reported that 2 deaths of the 1239 "diazepam-related deaths" surveyed "could be substantiated as deaths resulting from the actions of diazepam and diazepam alone." (2) One of these was in Canada, the other was in the United States. In North Carolina in the past 5 years we have 2 deaths certified as diazepam deaths and 3 deaths certified as codeine deaths.

Another problem with the DAWN data is graphically illustrated in an article where codeine was blamed for "16.6 Drug-Related Deaths per Million pills" and propoxyphene was blamed for 1090 deaths or "1.6 Drug Related per Million pills." (3) We believe that there were far fewer than 420 codeine deaths. Using data generated by the same company there were 2 codeine-containing generic preparations which totaled 1,431,000 prescriptions. (4) Tylenol with codeine was ranked seventh in prescription frequency and Empirin compound with Codeine was ranked 14 with Dalmane being ranked 13. The DAWN data projects 12,795,000 Dalmane prescriptions. Estimating at least 13 million prescriptions for Tylenol with codeine and 10 million for Empirin Compound with Codeine for a total of 23 million codeine-containing prescriptions, using an estimate of 36 pills per prescription would give a total of 828 million pills or 0.5 deaths per million pills. Our projections would mean that rather than "16.6 codeine-related deaths per million pills" there would be about 1/30th that number or 0.5. It is our opinion that more than 23 million codeine prescriptions are dispensed and that less than 100 deaths are attributable to codeine. The company that produced the statistics should be able to confirm or correct our estimates.

It appears that the deaths related to codeine were attributed to codeine "pills." Most prescriptions for codeine are for tablets of codeine combined with aspirin or acetaminophen which were not included but represent about 98 percent of the codeine dispensed. Had this been done in the case of propoxyphene the 1.6 propoxyphene related deaths per million "pills" would have been about 16.

In summary the DAWN data and interpretations of it make it appear that there are many codeine deaths and that the death rate per million doses is very high and that codeine is about 10 times more lethal than propoxyphene. We find in North Carolina that there are about 75 propoxyphene deaths to one codeine death.

From the survey it has also been estimated that there are about 880 "Valium" related deaths. In our opinion deaths due to Valium are very rare and in our opinion should be 10 or less.

In the one year interval May 1976 to April 1977, 10 marihuana related deaths have been estimated. We know of no documented death due to marihuana in the United States at anytime.

REFERENCES

- (1) Project Dawn VI, May 1977-April 1978, I.M.S. American Ltd. Ambler PA.
- (2) Finkle, B. S. and McCloskey, K. L., The Role of Diazepam in Postmortem Medico-Legal Investigation—Center for Human Toxicology—Salt Lake City, Utah. November 1977.
- (3) DAWN Data—Drug Related Deaths Tallied, U.S. Journal of Drug and Alcohol Dependence 2:2, April 1978.
- (4) 1977 Top 200 Drugs. Pharmacy Times, p. 41-48, April 1978.