SURVEY OF THE PRESENT-DAY PRESCRIPTION.*

BY FREDERICK LASOWSKY.[1]

In undertaking this survey, it was our purpose to determine the answer to the following questions:

1. What are some of the writing habits and peculiarities of our physicians?
2. Do prescriptions calling for Vitamins, Barbiturates and Glandular Products constitute a significant proportion of our practice?
3. How frequently does the proprietary product appear on the "present day prescription" compared to the official ingredient?

The results which are presented were compiled from a survey of 5000 new prescriptions filled by G. Fox & Co. of Hartford, Conn. during the months of May and June 1938. Copies of prescriptions originally filled at other drug stores, and prescriptions that were telephoned in by the physician were not considered in this survey, since it was desired to study the writing habits of the physicians themselves.

The prescriptions studied were written by approximately 350 physicians residing in Connecticut, Massachussetts, Rhode Island and New York.

Some of the facts determined are of casual interest only; others are of considerable significance. In the former category, for example, we may place the discovery that over 7% of our prescriptions were written in pencil. This, of course, is undesirable, since the handling of the prescription may cause smudging and render it illegible.

It is generally understood that Latin is the universal language of the prescription. Yet, in less that one-fourth the prescriptions studied, was Latin used to prescribe the ingredients. In only one out of five instances was Latin employed in writing the directions for the patient, and in these cases it was mostly simple, abbreviated Latin. The great majority of prescriptions was written in English or in a mixture of English and abbreviations.

An interesting fact revealed by the survey is the overwhelming preference shown by physicians for the apothecary system of weights and measures. For several years now the metric system has been advocated as the more exact. It is admitted to be much simpler to calculate percentage solution in the metric system than in the apothecary system. Medical Journals reveal the cubic centimeter and the gram as the preferred terms in which to express the results of scientific experiments. Yet, 87% of the prescriptions were written in the apothecary system.

It is important, from a legal point of view at least, that every prescription bear the name of the person for whom it is intended, the date on which it is written and the signature of the physician. Our survey revealed that many physicians were careless in this regard. The patient's name appeared on only half the number of prescriptions, the date was written even less frequently and on approximately 20% of the prescriptions, the full signature of the physician was lacking.

In making this study, we thought it a matter of considerable interest to the profession to determine the type of prescription which the present-day physician seems to prefer. The pharmacist has often been referred to as a "pill roller." This

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may have been true in the past, but as far as we are concerned, the title may no longer be justifiably applied. In 5000 prescriptions not a single one directed "mix et ft. pilulæ." What type prescription then, does the physician write most frequently? The preferred media, it appears, is the liquid. 43.1% of all the prescriptions studied were found to be liquids. Of this group approximately 60% had to be compounded by the pharmacist.

Tablets and pills were found to constitute 32% of our prescription volume; capsules accounted for 11.4%; ointments for 6.8%; powders for 5.7% and suppositories for slightly under 1%. Only one prescription in 400 called for a suppository that had to be manufactured by the pharmacist; approximately half the ointments and the powders had to be compounded; and three-fourths of the capsule prescriptions were found to call for items that required no compounding. This latter condition is partially explained by the fact that many of the proprietary vitamin preparations which are being prescribed with increasing frequency appear in capsule form. We believe the figures to be significant in that they indicate the path along which present-day medicine is proceeding.

It is generally accepted that medical science has made remarkable progress during the past few years in the fields of vitamin and of hormone therapy. It has been claimed by some that preparations of this class now contribute over 25% of our dollar volume. In our survey we attempted to determine the proportion of prescriptions which called for ingredients glandular or vitamin in nature. We discovered that approximately one out of every nine prescriptions called for a vitamin product and one out of every eighteen contained a glandular ingredient. Thus it is seen that 16% of our total volume is contributed by preparations which were seldom, if ever, prescribed ten or fifteen years ago. Since most of these vitamins and glandular products are rather expensive, it may be safely estimated that they constitute at least 20% to 25% of our prescription dollar volume.

During the last five years or so the market has been flooded with many derivatives of barbituric acid. Several states have considered the unregulated sale of barbiturates a menace to the public health and have enacted legislation preventing their sale without a prescription. Connecticut has no such law at present. It would be interesting to determine what proportion of our barbiturate sales at present are made over the counter and what per cent are sold on prescription. In this survey, we simply determined the proportion of prescriptions which called for a member of the barbital group, either alone or in combination with other ingredients. 11.4% of all prescriptions were found to fall into this classification. This percentage will undoubtedly be increased considerably when the sale of barbital compounds is restricted to prescriptions only.

Within recent years, there has been considerable concern over the extent to which proprietary products have replaced official preparations. Several methods have been suggested by which the physician might be induced to prescribe official ingredients rather than proprietary compounds. Several years ago the National Drug Store Survey found that proprietaries accounted for 20.5% of the total number of ingredients used in filling prescriptions. The results of our survey showed, however, that proprietaries constituted 32% of the total. The constant development of new preparations by the drug houses and the present vogue of vitamin therapy partially explain this situation.

It is hoped that our survey has helped reveal some of the preferences and peculiarities of the present-day prescription writer. If the facts we have brought out are not entirely a source of satisfaction, they at least point in what direction professional pharmacists must bend their efforts to secure the desired improvements.

ADDITIONAL NOTES ON TRAGACANTH JELLY.*

BY ADLEY B. NICHOLS.**

At the 1937 Convention of the AMERICAN PHARMACEUTICAL ASSOCIATION, the writer reported on the "Evaluation of Tragacanth and Tragacanth Mucilages,"[1] in the hope that a means of establishing uniformity in the viscosity of Ephedrine Jelly might be accomplished eventually.

The N. F. VI formula for the jelly calls for 1 per cent of tragacanth but various operators have reported unsatisfactory results with the final product, the general opinion being that the jelly is too thin. When the product was first proposed with a larger amount of tragacanth included in the original formula, mixed criticism resulted, some stating that the product was too thick, while others claimed it was too thin and again some considered it to be of about the proper consistency. The cause of the difficulty obviously was to be found in the variety or lot of tragacanth being used to produce the jelly, poorer varieties giving weak gels while the better varieties gave correspondingly firmer gels.

In the previously mentioned paper a method of evaluating tragacanths was presented, whereby the speed of a steel ball through a given column of the gel was determined. The time required for the ball to travel its course was interpreted in terms of relative tragacanth value, the results of a series of experiments with each variety of tragacanth being plotted, dilution *versus* the log of the seconds of time. Certain lots of tragacanth were seen to be undesirable according to the results obtained, while for the others it seemed entirely practical to refer to the curves on the graph and from these to calculate the necessary amount of any tragacanth to use for the preparation of a gel of predetermined consistency.

During the course of the original experiments it was recognized that with age, tragacanth gels became more firm, a matter for consideration if uniformity was to be established. In a series of experiments designed to determine the effect of age upon viscosity, jellies were made with five different lots of tragacanth, the amount of each tragacanth used varying according to its own graph curve, so that all jellies would be of nearly the same consistency or viscosity. Approximations were made usually to the nearest unit of five in terms of water ratio, with the final result that the first ball readings of the finished products were recorded as: 33, 40, 43, 39 and 28 seconds, comparatively close for such a relatively low reading. Readings were then repeated at intervals, first of a few days each, then monthly and later of longer periods.

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[1] JOUR. A. PH. A., 26, 823 (1937).