

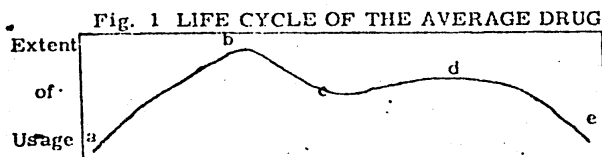
DIVISION OF HOSPITALS
OPERATIONS MANUAL

ATTACHMENT C4.1.2a

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The Council on Pharmacy and Chemistry of the American Medical Association has stated this situation so clearly we would like to quote from one of their writings ¹ on the subject, "A fundamental requirement to successful treatment is that the physician have the clearest possible understanding of the remedial agents that he prescribes. This is difficult at best, and is rendered increasingly more difficult with multiplication of agents that are nearly, but not quite equivalent. Each may show minor differences, which may or may not be important, but which are difficult to learn if he spreads his experience too widely, and, therefore, too thinly. It were much, much better for medical practice if modifications which do not offer substantial advantages were shunted into the discard before they see publicity and add to the confusion of the practitioners."

The Public Health Service firmly believes that a better job of successfully treating the sick can be done if our therapeutic armamentaria are reduced to carefully selected, indispensable, tried and true drugs which we learn to use well. The fact that our hospital pharmacy committees have developed formularies, we believe indicates the existence of a felt need for bringing order out of a chaotic situation. In preface to specific comments on criteria and methods of selection of drugs, we believe that it might be helpful to first try and visualize the life cycle of the average drug. We attempt to portray this diagrammatically in Figure 1.



The drug is introduced at "a." It becomes quite popular and reaches a peak of usage at "b." Some of its deficiencies become apparent and physicians become overly cautious, dropping its use to an abnormally low level at "c." With further experience the drug's use later rises to an optimal level at "d." Finally, as better agents are developed, it proceeds to obsolescence at "e." This cycle is quite rapid with some drugs and very slow with others. It took quinine 323 years to approach "c." On the other hand, sulfanilamide ran its course in a decade. Although some fundamental agents, like sodium chloride and dextrose, may never become truly obsolete in the practice of medicine, this diagram does serve to help one visualize the usual dynamics in the field of drug therapy.

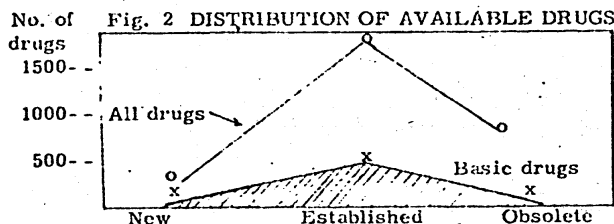


Figure 2 is presented in an effort to visualize another important aspect of clinical pharmacology. In this we attempt to illustrate the current status of all drugs available at one particular time by classifying them arbitrarily into three groups: "New," "Established," and "Obsolete." A random sample of items listed in N. N. D., U. S. P., N. F., A. D. R., and the Blue Book suggested that a reasonable distribution might be 5% "New," 63% "Established," and 32% "Obsolete." Applying these percentages to our guess of 2500 as the number of drugs now available, the points shown in Figure 2 are established. In view of the sources we used in presenting this diagram, the value shown as "New" is probably too low and that for "Obsolete" too high. For example, it was reported some years ago that 88 firms placed a total of 170 new single chemicals on the market in five years. To visualize the abundance of "Established" and "Obsolete" items available, we show the distribution of the 263 drugs we consider basic ² as worked out by Pharmacy Committees in U. S. Public Health Service Hospitals and Clinics in 1953. The ratio changes little over the years.

¹/ Journal of the American Medical Association Vol. 139, No. 6, February 5, 1949.

²/ The term basic is used as a synonym for fundamental, essential, point of departure, foundation, indispensable.

DHO TRANSMITTAL LETTER NO. R-207

9/20/65