

The weight used in constructing the index is the average dollar volume for two consecutive years ending with the year of reference. Thus a product is on the market at least two years with substantial dollar volume in prescriptions before it is then included in the index for the second year.

The result is that only products which become established in the market can be included in the index. Initial exploratory prices during the introductory period for the product would not generally affect the index. Indication of the rapid changes that have taken place in drug usage may be seen from the fact that only 27 of the original 99 products are still included in the index. This is considerably less than 10 percent of the total number of products included in the 1966 index. An index based on these 27 items at 1949 weights would stand at 105.9 in 1966. This, however, would be a most unrepresentative list of the drug items in use today. Such an index would be no more an index of drug prices today than an index based on horse and buggy items would be an index of transportation today. It should be obvious that failure to recognize and take account of such changes on a current basis when constructing the price index would result in rapid obsolescence of the index. Accordingly, the list of products and their weights are reviewed each year to make sure that no important item is excluded from the index and to provide for the retirement of drugs that have declined to insignificantly low levels of usage. I note that the Commissioner of the Bureau of Labor Statistics in recent testimony before this Committee stated that the BLS has recently adopted this policy for its drug index.⁴

Chain indexes

Whenever new items are added to the index or old items are deleted, or whenever the relative importance of the included items changes, the comparability of the index with the preceding period diminishes. To avoid any distortion that might follow from such changes, and to make sure that the only movements in the index are the results of price changes, a new index series is started at the time of each change. This series has, for both the current period and the immediately preceding period, an identical list of commodities with identical weights. Whatever percentage change is shown by the new series is applied to the index through the preceding period in order to measure the cumulative changes in prices for the life of the index. This procedure is called linking or chaining, and the index series is referred to as a "chain index". In this way an index series reflects price changes and price changes only. This is a standard procedure that is followed in all indexes to preserve continuity. To illustrate in a simple fashion what is achieved, let us assume that our hypothetical index as of 1965 stands at 90.0. In 1966, a new list of products (which normally would contain an overwhelming proportion of the products in the 1965 index) is compared with the prices for this identical list in 1965 and it is found that the average price has declined 1.0 percent. The new index for 1966 would then be equal to 90.0 (1965 index) reduced by one percent (of 90.0) or 89.1. Thus, we say in effect that prices that, up to 1965, had declined 10.0 percent (to 90.0), had declined an additional 1.0 percent in 1966 from the 1965 level, making the total decline in the index 10.9 percent (to 89.1).

Sub-indexes of the PMA price index

In addition to the PMA Index of Wholesale Prices for Ethical Pharmaceuticals, indexes for various reclassifications of relevant data are available. These are:

1. Therapeutic Group Indexes;
2. Indexes for the group of items covered by patents and those products without patent protection;
3. An index of drugs used by those who are 60 years of age and older.

What the PMA indexes show

In the seventeen years covered by the PMA Index of Wholesale Prices of Ethical Pharmaceuticals there has been a total decline of 14.1 percent. Declines have occurred in eleven of the seventeen years, increases in four and there have been two years with a change of less than 0.05 percent. Of the seventeen therapeutic groups, ten have shown increases and seven have had decreases since 1949. However, the declines of more than 50 percent that have occurred in two of the most important groups, antibiotics and hormones, more than offset increases of much smaller magnitude in less important groups.

⁴ Statement by Commissioner Ross, op. cit.