

## **Distributions of prescription drug expenses based on the Medicare Current Beneficiary Survey**

Distributions of Medicare beneficiaries' prescription drug expenses provide information for analyzing and projecting payments under the new Medicare Part D drug benefit. The information provided may give additional insights into the drug expenditure patterns of Medicare beneficiaries. These distributions are consistent with the Office of the Actuary's projections of the cost of the drug benefit.

The 1998 Medicare Current Beneficiary Survey (MCBS) was the base data used to estimate the cost impact of the drug benefit under the Medicare Modernization Act (MMA). For more information about the MCBS, see <http://www.cms.hhs.gov/MCBS/>.

To estimate the impact of the MMA, the data in the MCBS was projected forward to 2006 and adjusted to fit the provisions of the MMA. The drug benefit provisions were modeled for each person in the MCBS. The following tables display the distributions of drug expenditures at selected steps in the adjustment/update process.

Due to data limitations in the MCBS, individuals in managed care or in institutions were excluded from the distribution tables. The distribution tables are based on the remaining 9,652 MCBS sample observations.

The drug expense distributions are shown for selected dollar intervals. To avoid empty intervals, wider intervals are used for higher drug expenses.

Since only a relatively few beneficiaries in the MCBS have very high drug expenditures, there is greater variation and uncertainty associated with the frequency of such expense levels.

The distribution in table 1 is based on unadjusted drug expenses in the 1998 MCBS.

The table 2 distribution includes an adjustment for survey under-reporting of drug expenses in the MCBS. The degree of drug expense under-reporting is assessed by comparing an individual's reported Medicare Part A and B costs with the known level of such expenditures from CMS administrative records. The relationship between a beneficiary's drug expenses and his or her demographic, health status, and other characteristics is estimated for beneficiaries who accurately report their Part A and B costs. This relationship is then used to adjust total drug expenditures for individuals who do not report their Part A and B costs accurately.

Table 3 includes the under-reporting adjustment and a projection of drug expenditures from 1998 to 2006. For this purpose, each beneficiary's drug expense level is increased by the cumulative growth from 1998 to 2006 in per capita drug costs as estimated for the 2000 National Health Expenditure Accounts. The notes to table 3 show the year-by-year estimates for these increase factors. Additional information on the historical and projected health accounts is available at <http://www.cms.hhs.gov/statistics/nhe/>.

Table 4 further includes an adjustment for the level of price discounts and cost-management savings estimated to occur under the MMA, relative to the corresponding savings occurring in the MCBS data. Under the MMA, such savings are estimated to be 15 percent in 2006 (growing to 25 percent in 2011). The unadjusted MCBS data reflect actual utilization of prescription drugs and estimated price levels that vary by beneficiaries' insurance status. Individuals with no drug insurance coverage, for example, would generally have paid retail-level drug prices. Conversely, drug prices for Medicare-Medicaid dual beneficiaries reflect substantial price discounts.

The drug expense amounts in table 4 are also adjusted to reflect the estimated impact of the MMA on overall beneficiary drug expenses. Numerous studies have shown a relationship between an individual's demand for health care services (including prescription drugs) and the level of cost sharing that the person must pay under their insurance coverage. For example, a reduction in out-of-pocket costs for drugs, due to more comprehensive insurance coverage, would generally be associated with an increase in total drug expenses. This effect is often referred to as "induced utilization due to insurance." The notes to table 4 summarize how this adjustment was made.

These distributions are based on a sample of beneficiaries with resulting reporting errors. Beneficiaries in managed care plans or institutions are not included. As noted above, the sample data were extensively adjusted; including adjustments for under-reporting, inflation, variation in payments by different payers, drug plan savings, and insurance effect. Accordingly, these distributions should be used cautiously, with full awareness of their estimated nature and inherent limitations. In particular, although these distributions will provide information not otherwise available about Medicare beneficiaries' prescription drug expenses, users should not rely exclusively on these distributions for pricing determinations.

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