# Projected Cost Analysis of Potential Medicare Pharmacy Plan Designs <br> For The Society of Actuaries 

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## I. Executive Summary

One of the most significant current public policy issues in health care is the lack of coverage for prescription drugs under the Medicare program. The United States Congress is in the process of evaluating several different proposals. As part of this evaluation process, it is critical for Congress and the public to understand the cost implications of the proposals, both in the current year and in the long-term.

The Health Section and Health Practice Areas of the Society of Actuaries (SOA) approved and funded a research project to study the costs of a wide range of pharmacy plan designs for the Medicare population for the benefit and use of the SOA and their members. Reden \& Anders, Ltd. (R\&A) was retained to provide this analysis.

This report contains three types of cost estimates:

- Net benefit cost estimates per member per month (PMPM) for 28 benefit plan designs. These cost estimates, expressed for calendar year 2003, range from \$36 PMPM to \$114 PMPM. Half of the plans fall in the range of $\$ 60$ to $\$ 90$ PMPM. For comparison purposes, the current Medicare supplement pharmacy plan design estimates are \$50 PMPM for Plans H and I and \$62 PMPM for Plan J. (Please refer to Exhibits A and B.)
- Continuance table data. This information provides insight into the distribution of an individuals' annual pharmacy cost and of pharmacy usage by the cost of the prescription. This data can be used to estimate costs of additional plan designs beyond those studied in this report. (Please refer to Exhibits C and D.) For example, 20\% of the members account for $56 \%$ of the total claims, and $50 \%$ of the members account for $90 \%$ of the total claims. $11 \%$ of the members have no prescription drug claims.
- Projected annual costs to the government over 10 years for two selected plan designs. (Please refer to Exhibits E and F.)
- The total cost of drug benefits without member cost sharing or premium payment is estimated to be $\$ 151$ PMPM in 2003. The projected cost over the 10 years is $\$ 1.8$ trillion.
- The first plan is Scenario 12, which has commercial type copayments (see Exhibit A for a detailed description). The 2003 PMPM net cost is estimated to be $\$ 80$. The net projected cost over the 10 years is almost $\$ 1.0$ trillion, assuming $17.4 \%$ annual trend, with the government bearing $54 \%$ of the total cost.
- The second plan is a plan submitted by House Democrats as House Bill 1199, with coverage reflecting a $\$ 100$ deductible, $20 \%$ coinsurance, and a $\$ 2,000$ OOP maximum. The 2003 PMPM net cost is estimated to be $\$ 114$. The net projected cost over the 10 years is $\$ 1.35$ trillion, net of the proposed $\$ 25$ member premium, or $\$ 1.47$ trillion gross the $\$ 25$ member premium, assuming $17.4 \%$ annual trend. The government bears $68 \%$ of the total cost.


## Executive Summary (cont'd)

- Different cost scenarios can be extrapolated from the results in this report by assuming different trend factors, rebate adjustments, or a different mix between brand and generic prescriptions. For more information on these extrapolations, please refer to the Results Section of this report.

The remainder of this report describes the data and models used in our analysis, as well as the underlying assumptions and results. We have also provided a summary of the limitations of our report. One of the key limitations of the analysis is that we have not adjusted any of the results to reflect potential behavioral effects on prescription drug utilization due to varying member cost sharing provisions or other benefit design features. We highly recommend that readers of this report review the Limitations of the Analysis Section of this report to understand more completely the analysis and conclusions.

This report has been requested and funded by the Health Section and Health Practice Areas of the SOA and is available to all SOA members. Readers are cautioned to review the underlying modeling methodology and any limitations of the analysis as outlined in this report.

## II. Data and Methodology

We employed the R\&A Prescription Drug Pricing Model to perform this analysis. The detailed database in this model was built from prescription drug claims data provided by Medicare managed care contributors and contains experience for over 50,000 Medicare+Choice (M+C) members. It only includes data for members with unlimited pharmacy benefits in order to reflect the utilization of prescription drugs which would be expected under plans with no annual benefit maximums. However, it should be noted that member cost sharing could vary quite widely in the unlimited benefit plans included. No explicit adjustment has been made for the impact of member cost sharing on utilization levels, either in the underlying data or for the various benefit plans priced.

We did adjust this data, where necessary, by reviewing aggregate comparative statistics compiled from public and proprietary sources and other data sources such as various published studies and other general information maintained by the R\&A Research Services unit. For prescription drug cost data, the model relies on the most up-to-date Average Wholesale Price (AWP) information from First Databank.

To estimate the cost of a particular benefit plan, the R\&A Prescription Drug Pricing Model readjudicates historical claims at the National Drug Code (NDC) and member level. This method tracks each prescription and determines how much the member pays for it versus how much the plan pays for it. This pricing approach more accurately estimates the impact of deductibles, annual maximums, catastrophic benefits and cost sharing that exceeds the cost of a particular prescription, versus sole reliance on summarized continuance table data. The $50,000 \mathrm{M}+\mathrm{C}$ claims data described above was loaded into the R\&A Prescription Drug Pricing Model for purposes of pricing the benefit plans for this study.

Brand name drugs are assigned into two tiers by reviewing the underlying data. "Brand Tier 2" drugs are designated as those where the vast majority of the prescriptions of a particular NDC code were designated as non-formulary. Exhibit $J$ summarizes the top 50 drugs by allowed cost that were designated as Brand Tier 2. This list comprises over $80 \%$ of the total allowed costs in this category. We recognize that any formulary that may be included as part of a Medicare prescription drug benefit may not reflect the formulary included here. However, in order to show the impact of including a formulary in a Medicare prescription drug benefit, we believed it was appropriate to base projections on the formulary embedded in the data.

The historical database is for calendar year 2001. A utilization trend of $7 \%$ per annum was used to project calendar year 2003. The most recent AWP data was for January 2003. This AWP data was increased by $3.5 \%$ to project calendar year 2003 AWP prices.

While we believe the data, modeling and baseline assumptions used to project costs for the prescription drug plan designs are reasonable, there are limitations warranting consideration by users of this information. These limitations are summarized in the Limitations of the Analysis Section of this report.

## III. Assumptions

Exhibit A outlines the benefit plans analyzed. The scenarios were jointly decided upon by the SOA and R\&A. We also added one plan proposal proposed by House Democrats and submitted as House Bill 1199. To develop the cost estimates for these plans, we needed to make multiple assumptions about the plans and prescription drug costs in general. The rest of this section describes those assumptions.

One key assumption is the time frame for which the pricing applies. It is unlikely that any new pharmacy coverage could be added to the Medicare program in 2003, but the SOA requested that the cost estimates apply for calendar year 2003.

Another key assumption is the pharmacy fee schedule that will apply. We assumed that the government (or private companies offering the government benefit) will buy prescription drugs on the same basis currently employed in the private market (i.e., discounts from AWP plus dispensing fees). We selected the discounts and dispensing fee assumptions based on a survey we previously performed on pharmacy contracts for eight managed care organizations. This pricing basis is referred to as allowed cost.

Demographic distribution by age and gender does not have as significant an impact on the cost of pharmacy services as for medical services for the Medicare population. In fact, the prescription drug cost for all of the age/gender cohorts under Medicare is fairly consistent. Regardless of this homogeneity among the cohorts, we also re-weighted the data in our model's database to adjust the member distribution from the underlying managed care distribution to a Medicare eligible population. No other adjustment was made for any potential difference between managed care and fee-for-service (FFS) experience.

A summary of the pricing assumptions follows:

- Effective Date: January 1, 2003 with a midpoint of July 1, 2003.
- Retail versus Mail Order: We have assumed all prescriptions that have less than a 90 day supply are Retail and all prescriptions with a days supply of greater than or equal to 90 days are Mail Order.
- AWP Discounts:

| TABLE 1 <br> AWP DIscounts |  |  |
| :--- | :---: | :---: |
| Prescription Category | Retail | Mail Order |
| Generic | $45 \%$ | $50 \%$ |
| Brand Tier 1 | $14 \%$ | $18 \%$ |
| Brand Tier 2 | $14 \%$ | $18 \%$ |

## Assumptions (cont'd)

- Dispensing Fees:

| TABLE 2 <br> DISPENSING FEES |  |  |
| :--- | :---: | :---: |
| Prescription Category | Retail | Mail Order |
| Generic | $\$ 2.00$ | $\$ 0.00$ |
| Brand Tier 1 | $\$ 2.00$ | $\$ 0.00$ |
| Brand Tier 2 | $\$ 2.00$ | $\$ 0.00$ |

- For the copayment plan designs, mail order copayments equal two times retail copayments.
- Coinsurance is applied to the allowed cost (i.e., after discount and dispensing fee).
- PBM administrative fee: We did not include any administrative fee in our estimates. If these exist, it would be an additional cost to the plan sponsor.
- Rebates: We did not include any rebates in our estimates. Any rebates received would be a reduction in costs to the plan sponsor.
- Demographic distribution: Based on Medicare eligible beneficiaries with Medicare Part B coverage in 2000.

| AGE/GENDER DISTRIBUTION |  |  |
| :---: | :---: | :---: |
| Age Range | Gender | Percent of Members ${ }^{[1]}$ |
| $<65$ | F | $5.83 \%$ |
| $65-69$ | F | $11.78 \%$ |
| $70-74$ | F | $12.43 \%$ |
| $75-79$ | F | $11.28 \%$ |
| $80-84$ | F | $8.18 \%$ |
| $85+$ | F | $8.38 \%$ |
| $<65$ | M | $7.66 \%$ |
| $65-69$ | M | $9.73 \%$ |
| $70-74$ | M | $9.46 \%$ |
| $75-79$ | M | $7.55 \%$ |
| $80-84$ | M | $4.59 \%$ |
| $85+$ | M | $3.13 \%$ |
| Total | All | $100.0 \%$ |

[1] Medicare eligible distribution is from Part B Eligible counts for 2000.

## Assumptions (cont'd)

- The 10 year projections in Exhibits E, F.1, and F. 2 use a 7\% annual trend rate for utilization and a 10\% annual trend rate for average cost per prescription. The 10 year projection in Exhibit F. 3 uses a 4\% annual trend rate for utilization and a 6\% annual trend rate for average cost per prescription.


## IV. Limitations of the Analysis

We based the estimates of prescription drug costs for calendar year 2003 for the various prescription drug plan designs included in this report on reasonable data sources available at the time of this analysis. We also developed the 10 year projections for certain plan designs using assumptions considered reasonable at the time these projections were made. Information obtained after we developed these estimates or which we may obtain in the future has not been incorporated in this analysis and may have significant impacts on its results and conclusions.

Interpretation of the results of this analysis for comparisons to other studies or for other users should be done with caution due to the limitations inherent in this analysis and the underlying data. Some of the key limitations of this analysis that we are currently aware of are as follows:

- Data Source: The baseline data, which reflects prescription drug experience for unlimited benefits offered primarily under employer-sponsored $M+C$ plans, has been adjusted to reflect the demographic mix of all Medicare eligibles. However, this may not completely account for potential differences in prescription drug utilization for all Medicare eligibles versus those enrolled in Medicare M+C programs offered by HMOs, especially for current Medicare eligibles who have no prescription drug benefits. While we would expect the benefit relativities summarized in Exhibit B would remain fairly consistent for all Medicare eligibles who would enroll in a government sponsored prescription drug benefit, we cannot definitively state that this would indeed be true.
- Behavioral Effects: The relative and absolute cost differentials of the various prescription drug plans only reflect differences in the plan design, such as differences and the presence or absence of deductibles, copayments, coinsurance, plan annual benefit maximums, and catastrophic coverage thresholds. The cost differentials do not reflect any assumptions regarding the potential behavioral effects on utilization due to higher member cost sharing in one plan design versus another or the benefit design and the ability to maximize the benefit by a member by having knowledge of his or her expected utilization.
- Supplemental Coverage: We did not adjust utilization to reflect the potential presence of supplemental coverage through private insurance or employer coverage of member cost sharing not covered by the government plan. If cost sharing is reimbursed through private supplemental insurance with little or no cost liability for the individual, utilization could increase and the cost above the catastrophic coverage threshold may be significantly higher.
- Administrative Costs and Rebates: We did not include any assumptions regarding the additional cost of any pharmacy administrative charges or the savings from any rebate program that might be implemented.


## Limitations of the Analysis (cont'd)

- Member Premium: We did not reflect the reduction in cost due to any premium assessment in Exhibit B. The proposed premium in House Bill 1199 (Scenario 28) is used to reduce the total costs in the 10 year cost projection in Exhibit F.
- Pent Up Demand: Sometimes services that are newly eligible for insurance coverage have unusually high utilization in the first year coverage is available. We have not assumed any first-year "pent up demand" impact in our cost estimates.
- No Changes in Pricing Assumption for Projections: The 10 year projections of program costs in Exhibits E and F assume no change in trend rates, generic/brand mix, or discounts/dispensing fees from year to year.
- Sensitivity Modeling: No sensitivity modeling of assumptions, such as variable utilization and cost trends, shifts in generic versus brand name prescriptions, the indexing of deductibles, copayments or catastrophic coverage limits or behavioral effects on utilization was performed at a detailed level. The myriad of scenarios that could be performed over the 10 year projection period is beyond the scope and intent of these projections to provide reasonable cost estimates of potential prescription drug benefit plans offered to Medicare eligibles. However, some general comments are provided below to quantify the directional changes in costs as a result of modified assumptions.
- A decrease in trend assumptions would result in a decrease in projected costs, while an increase in trend assumptions would most likely result in an increase in projected costs.
- A possible behavioral effect would be reduced utilization and therefore reduced costs on prescription drug plans having higher member deductibles, copayments and coinsurance.
- A higher percentage of generic versus brand name prescriptions filled would most likely result in a decrease in projected costs.
- New Brand Name Drugs: No consideration was given to the potential impact that new, more expensive brand name drugs could have on projected 10 year costs.
- Patent Expiration: No consideration was given to the impact of current brand name drugs coming off of patent and generics becoming available, which would likely decrease costs.
- Mandatory Versus Voluntary Enrollment: No consideration of selection bias was made under the assumption that the Medicare program would be on a mandatory coverage basis versus on a voluntary basis. Coverage on a voluntary basis would likely lead to adverse selection in the program resulting in an increased cost per member to the program from that projected in this analysis.


## Limitations of the Analysis (cont'd)

The aforementioned limitations address issues that likely have the greatest impact on the variability of the results. However, there may be other issues worth considering that have not been identified in this report.

## V. Results

The benefit plan scenarios we analyzed are summarized in Exhibit A. The estimated cost PMPM for each of these scenarios in calendar year 2003 is presented in Exhibit B. Exhibits C.1, C.2, D.1, and D. 2 provide continuance table data that can be used to estimate the impact of variation on the plan designs already analyzed. Exhibit D.1a provides an example of how to use the continuance table data in Exhibit D.1. Exhibits E, F.1, F.2, and F. 3 provide10 year projections of total annual costs, while Exhibits G, H, and I illustrate how to use the report to estimate costs under different assumptions. Exhibit $J$ lists the top 50 drugs designated as Brand Tier 2.

## Estimated Cost of SOA Requested Scenarios - Exhibit B

Exhibit B summarizes the pricing results for calendar year 2003 of the 28 different plan designs. We iterate that behavioral effects on utilization due to member cost sharing, has been ignored in developing the projected costs of the plan designs. Also, it is assumed that coverage will be on a mandatory basis.

We have provided several breakdowns to help the reader understand the impact each cost sharing component has on the government-covered utilization and PMPM cost. The utilization and PMPM data is categorized as follows:

- Total gross utilization/allowed cost
- Eliminated due to deductible
- Eliminated due to copayments
- Eliminated due to coinsurance (PMPM only)
- Eliminated due to annual maximum
- Covered due to catastrophic coverage threshold
- Net utilization/cost covered by the plan

Utilization is only eliminated when the member pays the entire cost of the prescription. For example, the 6,448 elimination due to deductible for Scenario 1 indicates that 6,448 prescriptions per thousand members per year would be paid by the member in full since they would be utilized before the member has reached the $\$ 250$ deductible. Similarly, 5,681 prescriptions per thousand members per year would be paid by the member in full since they would be utilized after the member has reached the plan annual maximum. Prescriptions eliminated due to copayments represent prescriptions where the allowed cost is less than the copayment, so the member pays for the full cost of the prescription (e.g., a generic prescription that costs $\$ 8$ when the generic copayment is $\$ 10$ ).

## Results (cont'd)

PMPM cost reductions are based on similar logic, except that the member may pay a part of the cost of the prescription. Using Scenario 10 as an example, 8,394 prescriptions per thousand members are eliminated due to copayments. However, a number of prescriptions will also have the full copayment applied to them. The \$48.91 PMPM includes both prescriptions where the member pays the entire cost (since the entire cost is less than the copayment) and the prescriptions where the member pays the value of the copayment since the cost of the prescription is greater than the copayment.

Note that the cost elimination due to deductible for plans with a $\$ 100$ deductible is $\$ 8.73$ PMPM, or $\$ 104.76$ on an annual basis. The annualized amount is greater than $\$ 100$ because members are not enrolled for the entire calendar year. During the year, members enter the Medicare program as they become eligible and leave the Medicare program as they die. Hence, the average number of member months per member is something less than 12. Upon reviewing our analysis and data, we are comfortable that the average cost PMPM paid by a member for the first $\$ 100$ of coverage may very well be in excess of an annualized $\$ 100$ due to this constant change in membership.

Overall, the highest cost plan is the plan based on House Bill 1199 (Scenario 28) at \$113.87 PMPM (before reduction for proposed member premium), and the lowest cost plan is Scenario 8, Variation on Breaux/Frist \#3 at \$36.02 PMPM. We estimate that half of the plans would cost between $\$ 60$ and $\$ 90$ PMPM. For comparison purposes, the current Medicare supplement pharmacy plan designs are estimated at $\$ 50.60$ PMPM for Plans H and I, and $\$ 62.36$ PMPM for Plan J.

## Continuance Table by Member - Exhibits C. 1 and C. 2

We used the database in our model to develop continuance table data by member, as presented in Exhibits C. 1 and C.2. These tables reflect the cost distribution by member for calendar year 2003. Exhibit C. 1 shows the breakdown by allowed cost, which is the total cost incurred after reflecting discounts from AWP and dispensing fees. Exhibit C. 2 shows the breakdown by unadjusted AWP, which is the total cost that would be incurred by the member if there were no discounts from AWP (or dispensing fees).

These exhibits summarize the number of members, number of prescriptions, and costs (either allowed or unadjusted AWP) by member by the defined claim ranges. The total costs for the members are split by generic, Brand Tier 1, and Brand Tier 2. Finally, the percentage of members and dollars in excess of each of the dollar thresholds is shown. Not surprisingly, 20\% of the members account for $56 \%$ of the total claims, and $50 \%$ of the members account for almost $90 \%$ of the total claims. Roughly $11 \%$ of the members have no prescription drug claims in a year.

## Results (cont'd)

## Continuance Table by Prescription Cost Exhibits D.1, D. 1 A, AND D. 2

Exhibits D. 1 and D. 2 also present continuance table data. These exhibits show the number of prescriptions and average cost per prescription by range of cost per prescription. In Exhibit D.1, the average cost is based on the allowed amount per prescription (discounted AWP plus dispensing fee). In Exhibit D.2, the average cost is based on the undiscounted AWP. The data is shown in the following categories so that the reader can evaluate a benefit plan that varies benefits by type of prescription:

- Retail Generic
- Retail Brand Tier 1
- Retail Brand Tier 2
- Mail Order Generic
- Mail Order Brand Tier 1
- Mail Order Brand Tier 2

This table shows that only $20 \%$ of generic utilization is for prescriptions that have an allowed cost of more than $\$ 30$ per prescription after taking into account AWP discounts and dispensing fees. Conversely, about $78 \%$ to $86 \%$ of brand utilization is for prescriptions that have an allowed cost of more than $\$ 30$ per prescription after taking into account AWP discounts and dispensing fees. If the cost is based on full AWP, $43 \%$ of generic prescriptions and $80 \%$ to $87 \%$ of brand name prescriptions exceed $\$ 30$.

Exhibit D.1a provides an illustration of how to use the data displayed in Exhibit D.1. We have assumed a generic copayment of $\$ 10$ and have illustrated how the average cost of a prescription above $\$ 10$ is higher than the average cost of all generic prescriptions. To determine the average cost of generic prescriptions above \$10, we calculate the total cost for all generic prescriptions above $\$ 10(\$ 14,276,697)$ and then divide by the number of generic prescriptions above $\$ 10(514,998)$. The result is an average cost of $\$ 27.72$. The average payment by the plan for a generic prescription would therefore be $\$ 17.72$ (\$27.72-\$10.00).

In addition, we have calculated the percent of generic prescriptions that the plan would cover $(69.05 \%)$ in excess of the $\$ 10$ generic copayment. Hence, if the plan knew what their utilization for generic prescriptions was, they could use this data to calculate a PMPM cost for generic prescriptions by taking their overall generic utilization, multiplying it by $69.05 \%$ to determine the number of prescriptions on which they would make a payment, multiplying that product by $\$ 17.72$ to get an average cost per member per year, and then dividing by 12 to get a PMPM plan cost for generic prescriptions. A similar analysis could be used for brand prescriptions.

## Results (cont'd)

## Projections of Scenario 12 and the House Bill 1199 Exhibits E, F.1, F.2, and F. 3

We have developed projections from 2003 through 2012 for two different plan designs: Scenario 12 and House Bill 1199. We choose Scenario 12 as a representative copayment plan and House Bill 1199 since it was the most recent Congressional proposal when the report was being developed. These are shown in Exhibits E and F. Our projections make the following assumptions:

- All Medicare Part A eligibles will be in the proposed pharmacy program. We relied upon published CMS data for the number of Medicare eligibles in each year from 2003 to 2012. These projections include Medicare eligibles under age 65 . We did not modify the underlying distribution by age and gender in our cost projections. However, we tested the impact of varying the distribution by age/gender (using CMS data) and found the results only changed by $0.1 \%$ to $0.5 \%$ in any given year.
- All Medicare Part A eligibles will be provided the prescription drug benefit, either directly from CMS or through an additional payment to M+C plans from CMS to cover the cost of the prescription drug benefit.
- The trend assumptions do not change during the projection period. Likewise, the mix of generic/brand or pricing parameters for discounts and dispensing fees do not change during the projection period.

Table 4 summarizes the plan designs for the two projections:

| TABLE 4 <br> Summary OF PLAN DESIGNS |  |  |
| :--- | :---: | :---: |
|  | Scenario 12 | House Bill 11999 |
| Deductible | NA | $\$ 100$ |
| Coinsurance | NA | $20 \%$ |
| Copays: |  |  |
| Generic | $\$ 10$ | NA |
| Brand Tier 1 | $\$ 25$ | NA |
| Brand Tier 2 | Max of $\$ 40 / 50 \%$ | NA |
| Annual Maximum ${ }^{[1]}$ | $\$ 2,500$ | NA |
| Catastrophic Coverage Threshold ${ }^{[2]}$ | $\$ 6,000$ | $\$ 2,000$ |
| Monthly Premium | TBD | $\$ 25$ |

[1] The annual benefit maximum is a corridor maximum benefit payable by the plan until the insured's total OOP reaches the catastrophic coverage threshold.
[2] Total insured's OOP cost limit, including deductible, copayments, and coinsurance.
[3] R\&A's projections ignore indexing of cost sharing provisions.

## Results (cont'd)

To illustrate the impact of a constant catastrophic threshold over time, we have shown the government liability separately for the portion up to the plan annual maximum and the portion above the catastrophic level. The percent of the allowed cost paid by the member in each year is also shown.

Exhibit E for Scenario 12 shows a 10 year cost of $\$ 0.992$ trillion. Also, the member's percentage of gross costs remains almost constant until 2011, when it starts to decrease.

Exhibit F. 1 is the projection for the House Bill 1199 plan design (Scenario 28) using our baseline trend assumption. The 10 year cost projection is $\$ 1.351$ trillion. The member's percentage of gross costs declines steadily over the projection period.

In Exhibit F.2, we tested the impact of indexing the cost sharing so that the member percent of the total cost would be at $25 \%$ over the total projection period. This reduced our projected cost by $8 \%$ to $\$ 1.248$ trillion over 10 years.

Finally, in Exhibit F.3, we tested the impact on our projection of using a lower trend assumption ( $4 \%$ utilization and $6 \%$ average cost) without any indexing of cost sharing provisions. This reduced our projected 10 year cost of $\$ 1.351$ trillion by $36 \%$ to $\$ 0.868$ trillion.

## Other Uses for the Projections

The scenarios provided in Exhibits E, F.1, F.2, and F. 3 are only a small subset of the possible scenarios for a Medicare prescription drug benefit. However, the information in these exhibits can be used to develop other projections using reasonable interpolation methods. Below we describe three alternative scenarios.

## Example 1: Trend

Readers may wish to estimate cost projections under different trend assumptions. Exhibit E uses an annual trend assumption of $17.4 \%$. Exhibit G illustrates how this can be modified for an annual trend rate of about half this level ( $8.5 \%$ ). The first three years only are shown. Additional years could be adjusted in a similar manner.

Exhibit G makes two adjustments to the estimates in Exhibit E. The first adjustment is to prorate the effect of cumulative trend on the allowed cost PMPM. This is done by taking the Allowed Cost from Line 1 and adjusting it by the new cumulative trend from Line 7 divided by the original cumulative trend from Line 4 . The second adjustment reflects the impact that a different trend assumption has on the percent of the total cost for which the member has responsibility. The plan design in these projections (Scenario 12) has copays, an annual maximum and catastrophic coverage. A reduction in the trend assumption impacts this plan's cost as follows:

## Results (cont'd)

- The cost per prescription increases more slowly, which keeps the impact of copays from eroding as fast as in Exhibit E. This should increase the value of member liability relative to Exhibit E. Note also that Exhibit B indicates that 39\% of the allowed cost of Scenario 12 is eliminated due to copays and coinsurance.
- It takes longer for individuals below the annual maximum to reach the maximum. This reduces member liability relative to Exhibit E. Exhibit B shows that 9\% of the allowed cost of Scenario 12 is eliminated due to the annual maximum.
- It takes longer for individuals below the catastrophic threshold to reach that threshold, which keeps down plan costs and increases member liability in total versus Exhibit E. Exhibit B shows the value of the catastrophic benefit as $2 \%$ of allowed costs.

When these factors are considered in aggregate, it is likely that the member liability under a lower trend assumption will increase member liability as a percentage of the allowed cost, at least initially. Furthermore, it would appear that the primary factor would be the relationship of the copay to the cost per prescription. The data in Exhibit D. 1 can be used to understand the distribution of copay values. The cost per prescription can be increased at the selected trend rate and the proportion of the cost paid by the member (lesser of the full cost or the copay) can be computed and compared to the full (trended) allowed cost. Different plan designs will have different patterns of member cost sharing over time, with the interaction of the initial cost sharing (i.e., deductibles, copayment, or coinsurance) and the catastrophic coverage thresholds determining how quickly the cost of the benefit shifts between the plan and the member. Scenario 12 is actually a very well balanced plan in this regard until 2012 and 2013 when the member's share of the total cost starts to decrease.

## Example 2: Rebates

As noted earlier, the cost projections presented here are before any adjustment for rebates. Most managed pharmacy programs result in fairly significant rebates. The savings to be achieved through rebates will vary greatly depending on the contractual arrangements that can be made through pharmacy benefit managers or directly with drug manufacturers and the actual usage of brand prescriptions. In Exhibit H, it is assumed that rebates equivalent to 4\% of allowed costs can be achieved. Again, the first three years only are shown.

## Example 3: Generic/Brand Mix

The database used by the R\&A Prescription Drug Pricing Model contains experience from managed care entities. The design of a Medicare pharmacy benefit with regard to covered costs, use of formularies, mandatory generic substitution and so forth may result in a differential between this historical managed care experience and Medicare FFS experience. For example, there may be a lesser use of generic drugs, at least initially, which would increase the overall program costs from those shown in the projections here.

Exhibit I illustrates how one may use the baseline experience in Exhibit E, which has about 46\% generic use, to assume it will take several years under a FFS program until this level of generic

## Results (cont'd)

use can be achieved. The underlying average cost of generic and brand name drugs is obtained from Exhibit C.1. For simplicity, we have also assumed that the relationship of net to allowed costs overall applies equally to generics and brand name drugs. This assumption could be further analyzed using the continuance table data in Exhibit D. 1 (see discussion for varying trends above) and revised if desired.

## VI. Conclusions

While there are clearly many unknowns regarding how utilization will vary based on the plan design and coverage in the secondary market, the cost estimates presented here help to establish relativities between the various plan designs we have evaluated and provide a baseline for projecting costs over the next 10 years. Some key observations regarding the relativities between the plan designs in Exhibit B and the projections in Exhibits E and F are as follows:

- Some plan designs that have a low net plan payment PMPM in 2003 also have a low catastrophic coverage threshold. This catastrophic coverage will increase the cost to the plan very quickly if prescription drug costs continue to increase as they have in the past. For example, with a $17 \%$ annual cost trend, a \$4,000 catastrophic coverage threshold in 2003 would be equivalent to a $\$ 2,000$ catastrophic coverage threshold in 2008 and a $\$ 1,000$ catastrophic coverage threshold in 2013. Hence, even though a plan may have higher cost sharing and lower cost currently, the 10 year cost most likely would be higher than any of the plans without the catastrophic coverage benefit.
- The difference between Scenarios 3 (House Republican bill) and 4 (Tripartisan bill) is minor for 2003. Since the catastrophic thresholds are the same, a cost comparison over 10 years would likely also be similar.
- Of the Variations on Breaux/Frist plans (Scenarios 5 through 9), we would expect the cost differentials to increase significantly over time as the value of the catastrophic threshold becomes more important.
- Raising the copayments from $\$ 10 / \$ 25$ (Scenario 11) to $\$ 20 / \$ 40$ (Scenario 15) when there are no annual maximums reduces the net plan cost by almost $30 \%$. This differential would shrink slightly over a 10 year projection as average cost trends would reduce the impact of the copayments.
- Scenarios 11 and 19, which are both unlimited benefits, are very close in cost even though Scenario 11 is a copayment plan and Scenario 19 is a deductible/coinsurance plan. Over time, we would expect the copayment plans to cost more than the deductible/coinsurance plans due to the leveraging impact of the copayments. The same is true of Scenarios 12 and 21, which both have the same plan annual maximum and catastrophic coverage threshold.

House Bill 1199, which is clearly the most expensive, provides the most up-front coverage. However, some of the plans that provide $100 \%$ coverage above the catastrophic coverage threshold, such as Variation on Breaux/Frist \#1 (Scenario 6), may ultimately cost as much, or only slightly less, than House Bill 1199.

Exhibit A

## Society of Actuaries Medicare Pharmacy Study

 Proposed Plan Designs| Plan Scenario/Description | Copayments Per Prescription[1] |  |  | Deductibles |  | Member Coinsurance |  |  | Plan Annual Benefit Maximum[3] |  |  | CatastrophicCoverageThreshold[4] | Other Provisions |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Generic Drugs | $\begin{gathered} \hline \text { Brand } \\ \text { Tier 1[2] } \\ \hline \end{gathered}$ | Brand <br> Tier 2 [2] | $\begin{array}{\|c\|} \hline \text { Generi } \\ \text { Only } \end{array}$ | Brand <br> Only Combined | Generic Drugs | Brand Brand Tier 1[2]Tier 2 [2 | Combined | Generic Only | Brand Only | Combined |  |  |
| 1. MedSupp Plans H\&I <br> 2. MedSupp Plan J |  |  |  |  | $\begin{aligned} & \hline \$ 250 \\ & \$ 250 \end{aligned}$ |  |  | $\begin{aligned} & 50 \% \\ & 50 \% \end{aligned}$ |  |  | $\begin{aligned} & \$ 1,250 \\ & \$ 3,000 \end{aligned}$ |  |  |
| 3. House Republican Passed <br> 4. TriPartisan |  |  |  |  | \$250 \$250 |  |  | $\begin{gathered} \$ 0 \%, \$ 251- \\ \$ 1000 ; 50 \%, \\ \$ 1001 \text { to } \$ 2000 \\ 50 \% \end{gathered}$ |  |  | $\$ 1,100$ $\$ 1,600$ | $\$ 3,700$ $\$ 3,700$ |  |
| 5. Breaux/Frist |  |  |  |  | \$250 |  |  | 50\% |  |  | \$800 | \$6,000 |  |
| 6. Variation on Breaux/Frist \#1 |  |  |  |  | \$500 |  |  | 50\% |  |  | \$800 | \$4,000 |  |
| 7. Variation on Breaux/Frist \#2 |  |  |  |  | \$500 |  |  | 50\% |  |  | \$800 | \$6,000 |  |
| 8. Variation on Breaux/Frist \#3 |  |  |  |  | \$500 |  |  | 50\% |  |  | \$800 | \$10,000 |  |
| 9. Variation on Breaux/Frist \#4 |  |  |  |  | \$500 |  |  | 50\% |  |  | \$1,500 | \$6,000 |  |
| 10. Commercial Copay | \$10 | \$25 | \$40/50\% |  | \$250 |  |  | 0\% |  |  | \$2,250 | None |  |
| 11. Commercial Copay | \$10 | \$25 | \$40/50\% |  | \$0 |  |  | 0\% |  |  | Unlimited | None |  |
| 12. Commercial Copay | \$10 | \$25 | \$40/50\% |  | \$0 |  |  | 0\% |  |  | \$2,500 | \$6,000 |  |
| 13. Commercial Copay | \$10 | \$25 | \$40/50\% |  | \$0 |  |  | 0\% |  |  | \$1,300 | \$6,000 |  |
| 14. Commercial Copay | \$20 | \$40 | \$60/50\% |  | \$250 |  |  | 0\% |  |  | \$2,250 | None |  |
| 15. Commercial Copay | \$20 | \$40 | \$60/50\% |  | \$0 |  |  | 0\% |  |  | Unlimited | None |  |
| 16. Commercial Coinsurance |  |  |  |  | \$100 | 25\% | 25\% 50\% |  |  |  | \$2,400 | None |  |
| 17. Commercial Coinsurance |  |  |  |  | \$250 | 25\% | 25\% 50\% |  |  |  | \$2,250 | None |  |
| 18. Commercial Coinsurance |  |  |  |  | \$100 | 25\% | 25\% 50\% |  |  |  | Unlimited | None |  |
| 19. Commercial Coinsurance |  |  |  |  | \$250 | 25\% | 25\% 50\% |  |  |  | Unlimited | None |  |
| 20. Commercial Coinsurance |  |  |  |  | \$100 | 25\% | 25\% 50\% |  |  |  | \$2,400 | \$6,000 |  |
| 21. Commercial Coinsurance |  |  |  |  | \$250 | 25\% | 25\% 50\% |  |  |  | \$2,250 | \$6,000 |  |
| 22. Commercial Coinsurance |  |  |  |  | \$100 | 25\% | 25\% 50\% |  |  |  | Unlimited | \$6,000 | [5] |
| 23. Commercial Coinsurance |  |  |  |  | \$250 | 25\% | 25\% 50\% |  |  |  | Unlimited | \$6,000 | [5] |
| 24. Comm Copay/Split Max | \$10 | \$25 | \$40/50\% |  | \$0 |  |  |  | Unlimited | \$1,000 |  | None |  |
| 25. Comm Copay/Split Max | \$10 | \$25 | \$40/50\% |  | \$0 |  |  |  | Unlimited | \$2,500 |  | None |  |
| 26. Comm Coins./Split Max |  |  |  |  | \$0 | 25\% | 25\% $50 \%$ |  | Unlimited | \$1,000 |  | None |  |
| 27. Comm Coins./Split Max |  |  |  |  | \$0 | 25\% | 25\% $50 . . . . . . . .0 \%$ |  | Unlimited | \$2,500 |  | None |  |
| 28. House Bill 1199 Proposal |  |  |  |  | \$100 |  |  | 20\% |  |  | \$7,600 | \$2,000 | [6] |

[1] Copays for retail purchases are shown. Mail purchases have copays equal to 2 times those shown. When two values are shown, the copayment is the greater of the two.
[2] The Tier 1 and 2 copayments reflect preferred and non-preferred brand name drugs.
[3] The Annual Benefit Maximum is a corridor maximum benefit payable by the plan until the insured's total out-of-pocket reaches the Catastrophic Coverage Threshold. After the plan pays the Annual Benefit Maximum, the member is responsible for all payments until the Catastrophic Coverage Threshold is reached. The Plan then pays $100 \%$ of the amount above the Catastrophic Coverage Threshold without limit. The sum of the Annual Benefit Maxium and the Catastrophic Coverage Threshold represents the total Allowed cost that must be reached before the 100\% coverage takes effect. The Annual Benefit Maxiumum does NOT include the deductible.
[4] Total insured's out-of-pocket cost limit, including deductible, copayments, and coinsurance.
[5] We estimate the "attachment point" at which these 2 Scenarios would begin paying $100 \%$ are $\$ 19,667$ for Scenario 20 and $\$ 19,167$ for Scenario 21
[6] Includes a $\$ 25$ per member per month premium

## Exhibit B

Society of Actuaries Medicare Pharmacy Study Utilization Rates and Per Member Per Month Costs Calendar Year 2003

| Scenario | Utilization (Prescriptions per Thousand members) |  |  |  |  |  | Per Member Per Month Costs |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Gross | Eliminated Due To: |  |  | Covered Over Catastrophic Threshold | Prescriptions Covered by Plan [1] | Allowed | Eliminated Due to Member Payments For: |  |  | Covered Over <br> Catastrophic Threshold | NetPlanPayment [1] |
|  |  |  |  |  | Deductible [2] |  |  | Copayments/Coinsurance | Annual Max |  |  |
|  |  | Deductible | Copays | Annual Max |  |  |  |  |  |  |  |
|  | 38,336 | $(6,448)$ | 0 | $(5,681)$ | 0 | 26,207 | \$150.64 | (\$20.78) | (\$50.61) | (\$28.65) | \$0.00 | \$50.60 |
| 2. | 38,336 | $(6,448)$ | 0 | (724). | 0 | 31,164 | 150.64 | (20.78) | (62.36) | (5.14) | 0.00 | 62.36 |
| 3. | 38,336 | $(6,448)$ | 0 | $(9,554)$ | 1,580 | 23,915 | 150.64 | (20.78) | (28.30) | (45.30) | 9.66 | 65.92 |
| 4. | 38,336 | $(6,448)$ | 0 | $(3,591)$ | 1,191. | 29,488 | 150.64 | (20.78) | (55.30). | (19.27) | 7.67 | 62.96 |
| 5. | 38,336 | $(6,448)$ | 0 | $(10,598)$ | 548 | 21,838 | 150.64 | (20.78) | (40.10) | (49.66) | 4.15 | 44.25 |
| 6. | 38,336 | $(11,559)$ | 0 | $(8,915)$ | 1,580 | 19,442 | 150.64 | (38.57) | (34.73) | (42.60) | 9.66 | 44.40 |
| 7. | 38,336 | $(11,559)$ | 0 | $(8,915)$ | 548 | 18,410 | 150.64 | (38.57) | (34.73) | (42.60) | 4.15 | 38.89 |
| 8. | 38,336 | $(11,559)$ | 0 | $(8,915)$ | 89 | 17,951 | 150.64 | (38.57) | (34.73) | (42.60) | 1.28 | 36.02 |
| 9. | 38,336 | $(11,559)$ | 0 | $(3,479)$ | 386 | 23,684 | 150.64 | (38.57) | (46.66) | (18.75) | 3.20 | 49.86 |
| 10. | 38,336 | $(6,448)$ | $(8,394)$ | $(2,097)$ | 0 | 21,397 | 150.64 | (20.78) | (48.91) | (15.25) | 0.00 | 65.70 |
| 11. | 38,336 | 0 | $(10,451)$ |  | 0 | 27,885 | 150.64 | 0.00 | (62.61) | 0.00 | 0.00 | 88.03 |
| 12. | 38,336 | 0 | $(10,451)$ | $(1,935)$ | 241 | 26,190 | 150.64 | 0.00 | (58.87) | (14.31) | 2.31 | 79.77 |
| 13. | 38,336 |  | $(10,451)$ | $(6,240)$ | 426 | 22,071 | 150.64 | 0.00 | (50.85) | (38.62) | 3.44 | 64.61 |
| 14. | 38,336 | $(6,448)$ | $(14,990)$ | (880) | 0 | 16,018 | 150.64 | (20.78) | (72.42) | (9.17) | 0.00 | 48.27 |
| 15. | 38,336 | 0 | $(18,569)$ | 0 | 0 | 19,767 | 150.64 | 0.00 | (88.85) | 0.00 | 0.00 | 61.79 |
| 16. | 38,336 | $(2,814)$ | 0 | $(3,431)$ | 0 | 32,091 | 150.64 | (8.73) | (36.85) | (18.54) | 0.00 | 86.52 |
| 17. | 38,336 | $(6,448)$ | 0 | $(3,568)$ | 0 | 28,321 | 150.64 | (20.78) | (33.11) | (19.17) | 0.00 | 77.58 |
| 18. | 38,336 | $(2,814)$ | 0 | 0 | 0 | 35,522 | 150.64 | (8.73) | (42.18) | 0.00 | 0.00 | 99.73 |
| 19. | 38,336 | $(6,448)$ | 0 |  | 0 | 31,889 | 150.64 | (20.78) | (38.66) | 0.00 | 0.00 | 91.20 |
| 20. | 38,336 | $(2,814)$ | 0 | $(3,431)$ | 251 | 32,342 | 150.64 | (8.73) | (36.85) | (18.54) | 2.38 | 88.90 |
| 21. | 38,336 | $(6,448)$ | 0 | $(3,568)$ | 269 | 28,590 | 150.64 | (20.78) | (33.11) | (19.17) | 2.49 | 80.07 |
| 22. | 38,336 | $(2,814)$ | 0 | 0 | 7 | 35,529 | 150.64 | (8.73) | (42.18) | 0.00 | 0.45 | 100.18 |
| 23. | 38,336 | $(6,448)$ | 0 | 0 | 8. | 31,897 | 150.64 | (20.78) | (38.66) | 0.00 | 0.47 | 91.67 |
| 24. | 38,336 | 0 | $(10,451)$ | $(4,136)$ | 0 | 23,749 | 150.64 | 0.00 | (52.04) | (35.06) | 0.00 | 63.54 |
| 25. | 38,336 | 0 | $(10,451)$ | (858) | 0 | 27,027 | 150.64 | 0.00 | (60.39) | (9.44) | 0.00 | 80.81 |
| 26. | 38,336 | 0 | 0 | $(6,399)$ | 0 | 31,937 | 150.64 | 0.00 | (31.37) | (43.15) | 0.00 | 76.12 |
| 27. | 38,336 | 0 | 0 | $(1,287)$ | 0 | 37,049 | 150.64 | 0.00 | (41.39) | (10.84) | 0.00 | 98.41 |
| 28. | 38,336 | $(2,814)$ | 0 | (150) | 150 | 35,522 | 150.64 | (8.73) | (28.04) | (1.71) | 1.71 | 113.87 |

[1] Equal to Gross less Eliminated (deductible, copay, annual maximum) plus Catastrophic
[2] May exceed the deductible amount on an annualized basis due to average exposure of less than 12 months. See Results section of report for additional discussion.

Exhibit C. 1
Society of Actuaries Medicare Pharmacy Study Continuance Table by Member based on Allowed Dollars Calendar Year 2003 Claims

| Member Claims Range |  |  | Number of Members | Member Months | Number of Prescriptions |  |  |  | Allowed Claims [1] |  |  |  | \% in Excess of Threshold |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Generic |  | Brand Tier 1 | Brand Tier 2 | Total | Generic | Brand Tier 1 | Brand Tier 2 | Total | Members | Claims |
| \$0 |  | \$0 |  | 5,811 | 46,832 | 0 | 0 | 0 | 0 | \$0 | \$0 | \$0 | \$0 | 89\% | 100\% |
| 0.01 |  |  | 3,199 | 26,690 | 6,408 | 1,945 | 472 | 8,825 | 81,036 | 62,124 | 15,187 | 158,347 | 83\% | 100\% |
| 100.01 | - |  | 2,646 | 20,829 | 9,715 | 4,758 | 1,118 | 15,590 | 149,437 | 206,157 | 50,255 | 405,849 | 78\% | 99\% |
| 200.01 | - | 300 | 2,346 | 19,766 | 12,719 | 6,668 | 1,605 | 20,991 | 214,108 | 305,760 | 79,119 | 598,987 | 73\% | 98\% |
| 300.01 | - | 400 | 2,127 | 18,856 | 14,667 | 8,301 | 2,024 | 24,992 | 259,445 | 386,268 | 106,391 | 752,104 | 69\% | 98\% |
| 400.01 | - | 500 | 2,011 | 18,691 | 15,590 | 9,789 | 2,784 | 28,163 | 280,440 | 480,924 | 145,383 | 906,746 | 65\% | 96\% |
| 500.01 | - | 1,000 | 8,288 | 81,586 | 91,511 | 64,354 | 17,308 | 173,174 | 1,786,981 | 3,406,564 | 978,463 | 6,172,008 | 49\% | 88\% |
| 1,000.01 | - | 1,500 | 6,398 | 67,619 | 99,216 | 78,403 | 20,971 | 198,590 | 2,078,694 | 4,539,755 | 1,336,745 | 7,955,193 | 37\% | 78\% |
| 1,500.01 | - | 2,500 | 8,812 | 96,916 | 177,945 | 157,355 | 45,169 | 380,469 | 3,865,488 | 10,006,583 | 3,309,129 | 17,181,200 | 20\% | 56\% |
| 2,500.01 | - | 5,000 | 8,213 | 93,104 | 243,763 | 249,447 | 67,817 | 561,026 | 5,629,675 | 17,427,643 | 5,285,237 | 28,342,556 | 4\% | 19\% |
| 5,000.01 | + |  | 2,035 | 23,859 | 93,484 | 109,834 | 29,315 | 232,633 | 2,373,871 | 9,445,383 | 3,250,408 | 15,069,662 | 0\% | 0\% |
| Total |  |  | 51,886 | 514,749 | 765,016 | 690,853 | 188,583 | 1,644,452 | \$16,719,175 | \$46,267,160 | \$14,556,318 | \$77,542,653 |  |  |

[1] Allowed Claims are based on AWP adjusted for Discounts and Dispensing Fees.

## Exhibit C. 2

Society of Actuaries Medicare Pharmacy Study Continuance Table by Member based on Unadjusted AWP Calendar Year 2003 Claims

| Member Claims Range |  |  | Number of Members | Member Months | Number of Prescriptions |  |  |  | Gross Unadjusted AWP Claims [1] |  |  |  | \% in Excess of Threshold |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Generic |  | Brand Tier 1 | Brand Tier 2 | Total | Generic | Brand Tier 1 | Brand Tier 2 | Total | Members | Claims |
| \$0 |  | \$0 |  | 5,811 | 46,832 | 0 | 0 | 0 | 0 | \$0 | \$0 | \$0 | \$0 | 89\% | 100\% |
| 0.01 | - |  | 2,552 | 21,589 | 4,328 | 1,540 | 375 | 6,243 | 69,242 | 49,714 | 11,971 | 130,928 | 84\% | 100\% |
| 100.01 | - |  | 2,248 | 17,595 | 6,428 | 3,487 | 840 | 10,756 | 136,569 | 165,161 | 39,839 | 341,568 | 80\% | 100\% |
| 200.01 | - |  | 1,899 | 15,068 | 7,569 | 4,965 | 1,165 | 13,698 | 180,693 | 246,773 | 60,581 | 488,047 | 76\% | 99\% |
| 300.01 | - |  | 1,768 | 15,029 | 9,043 | 6,207 | 1,503 | 16,753 | 225,206 | 317,672 | 84,739 | 627,618 | 72\% | 98\% |
| 400.01 | - | 500 | 1,720 | 15,305 | 10,587 | 7,136 | 1,965 | 19,689 | 278,306 | 383,274 | 112,551 | 774,131 | 69\% | 98\% |
| 500.01 | - | 1,000 | 7,238 | 68,770 | 63,815 | 47,943 | 12,970 | 124,728 | 1,849,828 | 2,762,145 | 800,094 | 5,412,067 | 55\% | 92\% |
| 1,000.01 | - | 1,500 | 5,882 | 60,771 | 74,718 | 59,883 | 15,910 | 150,511 | 2,395,473 | 3,808,147 | 1,111,744 | 7,315,363 | 44\% | 84\% |
| 1,500.01 | - | 2,500 | 8,681 | 93,988 | 150,355 | 130,279 | 36,967 | 317,602 | 5,202,254 | 9,001,886 | 2,892,889 | 17,097,029 | 27\% | 67\% |
| 2,500.01 | - | 5,000 | 10,395 | 116,708 | 276,147 | 259,507 | 71,166 | 606,820 | 10,476,900 | 19,959,118 | 6,170,142 | 36,606,160 | 7\% | 29\% |
| 5,000.01 | + |  | 3,692 | 43,094 | 162,025 | 169,904 | 45,721 | 377,650 | 7,053,618 | 15,757,077 | 5,303,887 | 28,114,582 | 0\% | 0\% |
| Total |  |  | 51,886 | 514,749 | 765,016 | 690,853 | 188,583 | 1,644,452 | \$27,868,088 | \$52,450,969 | \$16,588,437 | \$96,907,493 |  |  |

[1] Gross Unadjusted AWP are based on AWP without any adjustments.

## Exhibit D. 1

Society of Actuaries Medicare Pharmacy Study Continuance Table by Allowed per Prescription

Calendar Year 2003 Claims

| Prescription Cost Range |  | Number of Prescriptions |  |  |  |  |  |  | Average Allowed per Prescription [1] |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Retail |  |  | Mail Order [2] |  |  | Total | Retail |  |  | Mail Order [2] |  |  |
|  |  | Generic | Brand Tier 1 | Brand Tier 2 | Generic | Brand Tier 1 | Brand Tier 2 |  | Generic | Brand Tier 1 | Brand Tier 2 | Generic | Brand Tier 1 | Brand Tier 2 |
| \$0 | - \$5 | 78,703 | 14,012 | 703 | 882 | 69 | 6 | 94,375 | \$3.97 | \$3.98 | \$3.72 | \$3.16 | \$3.28 | \$3.89 |
| 5.00 | - 10 | 152,102 | 23,514 | 4,239 | 2,155 | 595 | 11 | 182,616 | 7.44 | 7.32 | 7.87 | 8.27 | 6.48 | 8.57 |
| 10.01 | - 20 | 219,416 | 48,745 | 8,413 | 3,036 | 279 | 50 | 279,939 | 14.80 | 14.00 | 15.73 | 15.13 | 14.82 | 14.86 |
| 20.01 | - 30 | 143,215 | 58,567 | 11,823 | 1,706 | 398 | 42 | 215,752 | 24.74 | 24.88 | 24.30 | 25.44 | 27.10 | 23.92 |
| 30.01 | - 40 | 51,699 | 71,971 | 39,429 | 1,930 | 1,210 | 83 | 166,322 | 34.63 | 34.85 | 33.73 | 35.39 | 33.83 | 34.67 |
| 40.01 | - 50 | 48,511 | 66,656 | 23,202 | 1,801 | 399 | 70 | 140,639 | 44.72 | 43.74 | 45.26 | 45.67 | 45.07 | 44.55 |
| 50.01 | - 60 | 31,808 | 57,350 | 12,451 | 1,767 | 532 | 51 | 103,959 | 54.17 | 55.14 | 55.51 | 54.25 | 55.44 | 53.05 |
| 60.01 | - 70 | 7,359 | 97,014 | 11,105 | 863 | 1,416 | 54 | 117,811 | 64.18 | 64.66 | 65.62 | 66.00 | 66.99 | 64.84 |
| 70.01 | - 80 | 3,582 | 69,953 | 13,996 | 1,519 | 330 | 68 | 89,447 | 73.71 | 76.31 | 77.53 | 74.79 | 75.99 | 72.79 |
| 80.01 | - 90 | 3,506 | 24,870 | 6,427 | 381 | 961 | 909 | 37,054 | 84.64 | 85.22 | 83.45 | 85.40 | 86.47 | 84.75 |
| 90.01 | - 100 | 1,827 | 39,647 | 6,784 | 550 | 431 | 633 | 49,872 | 94.63 | 94.58 | 96.34 | 96.31 | 94.42 | 92.04 |
| 100.01 | - 125 | 2,085 | 40,735 | 20,592 | 1,113 | 1,864 | 637 | 67,026 | 112.31 | 111.36 | 112.79 | 114.31 | 114.21 | 111.24 |
| 125.01 | - 150 | 872 | 36,570 | 11,101 | 837 | 839 | 516 | 50,736 | 136.68 | 131.48 | 128.60 | 139.17 | 138.85 | 136.08 |
| 150.01 | + | 1,116 | 19,829 | 11,059 | 674 | 12,098 | 4,127 | 48,902 | 217.13 | 242.53 | 252.40 | 211.90 | 247.97 | 288.01 |
| Total |  | 745,804 | 669,433 | 181,325 | 19,213 | 21,420 | 7,257 | 1,644,452 | \$21.08 | \$63.62 | \$72.09 | \$51.99 | \$171.83 | \$204.48 |


[1] Average Allowed per Prescription is based on Allowed adjusted for Discounts and Dispensing Fees.
[2] Mail Order Number of Prescriptions and Average Allowed per Prescription represent the actual number of Mail Order prescriptions and their cost. These prescriptions have not been adjusted to a "Retail equivalent" basis. On a "Retail equivalent" basis, Mail Order would represent about 8\% of total utilization.

Exhibit D.1a
Society of Actuaries Medicare Pharmacy Study
Examples of How to Use the Data in Exhibit D. 1 Determining Average Cost of Retail Generic Prescriptions above \$10


Percent of Prescriptions with Coverage $=(514,998 / 745,804)=69.05 \%$

## Exhibit D. 2

Society of Actuaries Medicare Pharmacy Study Continuance Table by Unadjusted AWP per Prescription

Calendar Year 2003 Claims

| Prescription Cost Range |  | Number of Prescriptions |  |  |  |  |  |  | Average Unadjusted AWP per Prescription [1] |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Retail |  |  | Mail Order [2] |  |  | Total | Retail |  |  | Mail Order [2] |  |  |
|  |  | Generic | Brand Tier 1 | Brand Tier 2 | Generic | Brand Tier 1 | Brand Tier 2 |  | Generic | Brand Tier 1 | Brand Tier 2 | Generic | Brand Tier 1 | Brand Tier 2 |
| \$0 | - \$5 | 70,256 | 16,678 | 1,283 | 398 | 67 | 6 | 88,688 | \$3.38 | \$2.60 | \$3.00 | \$4.82 | \$3.95 | \$4.74 |
| 5.00 | - 10 | 82,889 | 23,795 | 3,933 | 485 | 595 | 2 | 111,699 | 7.55 | 6.85 | 7.41 | 7.54 | 7.89 | 9.63 |
| 10.01 | - 20 | 143,441 | 45,134 | 6,748 | 2,155 | 185 | 44 | 197,706 | 14.41 | 14.13 | 15.28 | 16.54 | 15.67 | 14.97 |
| 20.01 | - 30 | 126,556 | 50,720 | 12,161 | 1,273 | 164 | 43 | 190,919 | 24.60 | 25.73 | 24.86 | 25.75 | 25.27 | 25.27 |
| 30.01 | - 40 | 92,936 | 61,700 | 33,047 | 1,762 | 1,107 | 27 | 190,580 | 34.50 | 35.76 | 35.58 | 33.52 | 37.22 | 36.48 |
| 40.01 | - 50 | 69,786 | 59,224 | 18,713 | 707 | 446 | 82 | 148,957 | 45.62 | 45.31 | 44.97 | 44.54 | 46.07 | 43.83 |
| 50.01 | - 60 | 34,894 | 49,924 | 16,002 | 999 | 382 | 44 | 102,245 | 54.01 | 54.77 | 54.50 | 55.36 | 55.14 | 53.85 |
| 60.01 | - 70 | 27,145 | 47,370 | 10,806 | 794 | 502 | 65 | 86,682 | 64.74 | 65.50 | 65.37 | 63.96 | 67.34 | 63.81 |
| 70.01 | - 80 | 25,954 | 91,596 | 8,789 | 1,136 | 212 | 25 | 127,713 | 74.73 | 74.20 | 75.60 | 75.53 | 74.58 | 74.44 |
| 80.01 | - 90 | 23,644 | 52,575 | 13,599 | 732 | 1,325 | 77 | 91,952 | 83.63 | 86.79 | 87.85 | 85.21 | 82.98 | 85.28 |
| 90.01 | - 100 | 21,604 | 24,746 | 6,365 | 1,070 | 329 | 28 | 54,142 | 93.87 | 93.08 | 94.16 | 95.53 | 95.64 | 95.39 |
| 100.01 | - 125 | 14,009 | 70,766 | 9,103 | 1,890 | 1,324 | 1,567 | 98,659 | 108.29 | 110.89 | 111.59 | 109.45 | 109.34 | 107.40 |
| 125.01 | - 150 | 5,031 | 41,600 | 27,711 | 1,634 | 1,503 | 598 | 78,077 | 136.27 | 140.21 | 134.38 | 141.04 | 136.80 | 136.16 |
| 150.01 | + | 7,659 | 33,604 | 13,064 | 4,179 | 13,278 | 4,649 | 76,432 | 215.09 | 230.44 | 271.45 | 248.73 | 290.12 | 330.40 |
| Total |  | 745,804 | 669,433 | 181,325 | 19,213 | 21,420 | 7,257 | 1,644,452 | \$34.69 | \$71.65 | \$81.50 | \$103.97 | \$209.54 | \$249.37 |


| PrescriptionCost Range |  | \% Utilization in Excess of Threshold |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Retail |  |  | Mail Order |  |  | Total |
|  |  | Generic | Brand Tier 1 | Brand Tier 2 | Generic | Brand Tier 1 | Brand Tier 2 |  |
| \$0 | - \$5 | 91\% | 98\% | 99\% | 98\% | 100\% | 100\% | 95\% |
| 5.00 | - 10 | 79\% | 94\% | 97\% | 95\% | 97\% | 100\% | 88\% |
| 10.01 | - 20 | 60\% | 87\% | 93\% | 84\% | 96\% | 99\% | 76\% |
| 20.01 | - 30 | 43\% | 80\% | 87\% | 78\% | 95\% | 99\% | 64\% |
| 30.01 | - 40 | 31\% | 70\% | 68\% | 68\% | 90\% | 98\% | 53\% |
| 40.01 | - 50 | 21\% | 62\% | 58\% | 65\% | 88\% | 97\% | 44\% |
| 50.01 | - 60 | 17\% | 54\% | 49\% | 60\% | 86\% | 97\% | 37\% |
| 60.01 | - 70 | 13\% | 47\% | 43\% | 55\% | 84\% | 96\% | 32\% |
| 70.01 | - 80 | 10\% | 33\% | 39\% | 49\% | 83\% | 95\% | 24\% |
| 80.01 | - 90 | 6\% | 26\% | 31\% | 46\% | 77\% | 94\% | 19\% |
| 90.01 | - 100 | 4\% | 22\% | 28\% | 40\% | 75\% | 94\% | 15\% |
| 100.01 | - 125 | 2\% | 11\% | 22\% | 30\% | 69\% | 72\% | 9\% |
| 125.01 | - 150 | 1\% | 5\% | 7\% | 22\% | 62\% | 64\% | 5\% |
| 150.01 | + | 0\% | 0\% | 0\% | 0\% | 0\% | 0\% | 0\% |

[1] Average Unadjusted AWP per Prescription is based on the AWP with no adjustment.
[2] Mail Order Number of Prescriptions and Average Allowed per Prescription represent the actual number of Mail Order prescriptions and their cost. These prescriptions have not been adjusted to a "Retail equivalent" basis. On a "Retail equivalent" basis, Mail Order would represent about 8\% of total utilization.

## Exhibit E

Society of Actuaries Medicare Pharmacy Study 10 Year Projection for Benefit Plan Scenario 12 Assumed Annual Trend of 17.4\% (No Indexing)

|  | 10 Year Projection Period |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| Total Medicare Eligibles [1] (in 000s) | 39,937 | 40,457 | 40,983 | 41,586 | 42,339 | 43,245 | 44,164 | 45,042 | 46,112 | 47,521 |
| Percentage in Rx Program [2] | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% |
| Estimated Medicare Eligibles in Rx Program | 39,937 | 40,457 | 40,983 | 41,586 | 42,339 | 43,245 | 44,164 | 45,042 | 46,112 | 47,521 |
| Estimated Allowed PMPM Costs: [3] |  |  |  |  |  |  |  |  |  |  |
| Up to Annual Maximum | \$77.46 | \$90.83 | \$104.28 | \$117.21 | \$129.47 | \$140.84 | \$151.18 | \$160.60 | \$169.00 | \$176.44 |
| Above Catastrophic Coverage Threshold | 2.31 | 4.13 | 7.34 | 12.68 | $\underline{21.51}$ | 35.47 | 56.49 | 87.45 | 131.81 | 191.91 |
| Net Plan Payment | \$79.77 | \$94.96 | \$111.62 | \$129.89 | \$150.98 | \$176.31 | \$207.67 | \$248.05 | \$300.81 | \$368.35 |
| Member Payment | \$70.87 | \$81.68 | \$95.58 | \$113.23 | \$134.35 | \$158.66 | \$185.65 | \$213.90 | \$241.84 | \$269.20 |
| Allowed Benefit Cost | \$150.64 | \$176.64 | \$207.20 | \$243.12 | \$285.33 | \$334.97 | \$393.32 | \$461.95 | \$542.65 | \$637.55 |
| Annual Rate of Trend in: [4] |  |  |  |  |  |  |  |  |  |  |
| Benefit Cost Paid by Plan |  | 19.0\% | 17.5\% | 16.4\% | 16.2\% | 16.8\% | 17.8\% | 19.4\% | 21.3\% | 22.5\% |
| Benefit Cost Paid by Member |  | 15.3\% | 17.0\% | 18.5\% | 18.7\% | 18.1\% | 17.0\% | 15.2\% | 13.1\% | 11.3\% |
| Allowed Benefit Cost |  | 17.3\% | 17.3\% | 17.3\% | 17.4\% | 17.4\% | 17.4\% | 17.4\% | 17.5\% | 17.5\% |
| Percent of Allowed Benefit Cost Paid by Member | 47\% | 46\% | 46\% | 47\% | 47\% | 47\% | 47\% | 46\% | 45\% | 42\% |
| Annual Benefit Cost Per Member | \$957 | \$1,140 | \$1,339 | \$1,559 | \$1,812 | \$2,116 | \$2,492 | \$2,977 | \$3,610 | \$4,420 |
| Annual Cost of Rx Program (in millions) | \$38,230 | \$46,101 | \$54,894 | \$64,819 | \$76,708 | \$91,494 | \$110,059 | \$134,073 | \$166,450 | \$210,054 |
| Cumulative Cost of Rx Program (in millions) | \$38,230 | \$84,331 | \$139,225 | \$204,044 | \$280,752 | \$372,247 | \$482,306 | \$616,379 | \$782,829 | \$992,882 |

[1] Source: CMS enrollment statistics for Part A.
[2] No breakdown between Fee-for-service Medicare and $M+C$ has been made since it is assumed that similar funding would be provided to any members in the $M+C$ program
We have also assumed that all eligibles will enroll in the program (I.e. mandatory enrollment) and that adverse selection will not take place.
[3] Based on pricing of benefits using Reden \& Ander's Prescription Drug Pricing Model. Reflect costs after discount from AWP and dispensing fees
[4] Trend assumptions as of 2003 are projected to apply for the entire time period.

```
Scenario 12 Plan Design:
    $10 generic, $25 Brand Tier 1, and
    greater of $40/50% Brand Tier 2
    greater of $40/50% B
    $6,000 maximum out-of-pocket
```


## Exhibit F. 1

Society of Actuaries Medicare Pharmacy Study 10 Year Projection for House Bill 1199 Proposal Assumed Annual Trend of 17.4\% (No Indexing)

|  | 10 Year Projection Period |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| Total Medicare Eligibles [1] (in 000s) | 39,937 | 40,457 | 40,983 | 41,586 | 42,339 | 43,245 | 44,164 | 45,042 | 46,112 | 47,521 |
| Percentage in Rx Program [2] | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% |
| Estimated Medicare Eligibles in Rx Program | 39,937 | 40,457 | 40,983 | 41,586 | 42,339 | 43,245 | 44,164 | 45,042 | 46,112 | 47,521 |
| Estimated Allowed PMPM Costs: [3] |  |  |  |  |  |  |  |  |  |  |
| Up to Annual Maximum | \$112.16 | \$131.89 | \$154.40 | \$179.82 | \$208.09 | \$238.82 | \$271.49 | \$305.46 | \$339.28 | \$371.79 |
| Above Catastrophic Coverage Threshold | 1.71 | $\underline{2.99}$ | 5.38 | 9.48 | 16.33 | $\underline{27.52}$ | 45.02 | 71.16 | 109.56 | 163.82 |
| Net Plan Payment | \$113.87 | \$134.88 | \$159.78 | \$189.30 | \$224.42 | \$266.34 | \$316.51 | \$376.62 | \$448.84 | \$535.61 |
| Member Payment | \$36.77 | \$41.76 | \$47.42 | \$53.82 | \$60.91 | \$68.63 | \$76.81 | \$85.33 | \$93.81 | \$101.94 |
| Allowed Benefit Cost | \$150.64 | \$176.64 | \$207.20 | \$243.12 | \$285.33 | \$334.97 | \$393.32 | \$461.95 | \$542.65 | \$637.55 |
| Annual Rate of Trend in: [4] |  |  |  |  |  |  |  |  |  |  |
| Benefit Cost Paid by Plan |  | 18.5\% | 18.5\% | 18.5\% | 18.6\% | 18.7\% | 18.8\% | 19.0\% | 19.2\% | 19.3\% |
| Benefit Cost Paid by Member |  | 13.6\% | 13.6\% | 13.5\% | 13.2\% | 12.7\% | 11.9\% | 11.1\% | 9.9\% | 8.7\% |
| Allowed Benefit Cost |  | 17.3\% | 17.3\% | 17.3\% | 17.4\% | 17.4\% | 17.4\% | 17.4\% | 17.5\% | 17.5\% |
| Percent of Allowed Benefit Cost Paid by Member | 24\% | 24\% | 23\% | 22\% | 21\% | 20\% | 20\% | 18\% | 17\% | 16\% |
| Annual Benefit Cost Per Member | \$1,366 | \$1,619 | \$1,917 | \$2,272 | \$2,693 | \$3,196 | \$3,798 | \$4,519 | \$5,386 | \$6,427 |
| Member Annual Premium [5] | \$275 | \$275 | \$275 | \$275 | \$275 | \$275 | \$275 | \$275 | \$275 | \$275 |
| Annual Net Cost After Member Premium | \$1,091 | \$1,344 | \$1,642 | \$1,997 | \$2,418 | \$2,921 | \$3,523 | \$4,244 | \$5,111 | \$6,152 |
| Annual Cost of Rx Program (in millions) | \$43,589 | \$54,356 | \$67,309 | \$83,030 | \$102,377 | \$126,322 | \$155,596 | \$191,179 | \$235,680 | \$292,366 |
| Cumulative Cost of Rx Program (in millions) | \$43,589 | \$97,945 | \$165,254 | \$248,284 | \$350,662 | \$476,984 | \$632,580 | \$823,759 | \$1,059,439 | \$1,351,806 |

[1] Source: CMS enrollment statistics for Part A
2] No breakdown between Fee-for-service Medicare and $\mathrm{M}+\mathrm{C}$ has been made since it is assumed that similar funding would be provided to any members in the $\mathrm{M}+\mathrm{C}$ program We have also assumed that all eligibles will enroll in the program (I.e. mandatory enrollment) and that adverse selection will not take place.
[3] Based on pricing of benefits using Reden \& Ander's Prescription Drug Pricing Model. Reflect costs after discount from AWP and dispensing fees
[4] Trend assumptions as of 2003 are projected to apply for the entire time period
[5] Adjusted to reflect less than 12 months of exposure.

```
House Bill 1199 Plan Design (Scenario 26) \$ 25 member premium
\(\$ 100\) deductible, then \(20 \%\) coinsurance
\$2,000 maximum out-of-pocket
```


## Exhibit F. 2

## Society of Actuaries Medicare Pharmacy Study <br> 10 Year Projection for House Bill 1199 Proposal <br> Assumed Annual Trend of 17.4\%

Assumes Cost Sharing Provisions are Indexed so Percent of Allowed Benefit Cost Paid by Member is Fixed at 25\%

|  | 10 Year Projection Period |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| Total Medicare Eligibles [1] (in 000s) | 39,937 | 40,457 | 40,983 | 41,586 | 42,339 | 43,245 | 44,164 | 45,042 | 46,112 | 47,521 |
| Percentage in Rx Program [2] | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% | 100\% |
| Estimated Medicare Eligibles in Rx Program | 39,937 | 40,457 | 40,983 | 41,586 | 42,339 | 43,245 | 44,164 | 45,042 | 46,112 | 47,521 |
| Estimated Allowed PMPM Costs: [3] |  |  |  |  |  |  |  |  |  |  |
| Net Plan Payment | \$112.98 | \$132.48 | \$155.40 | \$182.34 | \$214.00 | \$251.23 | \$294.99 | \$346.46 | \$406.99 | \$478.16 |
| Member Payment | 37.66 | 44.16 | $\underline{51.80}$ | 60.78 | $\underline{71.33}$ | 83.74 | $\underline{98.33}$ | 115.49 | 135.66 | 159.39 |
| Allowed Benefit Cost | \$150.64 | \$176.64 | \$207.20 | \$243.12 | \$285.33 | \$334.97 | \$393.32 | \$461.95 | \$542.65 | \$637.55 |
| Annual Rate of Trend in: [4] |  |  |  |  |  |  |  |  |  |  |
| Benefit Cost Paid by Plan |  | 17.3\% | 17.3\% | 17.3\% | 17.4\% | 17.4\% | 17.4\% | 17.4\% | 17.5\% | 17.5\% |
| Benefit Cost Paid by Member |  | 17.3\% | 17.3\% | 17.3\% | 17.4\% | 17.4\% | 17.4\% | 17.4\% | 17.5\% | 17.5\% |
| Allowed Benefit Cost |  | 17.3\% | 17.3\% | 17.3\% | 17.4\% | 17.4\% | 17.4\% | 17.4\% | 17.5\% | 17.5\% |
| Percent of Allowed Benefit Cost Paid by Member | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% | 25\% |
| Annual Benefit Cost Per Member | \$1,356 | \$1,590 | \$1,865 | \$2,188 | \$2,568 | \$3,015 | \$3,540 | \$4,158 | \$4,884 | \$5,738 |
| Member Annual Premium [5] | \$275 | \$275 | \$275 | \$275 | \$275 | \$275 | \$275 | \$275 | \$275 | \$275 |
| Annual Net Cost After Member Premium | \$1,081 | \$1,315 | \$1,590 | \$1,913 | \$2,293 | \$2,740 | \$3,265 | \$3,883 | \$4,609 | \$5,463 |
| Annual Cost of Rx Program (in millions) | \$43,163 | \$53,191 | \$65,155 | \$79,557 | \$97,082 | \$118,480 | \$144,191 | \$174,879 | \$212,521 | \$259,607 |
| Cumulative Cost of Rx Program (in millions) | \$43,163 | \$96,354 | \$161,509 | \$241,065 | \$338,147 | \$456,627 | \$600,818 | \$775,697 | \$988,219 | \$1,247,825 |

[1] Source: CMS enrollment statistics for Part A.
[2] No breakdown between Fee-for-service Medicare and $M+C$ has been made since it is assumed that similar funding would be provided to any members in the $M+C$ program We have also assumed that all eligibles will enroll in the program (I.e. mandatory enrollment) and that adverse selection will not take place.
[3] Based on pricing of benefits using Reden \& Ander's Prescription Drug Pricing Model. Reflect costs after discount from AWP and dispensing fees.
[4] Trend assumptions as of 2003 are projected to apply for the entire time period.
[5] Adjusted to reflect less than 12 months of exposure.

```
House Bill 1199 Plan Design (Scenario 26):
\$ 25 member premium
\(\$ 100\) deductible, then \(20 \%\) coinsurance
\(\$ 2,000\) maximum out-of-pocket
```


## Exhibit F. 3

Society of Actuaries Medicare Pharmacy Study 10 Year Projection for House Bill 1199 Proposal Assumed Annual Trend of 10.2\% (No Indexing)

[1] Source: CMS enrollment statistics for Part A
2] No breakdown between Fee-for-service Medicare and $\mathrm{M}+\mathrm{C}$ has been made since it is assumed that similar funding would be provided to any members in the $\mathrm{M}+\mathrm{C}$ program We have also assumed that all eligibles will enroll in the program (I.e. mandatory enrollment) and that adverse selection will not take place.
[3] Based on pricing of benefits using Reden \& Ander's Prescription Drug Pricing Model. Reflect costs after discount from AWP and dispensing fees
[4] Trend assumptions as of 2003 are projected to apply for the entire time period
[5] Adjusted to reflect less than 12 months of exposure.

```
House Bill 1199 Plan Design (Scenario 26) \$ 25 member premium
\(\$ 100\) deductible, then \(20 \%\) coinsurance
\$2,000 maximum out-of-pocket
```

Exhibit G
Society of Actuaries Medicare Pharmacy Study Example for Estimating Varying Trend

|  | 2003 | 2004 | 2005 |
| :---: | :---: | :---: | :---: |
| Baseline Values from Exhibit E |  |  |  |
| 1. Allowed Cost PMPM | \$150.64 | \$176.64 | \$207.20 |
| 2. \% Paid by Member | 47.0\% | 46.2\% | 46.1\% |
| 3. Benefit Plan Factor (100\%-2.) | 53.0\% | 53.8\% | 53.9\% |
| 4. Cumulative Trend Factor | 1.000 | 1.173 | 1.375 |
| 5. Eligibles in Rx Program | 39,937 | 40,457 | 40,983 |
| Revised Assumptions |  |  |  |
| 6. Annual Trend Rate |  | 8.5\% | 8.5\% |
| 7. Cumulative Trend Factor | 1.000 | 1.085 | 1.177 |
| 8. Benefit Plan Factor [1] | 53.0\% | 53.5\% | 53.7\% |
| New Values |  |  |  |
| 9. Allowed Cost PMPM (1. x (7./4.)) | \$150.64 | \$163.44 | \$177.34 |
| 10. Net Plan Payment (8. x 9.) | \$79.77 | \$87.44 | \$95.23 |
| Annual Benefit Cost Per Member | \$957 | \$1,049 | \$1,143 |
| Annual Cost of Rx Program (in millions) | \$38,230 | \$42,452 | \$46,834 |
| Cumulative Cost of Rx Program (in millions) | \$38,230 | \$80,681 | \$127,515 |

[1] This is a somewhat subjective adjustment. A plan design like this one (based on copays) indicates that the factor should increase over time; however, the Catastrophic Coverage threshold caps the member's total cost. Base on Exhibit E, these two opposing effects result in a steady relationship between the plan's and member's costs until 2012 and 2013, so a lower trend would prolong that steady relationship into additional years.

Exhibit H

## Society of Actuaries Medicare Pharmacy Study

 Example for Estimating Rebate Value|  |  |  |  |
| :--- | ---: | ---: | ---: |
|  | 2003 | 2004 | 2005 |
| Baseline Values from Exhibit E |  |  |  |
| 1. Allowed Cost PMPM | $\$ 150.64$ | $\$ 176.64$ | $\$ 207.20$ |
| 2. Net Plan Payment | $\$ 79.77$ | $\$ 94.96$ | $\$ 111.62$ |
| 3. $\quad$ Eligibles in Rx Program | 39,937 | 40,457 | 40,983 |
| Estimated Value of Rebates |  |  |  |
| 4. As \% of Allowed Cost PMPM | $4.0 \%$ | $4.0 \%$ | $4.0 \%$ |
| 5. Cost Reduction via Rebates | $\$ 6.03$ | $\$ 7.07$ | $\$ 8.29$ |
| New Values |  |  |  |
| 6. Net Plan Payment (2. - 5.) | $\$ 73.74$ | $\$ 87.89$ | $\$ 103.33$ |
|  |  |  |  |
| Annual Benefit Cost Per Member | $\$ 885$ | $\$ 1,055$ | $\$ 1,240$ |
| Annual Cost of Rx Program (in millions) | $\$ 35,342$ | $\$ 42,671$ | $\$ 50,818$ |
| Cumulative Cost of Rx Program (in millions) | $\$ 35,342$ | $\$ 78,013$ | $\$ 128,831$ |

## Exhibit I

## Society of Actuaries Medicare Pharmacy Study Example for Estimating Varying Generic Usage

|  | 2003 | 2004 | 2005 |
| :---: | :---: | :---: | :---: |
| Baseline Values from Exhibit E [1] |  |  |  |
| 1. Allowed Cost PMPM | \$150.64 | \$176.64 | \$207.20 |
| 2. Net Plan Payment | \$79.77 | \$94.96 | \$111.62 |
| 3. Eligibles in Rx Program | 39,937 | 40,457 | 40,983 |
| Alternate Generic/Brand Distribution [2] |  |  |  |
| 4. Utilization 11,000 | 38,338 | 41,022 | 43,893 |
| 5a. Generic Mix | 30\% | 35\% | 40\% |
| 5b. Brand Mix | 70\% | 65\% | 60\% |
| 6a. Generic Allowed \$/Script | \$21.85 | \$24.04 | \$26.44 |
| 6b. Brand Allowed \$/Script | \$69.16 | \$76.08 | \$83.68 |
| New Values [3] |  |  |  |
| 7. Allowed PMPM (4. $\times 5 \mathrm{a} . \times 6 \mathrm{c} .+4 . \times 5 \mathrm{~b} . \times 6 \mathrm{~b}.) / 12000$ ) | \$175.61 | \$197.80 | \$222.34 |
| 8. Benefit Plan Factor (2. / 1.) | 0.530 | 0.538 | 0.539 |
| 9. Net Plan Payment (7. x 8.) | \$92.99 | \$106.33 | \$119.78 |
| Annual Benefit Cost Per Member | \$1,116 | \$1,276 | \$1,437 |
| Annual Cost of Rx Program (in millions) | \$44,567 | \$51,624 | \$58,905 |
| Cumulative Cost of Rx Program (in millions) | \$44,567 | \$96,190 | \$155,095 |

[1] The baseline projection has total utilization of 38,338 for an unlimited benefit, and a generic/brand mix of $46.5 \% / 53.5 \%$ (derived per Exhibit C.1).
[2] Allowed cost per script figures are derived from Exhibit C.1. Utilization and cost trends use the baseline assumptions ( $7 \%$ and $10 \%$, respectively). The only change from baseline is the relative mix of generic and brand name.
[3] Assumes the Generic and Brand Allowed \$/Script are the same for both the baseline projection and the revised generic/brand name projection.

Exhibit J
Society of Actuaries Medicare Pharmacy Study List of Top 50 Brand Tier 2 Drugs by Allowed Amount

|  | Percent of <br> Brand Tier 2 <br> Utilization | Percent of <br> Brand Tier 2 <br> Allowed |
| :--- | ---: | ---: |
| Drug Name | $10.4 \%$ | $15.7 \%$ |
| ZOCOR | $9.8 \%$ | $13.8 \%$ |
| CELEBREX | $5.9 \%$ | $9.7 \%$ |
| PRILOSEC | $16.4 \%$ | $6.2 \%$ |
| PRINIVIL | $0.0 \%$ | $2.5 \%$ |
| OXANDRIN | $3.5 \%$ | $1.9 \%$ |
| COZAAR | $0.2 \%$ | $1.9 \%$ |
| PROCRIT | $1.8 \%$ | $1.8 \%$ |
| ULTRAM | $0.4 \%$ | $1.6 \%$ |
| CASODEX | $0.4 \%$ | $1.6 \%$ |
| MEGACE | $0.9 \%$ | $1.5 \%$ |
| PEPCID | $1.3 \%$ | $1.5 \%$ |
| DITROPAN XL | $1.9 \%$ | $1.4 \%$ |
| TAMOXIFEN CITRATE | $2.3 \%$ | $1.2 \%$ |
| HYZAAR | $2.7 \%$ | $1.1 \%$ |
| PRINZIDE | $0.8 \%$ | $1.1 \%$ |
| RELAFEN | $2.5 \%$ | $1.1 \%$ |
| PLENDIL | $1.0 \%$ | $1.1 \%$ |
| PLETAL | $0.8 \%$ | $1.0 \%$ |
| OCUFLOX | $0.4 \%$ | $0.8 \%$ |
| AXID | $0.5 \%$ | $0.8 \%$ |
| SEROQUEL | $0.4 \%$ | $0.8 \%$ |
| MIRAPEX | $1.4 \%$ | $0.7 \%$ |
| DEMADEX | $0.7 \%$ | $0.7 \%$ |
| ELOCON | $1.5 \%$ | $0.7 \%$ |
| LESCOL |  |  |


| Drug Name | Percent of <br> Brand Tier 2 <br> Utilization | Percent of <br> Brand Tier 2 <br> Allowed |
| :--- | ---: | ---: |
| FAMVIR | $0.2 \%$ | $0.7 \%$ |
| TIAZAC | $1.1 \%$ | $0.6 \%$ |
| AZMACORT | $0.6 \%$ | $0.6 \%$ |
| TRUSOPT | $1.0 \%$ | $0.6 \%$ |
| EPOGEN | $0.0 \%$ | $0.5 \%$ |
| DOVONEX | $0.2 \%$ | $0.5 \%$ |
| DIPROLENE AF | $0.3 \%$ | $0.5 \%$ |
| NASACORT AQ | $0.4 \%$ | $0.4 \%$ |
| AGRYLIN | $0.1 \%$ | $0.4 \%$ |
| ARTHROTEC 75 | $0.3 \%$ | $0.4 \%$ |
| REQUIP | $0.3 \%$ | $0.4 \%$ |
| SINEMET CR | $0.2 \%$ | $0.4 \%$ |
| NITRO-DUR | $0.5 \%$ | $0.4 \%$ |
| NULYTELY | $0.4 \%$ | $0.3 \%$ |
| PERMAX | $0.1 \%$ | $0.3 \%$ |
| MEVACOR | $0.3 \%$ | $0.3 \%$ |
| ATACAND | $0.7 \%$ | $0.3 \%$ |
| EULEXIN | $0.1 \%$ | $0.3 \%$ |
| XOPENEX | $0.1 \%$ | $0.3 \%$ |
| ZANAFLEX | $0.2 \%$ | $0.3 \%$ |
| BLEPHAMIDE | $0.2 \%$ | $0.3 \%$ |
| MIRALAX | $0.4 \%$ | $0.2 \%$ |
| THEO-DUR | $0.8 \%$ | $0.2 \%$ |
| ZANTAC | $0.1 \%$ | $0.2 \%$ |
| DIPROLENE | $0.1 \%$ | $0.2 \%$ |
| Total | $76.4 \%$ | $81.9 \%$ |


[^0]:    Notice and Disclaimer: Regarding the appearance of trade names of prescription drugs in the report, nothing herein implies any endorsement or certification, either directly or indirectly, by SOA and R\&A of any programs, products, services or companies. Trade names of prescription drugs listed in the report are the property of their respective manufacturers. SOA and R\&A assume no responsibility or liability in connection with the appearance or omission of any information herein.

