Appendix F. Maryland Health Care Reform Financial Modeling Tool: Detailed Analysis and Methodology

Introduction

Federal health care reform and states’ implementation of its mandates will have an enormous fiscal impact on health care costs and savings in both the public and private sectors. Any current and future projections about relative costs and savings necessarily will be fluid and dependent on the various choices and decisions states make in implementing reform, as well as how various components of the delivery system—from the insurance markets to providers and consumers—respond to the reforms as they evolve.

Consequently, the goal of the financial modeling tool is to create a dynamic micro-simulation tool that may be updated to make projections that can be adapted and updated as data become available, as conditions and factors change over time, and as decisions are made by policymakers, employers, and consumers.

The financial modeling tool focuses on the new costs, savings, and revenues that are related to health care reform. As a result, the basic approach was to compare the new costs, savings, and revenues associated with health care reform against a baseline assumption of what those costs, savings, and revenues would have been, in the absence of health reform.

In reading the following methods statement, keep in mind the following:

- The financial modeling tool will be updated as actual data and decisions emerge.
- The financial modeling tool does not address the baseline budget, including the ongoing short-term challenges in Maryland’s budget related to the growth in the Medicaid enrollment and other factors. Because these factors are independent of health care reform, and are not an implication of health care reform itself, they are omitted from the modeling tool.
- The financial modeling tool deliberately was designed to conservatively estimate savings. For example, the tool does not include projected savings to Medicaid (as a payer) as the portion of uncompensated care built into hospital rates declines, once more people have coverage. As another example, the tool does not include potential federal grants that might address certain infrastructure-building needs; these start-up infrastructure costs are included in the tool as state costs.
- The program-by-program and year-by-year effects are found on the final two pages of this Appendix. In those final two pages, the projected final financial results are found on page F-23, and the projected newly insured and enrolled individuals are found on page F-24.
Sources and Methods

The Hilltop Institute used the following methodology to develop the financial modeling tool estimates for the state-government impact of implementing health care reform in Maryland.

Data Development

To derive the number of individuals who are eligible for the current Medicaid program and Primary Adult Care (PAC) program, we used the following methodology and data sources to estimate Maryland population by age group, disability status, and federal poverty level (FPL) status.

1. The Maryland Department of Planning published population projections for Maryland by age group through the year 2020, as shown in Table 1. The population projections were made in February 2009. Because population projections are in five-year increments, we used statistical methods to derive the population estimates by age groups for the years in between.

   Table 1. Maryland Population Projections by Age Group

<table>
<thead>
<tr>
<th>Selected Age Groups</th>
<th>2000</th>
<th>2005</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>353,393</td>
<td>370,180</td>
<td>387,410</td>
<td>406,830</td>
<td>421,770</td>
</tr>
<tr>
<td>5-19</td>
<td>1,139,572</td>
<td>1,197,000</td>
<td>1,187,380</td>
<td>1,204,340</td>
<td>1,252,630</td>
</tr>
<tr>
<td>20-44</td>
<td>1,978,806</td>
<td>1,930,470</td>
<td>1,878,310</td>
<td>1,948,460</td>
<td>2,015,150</td>
</tr>
<tr>
<td>45-64</td>
<td>1,225,408</td>
<td>1,433,590</td>
<td>1,600,200</td>
<td>1,656,860</td>
<td>1,623,030</td>
</tr>
<tr>
<td>65+</td>
<td>599,307</td>
<td>646,230</td>
<td>726,070</td>
<td>870,360</td>
<td>1,026,720</td>
</tr>
<tr>
<td>Total</td>
<td>5,296,486</td>
<td>5,577,470</td>
<td>5,779,380</td>
<td>6,086,840</td>
<td>6,339,290</td>
</tr>
</tbody>
</table>

Source: Maryland Department of Planning, 2009.

2. The U.S. Bureau of Census published data from the American Community Survey (ACS) for Maryland by age group and FPL status. The ACS data were used in conjunction with the population projection data from the Maryland Department of Planning to forecast estimates of population by FPL status. For projecting population by FPL status, we utilized research that has demonstrated that FPL status is related to the unemployment rate (Gruber & Levitt, 2002). We then developed a statistical model that forecasted the Maryland unemployment rate as a function of the national unemployment rate. Then we used the long-term economic forecast published by the Congressional Budget Office (CBO) entitled “The Budget and Economic Outlook: Fiscal Years 2010 to 2020,” which forecasted the national unemployment rate. Using the CBO unemployment level forecast, and the relationship between Maryland and US unemployment levels, we used our statistical model to forecast the Maryland unemployment rate through 2020. The CBO projected that the national unemployment rate will be approximately 5 percent between 2016 and 2020. Accordingly, the Maryland unemployment rate, which is statistically below the national average in the model, is forecasted to be approximately 3.9 percent from 2016 through 2020.
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3. The ACS data for Maryland provide estimates of population distribution by disability and FPL statuses. From ACS data, Table 2 shows the disability and FPL statuses of the Maryland population for the period of 2005 to 2007.

### Table 2. Disability and FPL Statutes of the Maryland Population, 2005-2007

<table>
<thead>
<tr>
<th>Population for whom poverty status is determined</th>
<th>Total</th>
<th>Below 50 percent of the FPL</th>
<th>Below 100 percent of the FPL</th>
<th>Below 125 percent of the FPL</th>
</tr>
</thead>
<tbody>
<tr>
<td>5,456,359</td>
<td></td>
<td>3.9%</td>
<td>8.2%</td>
<td>10.9%</td>
</tr>
<tr>
<td>DISABILITY STATUS</td>
<td>% of Total Population</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any disability</td>
<td>13.1%</td>
<td>6.3%</td>
<td>16.9%</td>
<td>22.3%</td>
</tr>
<tr>
<td>No disability</td>
<td>86.9%</td>
<td>3.3%</td>
<td>6.7%</td>
<td>8.9%</td>
</tr>
<tr>
<td>100.0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2 shows that during the 2005 to 2007 period, 3.9 percent of the Maryland population was below 50 percent of the FPL, 8.2 percent was below 100 percent of the FPL, and 10.9 percent was below 125 percent of the FPL. Data in the table further indicate that 13.1 percent of the Maryland population had a disability, of which 6.3 percent was below 50 percent of the FPL, and 86.9 percent of the population had no disability, of which 3.3 percent was below 50 percent of the FPL. Similarly, 16.9 percent of the population with a disability and 6.7 percent of the population with no disability was below 100 percent of the FPL. Furthermore, 22.3 percent of the population with a disability and 8.9 percent of the population with no disability was below 125 percent of the FPL.

The data in Table 3 (derived from Table 2) indicate that 6.3 percent of the population with a disability was below 50 percent of the FPL, 10.6 percent was between 50 and 100 percent of the FPL, and 5.4 percent was between 100 and 125 percent of the FPL. In comparison, 3.3 percent of the population without a disability was below 50 percent of the FPL, 3.4 percent was between 50 and 100 percent of the FPL, and 2.2 percent was between 100 and 125 percent of the FPL. This shows that disability status and poverty status are related; people with disabilities are more likely to be low-income.

### Table 3. Disability Status of the Maryland Population, 2005-2007

<table>
<thead>
<tr>
<th>Disability Status</th>
<th>Below 50 percent of the FPL</th>
<th>Between 50 and 100 percent of the FPL</th>
<th>Between 100 and 125 percent of the FPL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any disability</td>
<td>6.3%</td>
<td>10.6%</td>
<td>5.4%</td>
</tr>
<tr>
<td>No disability</td>
<td>3.3%</td>
<td>3.4%</td>
<td>2.2%</td>
</tr>
</tbody>
</table>

4. We used these data in conjunction with the data described above to derive estimates and project population by age group, disability, and poverty status for the 2010 to 2020 period. Next, we derived estimates of projected population below 116 percent of the FPL (a current Medicaid eligibility level) based on the number of people below 50 percent of the FPL plus a proportion of the number of people between 50 and 125 percent of the FPL.
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5. In the next step, we used actual Medicaid enrollment data to derive participation rates for
the population with a disability and the population with no disability. We first projected
Medicaid enrollment by disability status without health care reform in order to establish a
pre-health reform baseline. Then we derived projections of Medicaid enrollment by
disability status under current laws, where changes in Medicaid enrollment primarily
would reflect changes in economic conditions, and increases in Maryland’s overall
population, by age group and poverty status.

6. We also used actual enrollment in the PAC program to derive the participation rate of
adults in this program and to project their enrollment with constant take-up rates through
the forecasted period.

7. Subsequently, we assumed that to implement health care reform in Maryland, the state
will employ aggressive outreach programs in order to maximize enrollment of currently
eligible individuals who have not participated in the Medicaid program (this method was
utilized to project the woodwork effect: the increase in Medicaid enrollment in current
eligibility groups from the baseline, beginning in 2014, based on health reform effects
such as the Medicaid expansion, the individual mandate, and the creation of the insurance
exchange). We assumed that the people enrolling due to the woodwork effect would have
a slightly better health status than the existing Medicaid enrollment; in other words, we
assumed that take-up is related to health status (i.e., selection bias) (The Henry J. Kaiser
Family Foundation, 2010), such that the people enrolling due to the woodwork effect will
be slightly less disabled/poor health status than the baseline Medicaid enrollment.
Consequently, we assumed eligible individuals with a disability will have largely enrolled
in the Medicaid program by 2014, and that there will be small increases in participation
rates for people with a disability in 2015 and 2016. We also assumed modest increases in
participation rates for the population with no disability. However, consistent with
historical trends, we assumed that enrollment of childless adults with incomes below 116
percent of the FPL into the PAC program would increase substantially in 2014, 2015, and
2016, as the Medicaid benefit package available to these individuals becomes much more
comprehensive, and fulfills many of their unmet needs (Mathematica, 2009).1

8. For all groups of Medicaid-eligible individuals, we assumed that the increase in
enrollment of Medicaid expansion and Medicaid woodwork will have been completed by
2017, and that the growth in these cohorts from 2017 to 2020 would reflect normal
enrollment trends, where changes in the Medicaid enrollment would reflect changes in
economic conditions and the increase in the overall size of the eligible population based
on population growth in Maryland (by age group and FPL status). From the differences
between these enrollment projections, we derived the percentage of the currently eligible
population that would enroll in the Medicaid program (the woodwork effect). It should be
noted that because childless adults enrolled in PAC do not have coverage for hospital
services or a comprehensive benchmark benefit package, these individuals would be

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1 With a more expansive benefits package available, there was substantial growth in enrollment through the
Medicaid Buy-In program for individuals with disabilities from 2002 through 2005.
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considered part of the Medicaid Expansion population beginning in January 2014. As such, this population’s projected costs are included in the Medicaid Expansion costs.

To derive the number of individuals who would be eligible for Medicaid Expansion, we estimated the uninsured population by age group and FPL status, as follows.

1. The Maryland Health Care Commission (MHCC) (2010) conducted a survey and estimated the number of the uninsured population by age group and income as a percentage of FPL status. Because of data limitations, the MHCC break-down of the uninsured population was by broad FPL income categories (see Table 4).

<table>
<thead>
<tr>
<th>Age</th>
<th>Low Income (0% – &lt;200%)</th>
<th>Lower Moderate Income (200% –&lt;400%)</th>
<th>Higher Moderate to High Income (400% +)</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–18</td>
<td>10%</td>
<td>5%</td>
<td>3%</td>
<td>18%</td>
</tr>
<tr>
<td>19–34</td>
<td>18%</td>
<td>16%</td>
<td>10%</td>
<td>43%</td>
</tr>
<tr>
<td>35–64</td>
<td>17%</td>
<td>14%</td>
<td>8%</td>
<td>39%</td>
</tr>
<tr>
<td>All</td>
<td>45%</td>
<td>35%</td>
<td>20%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Maryland Health Care Commission.

2. The ACS data for Maryland were used in conjunction with MHCC data to derive estimates of the uninsured population by FPL status that correspond to Medicaid Expansion percentages of the FPL (i.e., up to 133 percent FPL).

3. We divided the estimated number of uninsured people in each age group and FPL status category by its corresponding total population in the same age group in order to derive the percentage of people in each age group who are uninsured and below certain FPL levels. This created a table that can be applied to the total population by age group in order to derive the number of uninsured by age group and FPL status.

4. Because the ACS data correspond to the 2006 to 2008 period, and MHCC data correspond to the 2007 to 2008 period, which were both before the start of the recent economic recession, the data that we derived correspond to more prosperous economic conditions than currently exist in Maryland. Therefore, we estimated an additional set of data that would correspond to recession conditions in 2010, in order to update the MHCC and ACS data and bring them current. Based on an analysis prepared by Jonathan Gruber of the Massachusetts Institute of Technology and National Bureau of Economic Research (NBER) and Larry Levitt of the Kaiser Family Foundation, the estimates for the percentage point change in the uninsured rate for each percentage point change in unemployment, using alternative statistical approaches, range from 0.43 to 0.57. We used a midpoint estimate between their respective approaches, or 0.50, for the analysis here. The statistical model shows that as the unemployment rate increases, the number of people with employer-sponsored insurance falls and the number of people with public coverage (like Medicaid) rises, though not enough to fully absorb the impact of the decline in employer coverage. This dynamic helps to explain the rapid growth in Medicaid
enrollment in recent years, as the expansion for parents has coincided with the economic downturn. Based on data from the Maryland Department of Labor, Licensing and Regulation’s (DLLR’s) Division of Workforce Development and Adult Learning, the Maryland unemployment rate average was about 4 percent in the 2007 to 2008 period. The Maryland average unemployment rate was about 7 percent in 2009. Based on our use of the midpoint estimate of .050, this 3 percent increase in the unemployment rate from the base period to the current period caused an estimated 1.5 percent increase in the uninsured rate. We used this estimate to derive the percentage of people in each age group who are uninsured and below certain FPL levels in the current economic recession. This method also addresses the so-called crowd-out effect (or substitution effect), where people formerly covered by employer-sponsored insurance enroll in Medicaid and the Maryland Children’s Health Program (MCHP).

5. To project the uninsured population, as discussed above, we first estimated statistical models for forecasting the Maryland unemployment rate as a function of the national unemployment rate. Then we used the long-term economic forecast published by the CBO that estimated the national unemployment rate. Subsequently, as discussed above, we forecasted the Maryland unemployment rate through 2020. To derive the number of uninsured individuals by age group and FPL status who would be eligible for coverage under Medicaid Expansion, we multiplied population projections by the numbers in Tables 3 and 4. This provided projections of the uninsured population by age group and FPL status for 2010 through 2020. We also used ACS 2005 to 2007 data for population break-down by disability and FPL statuses to derive projections of the uninsured populations by age groups and disability and FPL statuses for the 2010 to 2020 period.

6. In subsequent steps, we applied the percentage of the Maryland population that has U.S. citizenship in order to derive the number of people who would be eligible for Medicaid Expansion. Then we used participation rates by FPL status to project the number of people, by disability and FPL statuses, who would enroll in Medicaid Expansion.

The data described above constitute the population model database for projecting costs of implementing health care reform in Maryland.

In the remainder of this methods document, we will explain the specific components for each estimate in each row and column in the spreadsheet.

A. Increased Costs

A.1. Estimating the Cost of Medicaid Expansion

To derive the number of new enrollees who would become eligible after Medicaid Expansion in 2014, we looked at the estimated number of uninsured people aged 21 to 64 years by disability status who are under 134 percent of the FPL. Currently, parents with incomes below 116 percent of the FPL are eligible for enrollment in the Maryland Medicaid program. Therefore, we only included, in the Medicaid Expansion population, those adults with no disability whose incomes are between 116 and 133 percent of the FPL; plus those childless
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adults below 134 percent of the FPL. Next, we multiplied the number of people in each FPL category by 88 percent\(^2\) to derive the estimated number of U.S. citizens who would be eligible for Medicaid. We then multiplied the resulting number by Medicaid take-up (participation) rates to project the number of new enrollees. We assumed that the Medicaid take-up rate is 90 percent for people with incomes under 50 percent of the FPL, and 70 percent for people with incomes between 50 and 133 percent of the FPL. This is consistent with the assumption that the state of Maryland will implement aggressive outreach programs in 2014 and subsequent years. The estimated take-up rates of 90 percent for people with incomes below 50 percent of the FPL, and 70 percent for people between 50 and 133 percent of the FPL, are based on publications by King, Slifkin, and Holmes (2009) and Selden, Banthin, and Cohen (1998). Based on recent evidence from health care reform in Massachusetts, we included minimal effects of crowd-out of private insurance coverage, beyond the economic and unemployment factors, to avoid double-counting the effects (Long & Stockley, 2010).

We used the following formula to derive the costs of the Medicaid program with Medicaid Expansion for each year of the 2014 to 2020 period.

**Costs of Medicaid Expansion in year i =**

\[
\text{Costs of Medicaid Expansion in year } i = \frac{\text{Number of New Medicaid Enrollees from Medicaid Expansion in year } i}{\text{Multiplying by}} \frac{\text{Average Health care Costs per Medicaid Enrollee in year } i}{\text{Average Health care Costs per Medicaid Enrollee in year } i}
\]

To project the average health care cost per Medicaid enrollee, we used HealthChoice capitation rates, by age group, for a base year (FY 2010). For the projected new eligibles who do not have a disability, we used weighted average capitation rates, plus fee-for-service wraparound costs, derived from the Families and Children rate payment categories in HealthChoice. On a weighted average basis, the actual per member per year cost in the Families and Children cohort was $7,174—$5,486 of which was capitated payments to MCOs.

For the projected new eligibles who have a disability, we also used weighted average capitation rates, plus fee-for-service wraparound costs, derived from the disabled rate payment categories in HealthChoice. On a weighted average basis, the actual per member per year cost in the Disabilities cohort was $19,407—$17,719 of which was capitated payments to MCOs.

Next, we trended these per capita costs into each of the fiscal years in the financial modeling tool. CMS published *National Health Expenditure Projections 2009-2019*, which includes forecasts of “Medical Price Deflator” and other health care expenditures that we used for projecting the costs associated with implementing health care reform in Maryland for the period 2010-2019. We used this “Medical Price Deflator” to trend the base year (2010) capitation rates to 2014 and subsequent years, to reflect the projected trend in increased medical costs (on a per capita basis) during the period. As shown in the formula above, by multiplying the projected number of new Medicaid enrollees from Medicaid Expansion in

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\(^2\) The 88 percent estimate of citizenship status is based on ACS data.
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each year by the corresponding projections of health care costs, by disability status, we were able to project the total costs of Medicaid expansions in each year.

To estimate the state’s share of the Medicaid Expansion costs, we multiplied annual total costs of Medicaid Expansion by (1 minus the Federal Financial Participation (FFP) rate) for Medicaid Expansion. The FFP rate for Medicaid Expansion enrollees will be 100 percent in federal fiscal year (FFY) 2014 through FFY 2016; it will decrease to 95 percent in FFY 2017, 94 percent in FFY 2018, 93 percent in FFY 2019, and 90 percent in FFY 2020 and later years. We adjusted the FFP rates to convert federal fiscal years to state fiscal years by weighting FFPs for consecutive federal fiscal years (the federal fiscal year is October 1 through September 30; the state fiscal year is July 1 through June 30).

Estimating Cost Savings of the PAC/Childless Adult Program

The current PAC program includes childless adults who currently receive a limited health care benefit package that includes primary care physician services, pharmacy services, over-the-counter medications with a doctor’s order, family planning and gynecological services, mental health services delivered by a PCP, community-based substance abuse services, and outpatient emergency room services. As noted above, because PAC enrollees do not have coverage for hospital services, after implementation of the Medicaid Expansion in January 2014, these individuals will be considered part of the Medicaid Expansion population. They will be enrolled in Medicaid and will receive the full Medicaid benefit package. The state will receive enhanced FFP rates for their entire benefits. Therefore, the transition of current childless adults in PAC into the Medicaid Expansion will generate projected savings, as the current costs, which are matched at the standard 50 percent FFP level, instead are matched at the enhanced Medicaid Expansion FFP level, beginning in January 2014. Therefore, these savings, related to the conversion of current PAC-related costs for childless adults to a more favorable FFP for the state, are included in the Medicaid Expansion line of the financial model.

To reiterate, PAC program cost savings emanate from enhanced FFP rates under the health care reform law. Currently, 50 percent of PAC expenditures are funded by the state of Maryland. To forecast savings related to the PAC program, we projected the number of PAC childless adult enrollees based on the number of adults with incomes below 116 percent of the FPL, as described above. Then we projected current PAC capitation rates through the year 2020, as if health reform did not occur, using the “Medical Price Deflator” from CMS. This was necessary to develop the baseline expenditures for PAC childless adults against which the effects of the new federal health reform law will be measured. We multiplied the projected number of PAC enrollees through 2020 by the projected annual capitation rates for the limited benefit package in PAC, to estimate PAC program baseline costs in absence of health care reform.

Next, to estimate the cost of PAC enrollees under health care reform, we multiplied projected PAC enrollment by the projected full-benefit annual capitation payments for enrollees with a disability. We derived this number from the weighted average HealthChoice capitation rates, with the fee-for-service wraparound costs, for the disability cohort, as described above. Then
we multiplied total cost projections by 1 minus the FFP rates under health care reform law to derive the PAC program cost for childless adults to states under health care reform. Differences between PAC program costs based on health care reform, compared to the PAC program costs for childless adults without health care reform, with the related differential FFPs, represent the cost savings to Maryland related to the childless adults enrolled in the baseline PAC program. As mentioned above, these cost savings are added to the Medicaid Expansion cost estimates to derive the net costs of Medicaid Expansion under the health care reform law. Based on these methods and our data sources, as of July 15, 2010, the estimated cost of Medicaid Expansion (including the PAC program) for FY 2014 through FY 2020 was $126 million. This figure is reflected as the midpoint cost on the spreadsheet.

A.2. Estimating Costs of the Medicaid Woodwork Effect

Recent research demonstrates that knowledge gaps among parents partially explain why children of low-income families remain without health insurance. For example, one study (Kenney, Haley, & Tebay, 2003) showed that nearly 30 percent of low-income parents had not heard of SCHIP and 40 percent did not understand that their children could be eligible for health coverage even if they were not enrolled in welfare. Additionally, an estimated 7 percent of uninsured children lack coverage because their parents do not think that they need it (Hill, Stockdale, Evert, & Gifford, 2006).

We estimated costs of the Medicaid “woodwork effect” using the same methodology that we used for Medicaid Expansion, as described above. We included the uninsured population in the 0-20 and 21-64 age categories as potential new enrollees. We also assumed that 88 percent of the uninsured populations are U.S. citizens.\(^3\)

As our primary source document to estimate the size of the woodwork effect in Maryland, we used a May 2010 report produced by the Henry J. Kaiser Family Foundation and authored by John Holahan and Irene Headen of the Urban Institute. This report estimated state-by-state woodwork effects (in dollars).

The Kaiser analysis examined two participation rate scenarios:

1. **Standard Participation Scenario.** This scenario attempts to approximate participation rates used by the CBO to estimate the national impact of Medicaid Expansion and then examines the results by state. These results assume moderate levels of participation similar to current experience among those made newly eligible for coverage and little additional participation among those currently eligible. This scenario assumes 57 percent participation among the newly eligible uninsured and lower participation across other coverage groups.

2. **Enhanced Outreach Scenario.** This scenario examines the impact and reach of Medicaid assuming a more aggressive outreach and enrollment campaign by federal and state governments and key stakeholders, including community-based

\(^3\) As mentioned in the Medicaid Expansion section, the 88 percent estimate is based on ACS data.
organizations and providers. This campaign would promote more robust participation among those newly eligible (75 percent participation among the newly eligible who are currently uninsured and lower participation across other coverage groups) and higher participation among those currently eligible for coverage than in the standard scenario.

From the Kaiser report we took the “low participation” estimate of the woodwork costs in Maryland ($176 million for 2014 to 2019, found in Table 6, page 40 of the report) and the “high participation” estimate of woodwork costs in Maryland ($648 million from 2014 to 2019, found in Table 10, page 44 of the report), and converted these estimates to enrollment levels, based on Maryland’s enrollment mix and per capita costs. We assumed that Maryland will actively seek to enroll all eligible individuals, thereby enrolling a high percentage of the potential woodwork population. Thus, we took, as our midpoint estimate in the financial model, the 75th percentile between the “low participation” and “high participation” levels. This translated to a woodwork enrollment of 33,540 at full ramp-up of health care reform in 2017. We then used statistical methods to forecast these effects through 2020, which is one year beyond the estimated costs in the Kaiser report. All of this is internally consistent because the 75th percentile of costs in the Kaiser report is $530 million from 2014 to 2019, which our model achieves. Expanding the woodwork to include 2020 added another $127 million. As of July 15, 2010, the estimated cost of the Medicaid woodwork effect for FY 2014 through FY 2020 was $657 million. This figure is reflected as the midpoint cost on the spreadsheet.

A.3. Medicaid and the Maryland Children’s Health Program Administration

To estimate the cost increase of Medicaid and MCHP administration, we took the projected total expenditure of Medicaid Expansion—including PAC program expenditures—and the projected total expenditures of the Medicaid woodwork and multiplied this by the estimated administration cost percentage of 5 percent, which is the historic average administrative (overhead) load. It finances not only the outreach, enrollment, and eligibility determinations related to the substantial increase in the Medicaid enrollment, but also the various programmatic oversight activities. The “federal medical assistance percentage” (FMAP) is the percent that the federal government pays toward Medicaid costs. The FMAP for the vast majority of administrative activities is 50 percent. Thus, we assumed in the model that the state’s additional administrative costs are 50 percent of the total (gross) administrative costs, which are entered in the financial model. We also included $10 million in additional administration costs in FY 2012, $15 million in FY 2013, and $5 million in FY 2014, for a total of $30 million state funds ($60 million in total funds, once federal funds are added) to develop the necessary eligibility system to comply with the eligibility determination requirements of health care reform. As of July 15, 2010, the estimated cost of Medicaid and MCHP administration for FY 2014 through FY 2020 was $533 million. This figure is reflected as the midpoint cost on the spreadsheet.

A.4. Reduction in Fee-for-Service Pharmacy Drug Rebates
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Unlike other components of health care reform, changes in pharmaceutical drug rebates are effective in 2010. The CMS *National Health Expenditure Projections 2009-2019* includes forecasts of changes in prescription drug costs. To derive reductions in pharmacy rebates, we first projected pharmacy rebates without health care reform. To project annual drug cost per fee-for-service program enrollee, we trended the base year (FY 2009) average drug cost per enrollee by the CMS projections of changes in prescription drug costs. By multiplying the projected number of fee-for-service program enrollees by the average annual costs of pharmaceutical drugs per enrollee, we estimated total fee-for-service expenditures for pharmaceutical drugs. Actual rebate collections for fee-for-service program enrollees were 30.5 percent of total drug expenditures in FY 2009. Based on Medicaid, MCHP, and Family Planning percentages (50 percent, 37.5 percent, and 10 percent, respectively), the state’s share of drug rebates is estimated to be about 45 percent of total drug rebates. We used the same percentages to project rebate collections with and without health care reform for FY 2010 through 2020.

Under the federal health care reform law, the fee-for-service pharmacy rebate will increase from a minimum of 15.1 percent to a minimum of 23.1 percent; with the entire 8 percent increase to be transferred to the federal government; the state is not permitted to retain any of the rebates in this range. Fee-for-service expenditures for generic drugs constitute a small percentage of total drug expenditures. To determine the drug rebate amounts under health care reform that would be subject to sharing with the federal government (CMS), we used 22.5 percent (30.5 percent average fee-for-service drug rebate minus 8 percent take-up by CMS) as the fee-for-service drug rebate collection percentage. In the financial model, fee-for-service reductions in drug rebates are entered on line 4 of Section A. Increased Costs. As of July 15, 2010, the estimated reduction in fee-for-service pharmacy drug rebates for FY 2011 through FY 2020 was $167 million. This figure is reflected as the midpoint cost on the spreadsheet.

A.5. Reductions in Medicaid Disproportionate Share Hospital (DSH) Payments

To project reductions in federal Medicaid DSH payments, we based our estimates on actual FFY 2009 federal DSH payments to Maryland, which were approximately $26 million. Then, to project DSH payments in absence of health care reform, we used CMS projections of changes in hospital expenditures through 2019.

Spending less than 3 percent of its total Medicaid expenditures on DSH payments, Maryland is considered a low DSH state. According to the Congressional Research Service (2010), the health care reform law will reduce federal DSH allotments to states based on reductions in state-specific uninsured rates over time. When a low DSH state’s uninsured population rate decreases by at least 45 percent compared to its 2009 uninsured rate, its federal DSH allotment will be reduced by 25 percent. Subsequently, reduction in the state’s DSH allotment will depend on the decrease of the state’s uninsured rate compared to a base five-year period. For FY 2013 and beyond, in no case will a state’s DSH allotment be less than 50 percent of its FY 2012 DSH allotment, increased by the percentage change in inflation.

Therefore, we applied the 25 percent reduction in federal DSH payments in FY 2015 when, after a ramp-up in enrollment starting in January 2014, most of the uninsured individuals will
be enrolled in Medicaid Expansion. Because a majority of the uninsured individuals in Maryland will have insurance coverage by the end of FY 2015, either through Medicaid or health insurance exchange, there will be very small reductions in the uninsured population rate in FY 2016 and beyond. Therefore, we project that the effective rate of reduction in DSH payments for FY 2016 through FY 2020 will be 26 percent of the projected total DSH payments. To estimate the DSH payment reductions, we applied the rates of reduction to the projected DSH payments in each fiscal year. As of July 15, 2010, the estimated cost of reduction in federal payments for Medicaid DSH for FY 2014 through FY 2020 was $67 million. This figure is reflected as the midpoint cost on the spreadsheet.

A. 6. State Exchange Admin/necessary and permitted by law

Administrative costs will be incurred in operating the new exchange. The magnitude of these costs is largely unknown and unknowable at the present time, until the specific functions and design of the exchange is created. Section 1311 of PPACA requires that all exchanges be self-sustaining (meaning, sustainable without federal funds) from January 1, 2015 on, yet Maryland has not made any decision on whether the state will provide ongoing administrative support to the exchange, or expect the exchange to be fully self-supporting through user fees and similar revenue sources. In this model, we made a conservative assumption that some degree of state support will be provided. However, this level of support is likely to be less than the current per capita administrative expenditures in a program such as MHIP, where the state uses a third-party administrator (TPA) and pays nearly $50 per person per month for administrative costs. In this model, we assumed most of the TPA-related costs instead will be included in insurance premiums paid to fully risk-based carriers. For purposes of this model, we simply used a reasonable administrative assumption of $13 million per year, or $91 million in the period. This new section will be updated as decisions are made and data become available. This figure is reflected as the midpoint cost on the spreadsheet.

A.7. State Employee/Retiree Health Insurance

The state of Maryland will incur new costs as an employer and as an offeror of health insurance to retired state employees. The overall net new costs are a function of seven separate factors, some of which result in net savings or new revenue for the state, and some of which result in net new costs for the state. Overall, through the period of FY 2011 to FY 2020, the costs are projected to increase. The seven independent factors are: the early retiree reinsurance program, the comparative effectiveness tax, the cost of extending dependent coverage to age 26, insurance costs related to contractual employees, the tax on high-cost health plans, automatic enrollment and subsidies, and related administrative costs. The figures found in the spreadsheet reflect the annual and aggregate effects of these seven factors; the data were prepared by the Department of Budget and Management and incorporated in the model without any adjustment. The figures in the spreadsheet represent the midpoint cost estimate.

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4 In FY 2016 through 2020, the reduction in DSH payments will be equal to 27.5 percent times (prior year’s reduced DSH allotment) times (percent reduction in number of uninsured). Therefore, more reduction in the number of uninsured results in more reduction in DSH allotment.
A.8. Admin Costs (non-DHMH agencies, outreach, etc.)

The marginal increase in administrative costs at agencies other than DHMH, and in general state outreach activities, is largely unknown and unknowable at the present time, until decisions are made. For purposes of this model, we simply used a reasonable administrative assumption of $3 million per year in FY 2011, FY 2012, FY 2019, and FY 2020. In the intermediate years, when the peak activities will be occurring in conducting education and outreach, we used a reasonable administrative assumption of $4 million per year (for FY 2013-FY 2018). These estimates will be updated as decisions are made and data become available. The total figure of $36 million for the period is reflected as the midpoint cost on the spreadsheet.

A.9. Transfer of 6-19 Year-Olds with Family Incomes between 100 and 133 Percent of the FPL from MCHP (Title XXI) to Medicaid (Title XIX)

Starting in 2014, MCHP children aged 6-19 years in families with incomes between 100 and 133 percent of the FPL will be transferred from MCHP to Medicaid. This transfer will increase the state’s costs due to the change from the Title XXI FFP rate of 62.5 percent to the Medicaid FFP rate of 50 percent. To forecast the additional cost to Maryland related to the change in matching rates, we estimated the number of MCHP enrollees aged 6-19 years with family incomes between 100 and 133 percent of the FPL based on actual MCHP enrollment data. Next, we calculated the weighted average per member per year capitation payment rate for MCHP enrollees aged 6-19. We then applied trend factors based on changes in the “Medical Price Deflator” to estimate the average annual cost per enrollee for FY 2014 through FY 2020. By multiplying the projected number of children aged 6-19 in families with income between 100 and 133 percent of the FPL by the projected average annual cost per enrollee, we were able to forecast total expenditures for this population. To estimate additional state expenditures from the transfer of these MCHP enrollees to the Medicaid program, we multiplied their projected annual expenditures in FY 2014 through FY 2020 by 12.5 percent (62.5 percent minus 50 percent), which was entered in the financial model. As of July 15, 2010, the estimated cost of transferring 6-19 year-olds with family incomes between 100 and 133 percent of the FPL from MCHP to Medicaid for FY 2014 through FY 2020 was $21 million. This figure is reflected as the midpoint cost on the spreadsheet.

B. Programmatic Savings

B.1. Enhanced Title XXI (MCHP) Match Rate

Average monthly enrollment in MCHP was 105,617 in FY 2009, 100,000 in FY 2010, and about 96,000 in June 2010. Most likely due to the recent economic recession, the family incomes of some of the MCHP enrollees have dropped below 116 percent of the FPL, making the whole family eligible for enrollment in the Medicaid program. This has led to a decline in MCHP enrollment in recent months. For forecasting purposes, we assumed that with economic recovery, monthly MCHP enrollment will increase from 96,000 to 100,000, and will remain at that level through the forecast period.
Appendix F. Maryland Health Care Reform Financial Modeling Tool: Detailed Analysis and Methodology

We estimated combined expenditures in MCHP—including both Medical Care expenditures and Mental Hygiene expenditures—to be $217.3 million in FY 2010. Using changes in the “Medical Price Deflator,” we projected the average cost per enrollee, as well as the total cost of MCHP, through FY 2020. The FFP rate for MCHP is currently at 62.5 percent. Based on this FFP rate, in order to establish the baseline, we projected the state’s cost for MCHP in absence of health care reform through FY 2020.

Next, we determined the FFP rate for each fiscal year. Under the health care reform law, states will receive a 23 percentage point increase in the match rate for the Children’s Health Insurance Program (CHIP, which is the federal name for the MCHP program), up to a maximum of 100 percent, for FFY 2016 through FFY 2019. Because of the difference in state and federal fiscal years, the 23 percent increase in the FFP rate would increase the FY 2016 FFP rate to 79.8 percent and the FY 2017 through 2020 rate to 85.5 percent. Using these FFP rates, we estimated the state’s MCHP costs under health care reform. Differences between the state’s MCHP costs with and without health care reform determined the state’s cost savings in each year. As of July 15, 2010, the estimated savings of the enhanced Title XXI federal match rate for FY 2014 through FY 2020 was $311 million. This figure is reflected as the midpoint cost on the spreadsheet.

B.2. Hospital Assessment: MHIP-Related

The Maryland Health Insurance Program (MHIP) is the state’s high-risk health insurance pool. The purpose of MHIP is to provide access to affordable, comprehensive health benefits for individuals with medical conditions who are medically uninsurable. MHIP is funded with premiums paid by enrollees, plus a one percent assessment on hospital revenues. After the implementation of health care reform, MHIP enrollees with income under 134 percent of the FPL will transfer to the Medicaid program, and we assumed that the remaining MHIP enrollees will transfer to the health insurance exchange and receive federal subsidies toward their insurance if they are below 400 percent of the FPL. The products sold through the exchange will be based on the insurance market reforms, which will prohibit underwriting practices, require community rating, and bar annual and lifetime caps on benefits. Thus, the products sold in the exchange, unlike the products currently sold in the non-MHIP individual market, are assumed to be products both affordable and available to MHIP enrollees. Therefore, we assumed that the current one percent assessment on hospital revenues now used to help fund MHIP will become a program saving to the state.

To estimate the amount of state savings, we obtained projections of hospital revenues from the Health Services Cost Review Commission (HSCRC). Then we estimated the amount of the 1 percent hospital revenue assessments and entered it into the financial model. As of July 15, 2010, the estimated state savings for FY 2014 through FY 2020 was $1,055 million. This figure is reflected as the midpoint cost on the spreadsheet.
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B.3. Offset to the Rate Stabilization Fund for Increasing Medicaid Primary Care Physician (PCP) Fees to 100 Percent of Medicare

Under the health care reform law, the federal government will pay for increasing Medicaid payment rates in fee-for-service and managed care for services provided by primary care physicians (PCPs) (family medicine, general internal medicine, and pediatric medicine) to 100 percent of the Medicare payment rates for calendar years 2013 and 2014. For services furnished on or after January 1, 2013, and before January 1, 2015, states will receive 100 percent federal financing for increasing PCPs’ payment rates from the rates in effect July 1, 2009. Prior to passage of the health reform law, Maryland gradually was increasing PCP rates in Medicaid using funds from the Rate Stabilization Fund. Maryland had developed a plan, prior to health reform, to increase Medicaid’s PCP rates gradually until parity with Medicare rates was achieved. Because of health reform, for the years 2013 and 2014, the funds that otherwise were planned to be drawn from the state’s Rate Stabilization Fund to increase Medicaid PCP payments instead will be drawn using 100 percent FFP. As the 100 percent federal financing for increased evaluation and management (E&M) fees will replace funds provided by the Rate Stabilization Fund, they will become savings for the state.

Hilltop developed a physician fee payment model that has been used since 2005 to set Maryland Medicaid reimbursement rates for physicians. To determine the amount of state savings in FY 2013 through 2015 (because a portion of calendar years 2013 and 2014 falls into three separate state fiscal years), we used the physician fee payment model to determine how much it would cost the state to increase PCP fees to 100 percent of Medicare fees. Based on the physician fee payment model, after accounting for utilization and enrollment increases between the base year and FY 2013, it would cost $64 million to increase physician fees for E&M procedures to 100 percent of Medicare fees in FY 2013. Based on a previous study conducted by Hilltop, 67 percent of fee increases for E&M procedures would be channeled to PCPs. This would amount to $21 million state funds ($43 million total funds) payment allocation to PCPs in 2013. Prorating this amount for 6 months of FY 2013, we estimated state savings of about $10 million in FY 2013. Estimated state savings would be approximately $22 million in FY 2014, and $11 million in FY 2015, for a total savings of $43 million. This figure is reflected as the midpoint cost on the spreadsheet.

B.4. Extension of Pharmacy Drug Rebates to MCOs

As mentioned in Section A.4., unlike other components of health care reform, changes in pharmaceutical drug rebates are effective 2010. To derive the cost savings from the extension of pharmacy rebates to HealthChoice enrollees, we used the same methodology as described in Section A.4 for projecting drug rebate collections for HealthChoice enrollees. Although managed care organizations (MCOs) receive discounts from their pharmacy benefit managers (PBMs), HealthChoice rebate collection without health reform is zero, as drug manufacturers are not required to provide rebates for managed care enrollees.

To project the annual drug cost per HealthChoice enrollee, we trended the base year (FY 2009) average drug cost per enrollee by the CMS projection of changes in prescription drug costs. By multiplying the projected number of HealthChoice enrollees by the average annual
Appendix F. Maryland Health Care Reform Financial Modeling Tool: Detailed Analysis and Methodology

costs of pharmaceutical drugs per enrollee, we estimated total MCOs’ expenditures for pharmaceutical drugs. Then we used a publication by the Agency for Health Care Research and Quality (Stagnitti, 2006), which shows trends in expenditures for generic and brand name drugs, to project the break-down of MCOs’ expenditures for pharmaceutical drugs into expenditures for generic and brand name drugs.

Under the health care reform law, generic (multi-source) drug rebates will be a minimum of 13 percent of average manufacturer’s price, 2 percent of which will go to CMS. We applied the manufacturers’ drug rebate percentages of 22.5 percent (30.5 percent average drug rebate minus 8 percent take-up by CMS) for brand name drugs. According to a September 22, 2008, report prepared for the Association for Community Affiliated Plans by the Lewin Group, entitled “Analysis of Dual Eligible Pharmacy Costs under Medicaid and Medicare Part D,” Medicaid MCOs only receive about a 6 percent discount on brand name drugs and no discount on generic (multi-source) drugs (Association for Community Affiliated Plans, 2008). Based on these percentages, we projected the amount that the state will pay MCOs in the form of higher capitation rates.

We compared the financial model’s projected drug rebate for MCOs with the actual amount reported by MCOs for 2009. The model-projected drug rebate for 2009 is about $10.3 million; the actual amount recently reported by MCOs is $9.5 million. The model over-estimated the amount of rebate that the state would pay to MCOs by about $0.8 million. We did not adjust the financial model for this small discrepancy. By subtracting the payments that would be due to MCOs from the estimated total drug rebates for HealthChoice enrollees, we derived net savings from extending the drug rebates to MCOs.

Based on the state’s weighted share of expenditures for Medicaid, MCHP, and Family Planning enrollees, the state share of drug rebates is estimated to be about 45 percent of the net total drug rebates. We used the same percentage to project the state’s rebate collections with and without health care reform for FY 2010 through 2020. As of July 15, 2010, based on our methodology and data sources, the estimated state savings of extending drug rebates to MCOs for FY 2011 through FY 2020 was $232 million. This figure is reflected as the midpoint cost on the spreadsheet.

B.5. Medicaid: Breast and Cervical Converts to Insurance

The Medicaid program now operates a limited benefit package for certain women for breast and cervical cancer screening and treatment. Once health reform occurs, the individuals in the current program will be enrolled in a comprehensive insurance program (and enrolled in the programs described elsewhere in this document), and this program will sunset. This will generate savings. The appropriation for this program in FY 2011 is $4 million in general funds. We assumed a half year reduction in FY 2014, because the major coverage expansion begins six months into FY 2014. The aggregate savings through the period is $26 million. This figure is reflected as the midpoint cost on the spreadsheet.
Appendix F. Maryland Health Care Reform Financial Modeling Tool: Detailed Analysis and Methodology

B.6. Reductions in State-Only Programs/Grants

Once a vast number of uninsured individuals receive insurance coverage through Medicaid Expansion, the Medicaid woodwork effect, and the exchange, it is likely that funding for public safety net programs will diminish without jeopardizing access to care for the patients. Perhaps these programs will require less support from the state budget because they can continue to serve their former patients by billing the insurance companies for the newly insured individuals; perhaps there will be less need for publicly financed state-only grant programs once the number of uninsured drops and formerly uninsured individuals instead have insurance access to coverage from private practitioners who are providers in the networks of the insurance carriers.

In estimating the potential reduction in state financial support for state-only grants and programs, we made the following assumption: no cuts should be made to three separate programs: state residential programs (because these programs are unlikely to be covered benefits under insurance policies); mental health “purchase of care” programs (which are inpatient programs at specialty and general hospitals); and the funding to academic centers for screening, research, and treatment related to the Cigarette Restitution Fund.

For the remaining programs, we assumed an aggregate 50 percent reduction in the following programs administered by the Department of Health and Mental Hygiene: public health (breast cancer screening and treatment, and cigarette restitution fund screening and treatment), mental health administration, and alcohol and drug abuse administration. After setting aside the protected programs mentioned above, the total pool of current funds in these programs in FY 2011 is appropriated at $130 million (drawn from several funds under state control, including the general fund, the Cigarette Restitution Fund, and federal block grants). We assumed a 50 percent reduction from this pool, as well as all of the reduction from non-federal fund sources, or an annual reduction of $65 million per year. We assumed a half-year reduction in FY 2014 because the major coverage expansion begins six months into FY 2014. The aggregate savings through the period is $423 million. This figure is reflected as the midpoint cost on the spreadsheet.

B.7. Seniors Prescription Drug Assistance Program (SPDAP)

The Senior Prescription Drug Assistance Program (SPDAP) provides Medicare Part D premium and coverage gap assistance to Maryland Medicare enrollees with incomes at or below 300 percent of the FPL for the purchase of outpatient prescription drugs. The funds for SPDAP are provided from a portion of the value of CareFirst’s premium tax exemption.

When the Medicare coverage gap (“donut hole”) in Part D drug coverage is phased down starting in 2014, the projected reduction in payments for the SPDAP will become available to the state general funds. Based on information from the Maryland Department of Budget and Management, the state cost for coverage gap subsidy for individuals enrolled in SPDAP was $2 million in 2009.
Appendix F. Maryland Health Care Reform Financial Modeling Tool: Detailed Analysis and Methodology

Section 1101 of the Reconciliation Act added provisions to phase down the coverage gap by 2020 and to provide for an immediate reduction in costs for Medicare Part D enrollees who enter the coverage gap in 2010. Specifically, in 2010, each Medicare Part D enrollee who enters the coverage gap will receive a rebate of $250. Additionally, the Reconciliation Act reduces beneficiary cost sharing for brand-name drugs from 100 percent in 2010 (minus the $250 rebate) to 25 percent by 2020. In 2011 and 2012, per the manufacturer discount provision in PPACA, beneficiary cost sharing will be reduced to 50 percent of the price of the drug. In 2013 and beyond, the Medicare program will cover additional costs beyond the 50 percent discount to further reduce cost sharing. In 2020, the manufacturer discounts account for 50 percent of the reduction, and Medicare Part D covers the remaining 25 percent. The beneficiary cost sharing for brand-name drugs during the coverage gap in 2013 and subsequent years will be as indicated in Table 5 below.

**Table 5. Beneficiary Cost Sharing for Brand-Name Drugs**

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However, generic drugs are not subjected to the required 50 percent discount. Beneficiary cost sharing in the coverage gap will be reduced to 93 percent in 2011. In 2012 and subsequent years, beneficiary cost sharing in the coverage gap will decrease by an additional 7 percent—until 2020, when cost sharing will equal 25 percent. See Table 6 below.

**Table 6. Beneficiary Cost Sharing for Generic Drugs**

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To project SPDAP expenditures, we trended the base year costs by the CMS projection of changes in prescription drug costs. We also used the Agency for Health Care Research and Quality publication mentioned above (Stagnitti, 2006) to project the break-down of SPDAP subsidies for pharmaceutical drugs into subsidies for generic and brand name drugs. Next, we applied the Medicare beneficiaries’ cost sharing percentages in Tables 5 and 6 to project the SPDAP expenditures for subsidies of brand name and generic drugs. Differences between projected expenditures with and without the changes in beneficiaries’ cost sharing provided estimates of state savings from SPDAP. As of July 15, 2010, based on our methodology and data sources, the estimated state savings for FY 2011 through FY 2020 was $15 million. This figure is reflected as the midpoint cost on the spreadsheet.

**C. New Revenues**

We used the same methodology for projecting the new revenues from the 2 percent premium assessments for both for-profit carriers (row C.1 of the financial model) and nonprofit carriers (row C.2 of the financial model). This section explains our methodology and how we divided the new revenues between for-profit and nonprofit carriers. In this model, we assumed no change in existing state laws regarding premium assessments.
Our general methodology was to first forecast the new enrollment of individuals into insurance products that will be subject to the two percent assessment. The overall growth in covered individuals after health reform, and take-up by these individuals of products that are subject to the premium assessment, is the entire basis for this new revenue. In other words, the revenue growth is driven by the volume of newly insured individuals.

In general, our approach was to estimate the growth in enrollment in both Medicaid and the exchange, and to develop projected per member per year (PMPY) premium revenues for each year, and finally multiply the enrollment numbers for each year by their corresponding PMPY numbers. There are four groups of individuals who will enroll in health insurance carriers who are not subject to premium assessments currently:

1. Maryland Health Insurance Plan (MHIP) enrollees, some of whom will move to Medicaid, and some of whom will move to the exchange (both of which are assumed to be subject to the existing premium assessment)
2. Non-MHIP current enrollees who will be covered in the health insurance exchange
3. Medicaid Expansion (including current limited-benefit PAC) enrollees who will enroll in HealthChoice
4. Individuals currently eligible for—but not enrolled in—Medicaid who will enroll in HealthChoice (the woodwork effect)

For the MHIP enrollees, we obtained data on historical monthly enrollment numbers from the Health Insurance Safety Net Program, the independent state agency that administers MHIP. The data included MHIP+ enrollees, who are low-income MHIP enrollees. We projected their total enrollment using a statistical model that is based on historical trends and population projections. We predicted the portion of MHIP enrollees (MHIP+ enrollees) who will enter the Medicaid HealthChoice program. The remaining MHIP enrollees were assumed to enter the exchange, and were allocated to for-profit and nonprofit carriers based on current market share data from MIA on the distribution of the individual market between for-profit and nonprofit carriers. We projected PMPY revenues for the MHIP+ enrollee who will enter HealthChoice MCOs based on PMPY capitations for disabled HealthChoice enrollees. We used PMPY revenues based on actual MHIP payments for enrollees who will enter the for-profit and nonprofit carriers.

From MIA we obtained 2009 base year data for the individuals in the current individual and small group markets. These data were further distributed (in base year enrollments) between for-profit and nonprofit carriers, as well as their total premiums. In allocating the market share in the individual and small group markets between for-profit and nonprofit carriers, we used these data from MIA, which we used to derive the PMPY revenues of their insurance carriers for the projected enrollment in the exchange; we used the current market share distribution and assumed the newly enrolled exchange enrollees would be distributed according to the same market share patterns. We projected their enrollment using projected rates of growth of the population. We also projected their corresponding carriers’ PMPY revenues using the projected growth rates of private health insurance expenditure based on CMS projections.
Appendix F. Maryland Health Care Reform Financial Modeling Tool: Detailed Analysis and Methodology

According to a report from the Urban Institute, the potential size of the newly insured through the exchange in Maryland is 269,000 (Holahan & Blumberg, 2010). The Chief Actuary at CMS estimates that the take-up of this population is 63 percent (CMS, 2010). Thus, the potential enrollment in Maryland’s exchange, at maturity, was estimated to be the product of these numbers, or 169,470. This was the baseline exchange enrollment assumed to be present in 2014, and the enrollment in the exchange was projected to grow over time based on population growth in Maryland.

For the new Medicaid Expansion and “woodwork” enrollees, we used total expenditures projected for inclusion in rows A.1 and A.2 of the financial model (described in Sections A.1 and A.2 above) to project new revenues of Medicaid HealthChoice MCOs.

C.1. Insurance Premium Assessment: For-Profit Carriers

To forecast the new insurance premium assessment revenues of for-profit carriers, we summed the 2 percent assessment on total for-profit revenues related to MHIP, on new Medicaid enrollees in HealthChoice (taking only that portion of the new costs related to MCO premiums and not the fee-for-service wraparound payments), and newly covered individuals in insurance exchange who will enter the for-profit insurance carriers. As of July 15, 2010, based on our methodology and data sources, the state’s estimated new revenues from the for-profit insurance carriers for FY 2011 through FY 2020 was $486 million. This figure is reflected as the midpoint cost on the spreadsheet.

C.2. Premium Assessment Equivalent of Nonprofit Carriers

To forecast premium assessment equivalents of nonprofit carriers, we summed the 2 percent assessment on total nonprofit revenues related to MHIP and new covered individuals in insurance exchange who will enter the nonprofit insurance carriers. As of July 15, 2010, based on our methodology and data sources, the state’s estimated new revenues from the nonprofit insurance carriers for FY 2011 through FY 2020 was $90 million. This figure is reflected as the midpoint cost on the spreadsheet.
Appendix F. Maryland Health Care Reform Financial Modeling Tool: Detailed Analysis and Methodology

References


Appendix F. Maryland Health Care Reform Financial Modeling Tool: Detailed Analysis and Methodology


### Appendix F. Maryland Health Care Reform Financial Modeling Tool: Detailed Analysis and Methodology

**Analysis excludes baseline programs that predated Health Reform and were not altered by Health Reform**

(State funds only, midpoint of range, in millions)

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<td>$33</td>
<td>$155</td>
<td>$116</td>
<td>$194</td>
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<tr>
<td>8. Admin costs (non-DHMH agencies, outreach, etc.)</td>
<td>$3</td>
<td>$3</td>
<td>$4</td>
<td>$4</td>
<td>$4</td>
<td>$4</td>
<td>$4</td>
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<td>$3</td>
<td>$4</td>
<td>$21</td>
<td>$27</td>
<td>$45</td>
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<td>9. Transfer of 6-19 yo (100%-133% FPL): XXI to XIX</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$1</td>
<td>$3</td>
<td>$3</td>
<td>$3</td>
<td>$4</td>
<td>$4</td>
<td>$21</td>
<td>$16</td>
<td>$27</td>
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<tr>
<td><strong>Overall Category Total</strong></td>
<td>$3</td>
<td>$23</td>
<td>$43</td>
<td>$49</td>
<td>$105</td>
<td>$127</td>
<td>$262</td>
<td>$344</td>
<td>$395</td>
<td>$504</td>
<td>$1,853</td>
<td>$1,390</td>
<td>$2,317</td>
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<td><strong>B. Programmatic Savings</strong></td>
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<tr>
<td>1. Enhanced Title XXI match rate</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$-46</td>
<td>$-63</td>
<td>$-65</td>
<td>$-68</td>
<td>$-70</td>
<td>$-311</td>
<td>$-233</td>
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<td>3. Rate Stabilization Offset: 100% Medicaid PCP</td>
<td>$0</td>
<td>$0</td>
<td>$-11</td>
<td>$-22</td>
<td>$-11</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$-43</td>
<td>$-33</td>
<td>$-54</td>
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<tr>
<td>5. Medicaid: Breast&amp;Cervical converts to ins.</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$-2</td>
<td>$-4</td>
<td>$-4</td>
<td>$-4</td>
<td>$-4</td>
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<td>$-4</td>
<td>$-26</td>
<td>$-20</td>
<td>$-33</td>
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<td>7. Seniors Prescript Drug Assist (SPDAP)</td>
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<td>$-1</td>
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<td>$-3</td>
<td>$-15</td>
<td>$-11</td>
<td>$-18</td>
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<tr>
<td><strong>C. New Revenue</strong></td>
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<tr>
<td>1. Insurance Premium Assessment: for Profit Carriers</td>
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<td>$0</td>
<td>$0</td>
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<td>$-65</td>
<td>$-71</td>
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<td>$-86</td>
<td>$-486</td>
<td>$-364</td>
<td>$-607</td>
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<td>2. Premium Assessment Equiv.: Nonprofit Carriers</td>
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<td>$0</td>
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<td>$-12</td>
<td>$-13</td>
<td>$-14</td>
<td>$-15</td>
<td>$-15</td>
<td>$-16</td>
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<tr>
<td><strong>Overall Category Total</strong></td>
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<td>$0</td>
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<td>$-77</td>
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<td>$-89</td>
<td>$-93</td>
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<td>$-102</td>
<td>$-576</td>
<td>$-432</td>
<td>$-720</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>$-15</td>
<td>$4</td>
<td>$12</td>
<td>$-133</td>
<td>$-222</td>
<td>$-250</td>
<td>$-145</td>
<td>$-80</td>
<td>$-46</td>
<td>$-829</td>
<td>$-621</td>
<td>$-1,036</td>
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<tr>
<td>2. Medicaid &quot;Woodwork&quot; Effect</td>
<td>4,125</td>
<td>23,348</td>
<td>29,871</td>
<td>33,540</td>
<td>33,827</td>
<td>34,114</td>
<td>34,401</td>
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<tr>
<td>3. Exchange (133-400% FPL)</td>
<td>88,509</td>
<td>178,774</td>
<td>180,529</td>
<td>182,014</td>
<td>183,500</td>
<td>184,985</td>
<td>186,470</td>
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<tr>
<td>TOTAL</td>
<td>151,879</td>
<td>330,832</td>
<td>344,602</td>
<td>350,665</td>
<td>353,348</td>
<td>356,029</td>
<td>358,710</td>
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