The Hilltop Health Care Reform Simulation Model

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Implementing Insurance Coverage Expansion
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Introduction

The simulation model:

- Focuses on the new costs, savings, and revenues related to health care reform

- Compares costs, savings, and revenues of health care reform with costs and revenues in absence of health care reform

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The Hilltop Health Care Reform Simulation Model

The model consists of four component models:

- Population Model

- Employment Model

- Expenditure and Financial Model

- Economic Impact Model

Population Model Projects:

- Population and number of uninsured by age group, disability, and FPL (federal poverty level) status

- Number of people eligible for Medicaid Expansion

- Number of individuals who are eligible but not enrolled in Medicaid, but are likely to enroll with health care reform ("woodwork effect")

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Population Model Projection Methodology

- Utilized research demonstrating that change in the distribution of population by FPL status is related to change in unemployment rate

- Estimated econometric model to forecast Maryland's unemployment rate as a function of national unemployment rate

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Unemployment Rate Projections

- Used the long-term forecast of the national unemployment rate published by the Congressional Budget Office (CBO)

- Projections are used in Population and Employment Models

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Unemployment Rate Projections, 2015-2020

	2015	2016	2017	2018	2019	2020
Nation	7.4%	6.3%	5.7%	5.5%	5.5%	5.4%
Maryland	5.8%	5.0%	4.5%	4.3%	4.3%	4.3%

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Unemployment Rate & Medicaid Eligibility

- Increase in unemployment rate leads to:

  - Decrease in employer-sponsored insurance (ESI)

  - Increase in number of people with public coverage (e.g., Medicaid)
    (Gruber & Levitt, 2002)

- This explains recent rapid growth in Medicaid enrollment due to economic recession

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Population Model:
Eligibility for Medicaid Expansion

- Used estimates of the number of uninsured individuals in Maryland by age group and income (% of the FPL)

- Projected number of individuals in each age group who are uninsured and below certain FPL levels

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Current Population Survey: Number of Uninsured Individuals by Percentage of the FPL

Number of Uninsured (2009 to 2010)

Age Group	Income-to-Poverty Ratio, 2009 to 2010						Total
	Below 50%	50% to below 139%	139% to below 150%	150% to below 200%	200% to below 400%	400% and above	
00 to 20	16,494	37,647	8,768	27,038	36,608	13,949	140,504
21 to 64	72,196	117,572	23,340	88,316	189,177	105,635	596,236
65 to 80+	2,216	2,944	649	634	4,362	1,795	12,600
Total	**90,906**	**158,162**	**32,758**	**115,988**	**230,147**	**121,379**	**749,340**

Source: U.S. Census Bureau

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Employment Model

- Projects insurance take-up rate for individuals above 138% of the FPL

- Three econometric sub-models project ESI and individual direct purchase coverage:
  - Employer Offer of Insurance
  - Employee Take-Up of Insurance
  - Direct Purchase of Insurance

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Direct Purchase of Insurance

- Econometric model projects direct purchase of insurance through the Exchange:
  - Estimate number of employed individuals without ESI
  - Multiply by predicted probability of direct purchase of insurance coverage
  - Projects number of individuals who will purchase coverage by % of the FPL

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Employment Model

- Sources of data for the employment model:

  - The Maryland Department of Labor, Licensing and Regulation (DLLR)

  - The U.S. Bureau of Labor Statistics

- Uses projections of labor force participation rates

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Employment Model continued

- Estimates 2010 employment by sizes of firms:
    - Fewer than 50 employees
    - 50 to 100 employees
    - More than 100 employees

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Employer Offer of Insurance

- MEPS data estimate percentage of Maryland firms that offered ESI to their employees

- Use econometric models to project number of employers that offer ESI through 2020

Employee Take-Up of Insurance

- Econometric model projects percentage of employees who take up ESI

- The ACA's individual mandate leads to increase in employee take-up of ESI

- Multiply by average family size to project the total number of people with ESI coverage

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Variables that Affect these Sub-Models

- Unemployment rate

- Price of medical care

- Insurance premiums

- Employee premiums

- Employer penalty under the ACA

- Average workers' income

- Percentage of workers in firms of different sizes

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Expenditure & Financial Models

- These models show summaries of:
  - New health care expenditures in the state
  - New revenues, expenditures, savings and impact on the state budget

Expenditure & Financial Models continued

- Estimates are based on:

  - Projections of the Population and Employment models

  - Detailed calculations based on the ACA law and specific to state

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Federal Medical Assistance Percentage (FMAP)

- FMAP rates for Medicaid Expansion:

  - 100% in federal fiscal years (FFYs) 2014 - 2016

  - 95% in FFY 2017

  - 94% in FFY 2018

  - 93% in FFY 2019

  - 90% in FFY 2020 and later

Impact on Employers and Employees

- Federal assessment of employers under the ACA:

  - Fewer than 50 employees: Exempt from penalties

  - More than 50 employees with no insurance coverage: Penalty of $2,000 per employee, excluding 30 employees

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Economic Impact Model

- Results of the Expenditure Model are used by the Economic Impact Model to determine the economic multiplier for Maryland

- Estimates the effects of spending in health care sector on other sectors of the economy

- Evaluates the total economic impact of the ACA on the state's economy

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Population Insurance Coverage Status (1000s)

	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20
Total Maryland Population	**5,924**	**5,962**	**6,013**	**6,064**	**6,114**	**6,165**	**6,216**
Medicaid	1,088	1,129	1,156	1,185	1,208	1,227	1,244
Medicare	833	860	893	926	958	991	1,024
CHAMPUS/Tricare	188	187	186	185	184	184	183
Commercial Insurance Coverage	3,248	3,280	3,282	3,283	3,285	3,284	3,285
Maryland Health Benefit Exchange	147	170	184	208	235	258	284
Total Uninsured	599	514	489	473	440	415	390
Adjustment for Dual Coverage	-178	-178	-178	-196	-196	-194	-193
Total Coverage including Dual Coverage	**6,103**	**6,140**	**6,191**	**6,260**	**6,310**	**6,360**	**6,409**

The Economic Impact of the ACA (in Millions)

	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20
Federal Subsidies to Individuals (Tax Credits)	$224	$535	$607	$716	$849	$987	$1,153
Federal Cost-Sharing Payments to Individuals	$30	$72	$80	$92	$108	$124	$142
Total Federal Payments for Cost Sharing and Subsidies (Tax Credits)	$254	$607	$687	$808	$957	$1,111	$1,295
Increase in Total Health Care Expenditures	$1,057	$2,085	$2,321	$2,719	$3,111	$3,497	$3,930
Additional Output Generated	**$1,174**	**$2,020**	**$2,123**	**$2,421**	**$2,693**	**$2,965**	**$3,283**
Total Additional State and Local Taxes Generated	$61	$140	$147	$169	$191	$212	$237

Population Uninsured, Number of New Jobs (in Thousands), and Unemployment Rate

	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20
Total Uninsured without ACA	746	736	728	719	719	722	724
Total Uninsured with ACA	599	514	489	473	440	415	390
Number of New Individuals Insured with ACA Law	**147**	**221**	**239**	**246**	**279**	**307**	**333**
Uninsured as % of Total Population (without ACA)	12.6%	12.3%	12.1%	11.9%	11.8%	11.7%	11.6%
Uninsured as % of Total Population (with ACA)	10.1%	8.6%	8.1%	7.8%	7.2%	6.7%	6.3%
New Employment due to ACA	**9**	**16**	**17**	**20**	**22**	**24**	**26**
Unemployment Rate without ACA	6.9%	5.8%	5.0%	4.5%	4.3%	4.3%	4.3%
Unemployment Rate with ACA	6.7%	5.5%	4.6%	4.1%	3.9%	3.8%	3.7%
Change in Unemployment Rate	**-0.2%**	**-0.4%**	**-0.4%**	**-0.4%**	**-0.5%**	**-0.5%**	**-0.6%**

Maryland Population Insurance Coverage Status
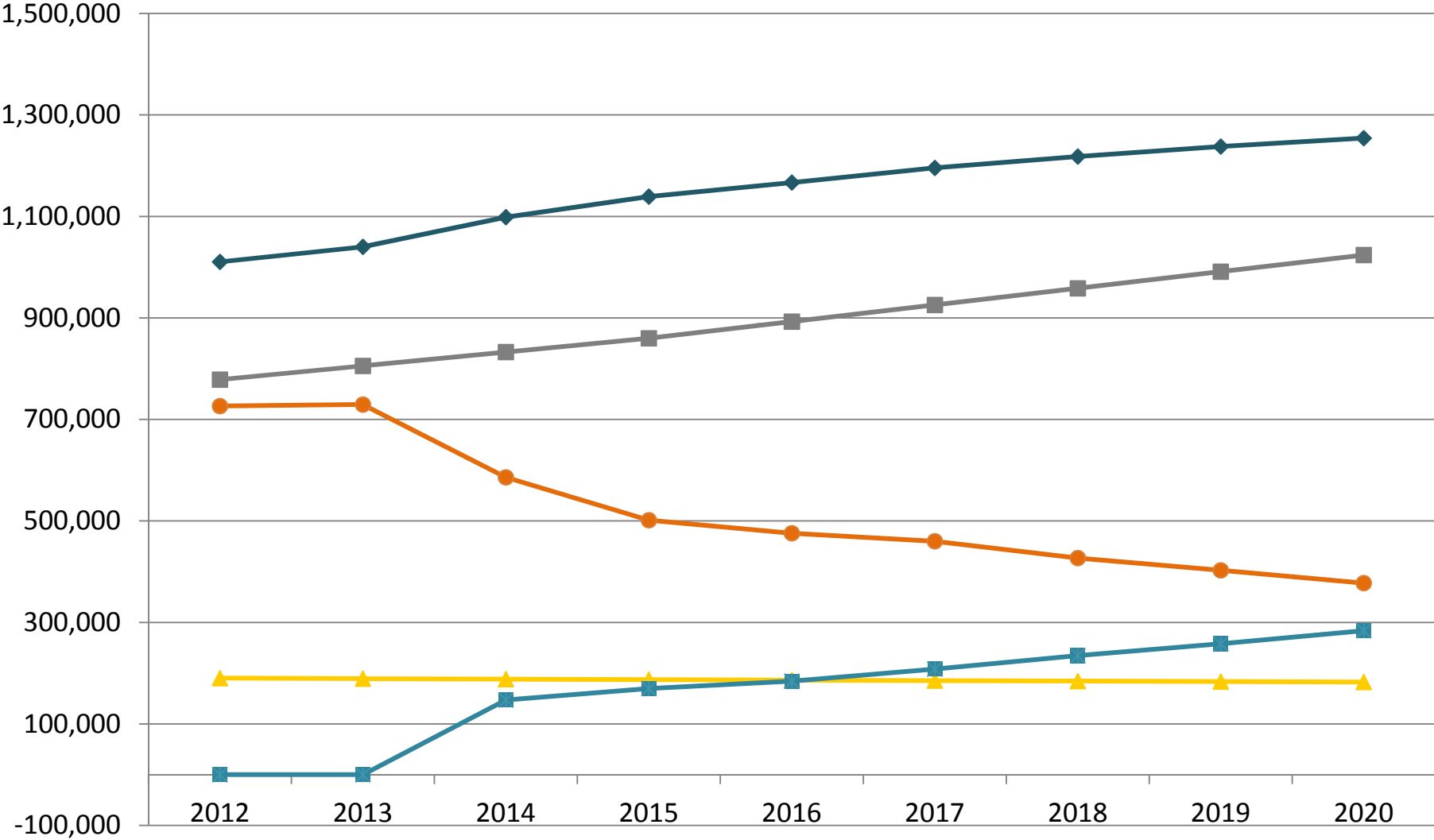
Legend: Medicaid, Medicare, CHAMPUS/Tricare, Maryland Exchange, Total Uninsured

Isolating Effects of Medicaid Expansion

Compared outputs of the Hilltop Health Care Reform Simulation Model without Medicaid Expansion to a baseline that includes Medicaid Expansion under the ACA

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Impact of Medicaid Expansion on the Economy

- **Had Maryland decided not to expand Medicaid:**

  - Medicaid coverage would be denied to 127,000 individuals in 2015

  - Health care expenditures will decrease by $660 million

  - Economic output will decrease by $950 million, leading to decrease of approx. 7,000 new jobs in the state economy

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