

THE IMPACT OF CHANGES IN CALIFORNIA TOBACCO CONTROL FUNDING ON HEALTHCARE EXPENDITURES: 2012-2016

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Plan for Today

- ▣ Strategy
- ▣ Healthcare expenditures
 - How we estimate them
 - Our findings
- ▣ Mortality implications: exploratory findings
- ▣ Policy implications

Strategy

- We have been modeling smoking-attributable costs in the US and CA for over 20 years
- Develop models using most current data
- Use the models to estimate the impact on healthcare expenditures and mortality
- Compared 2 CTCP funding scenarios

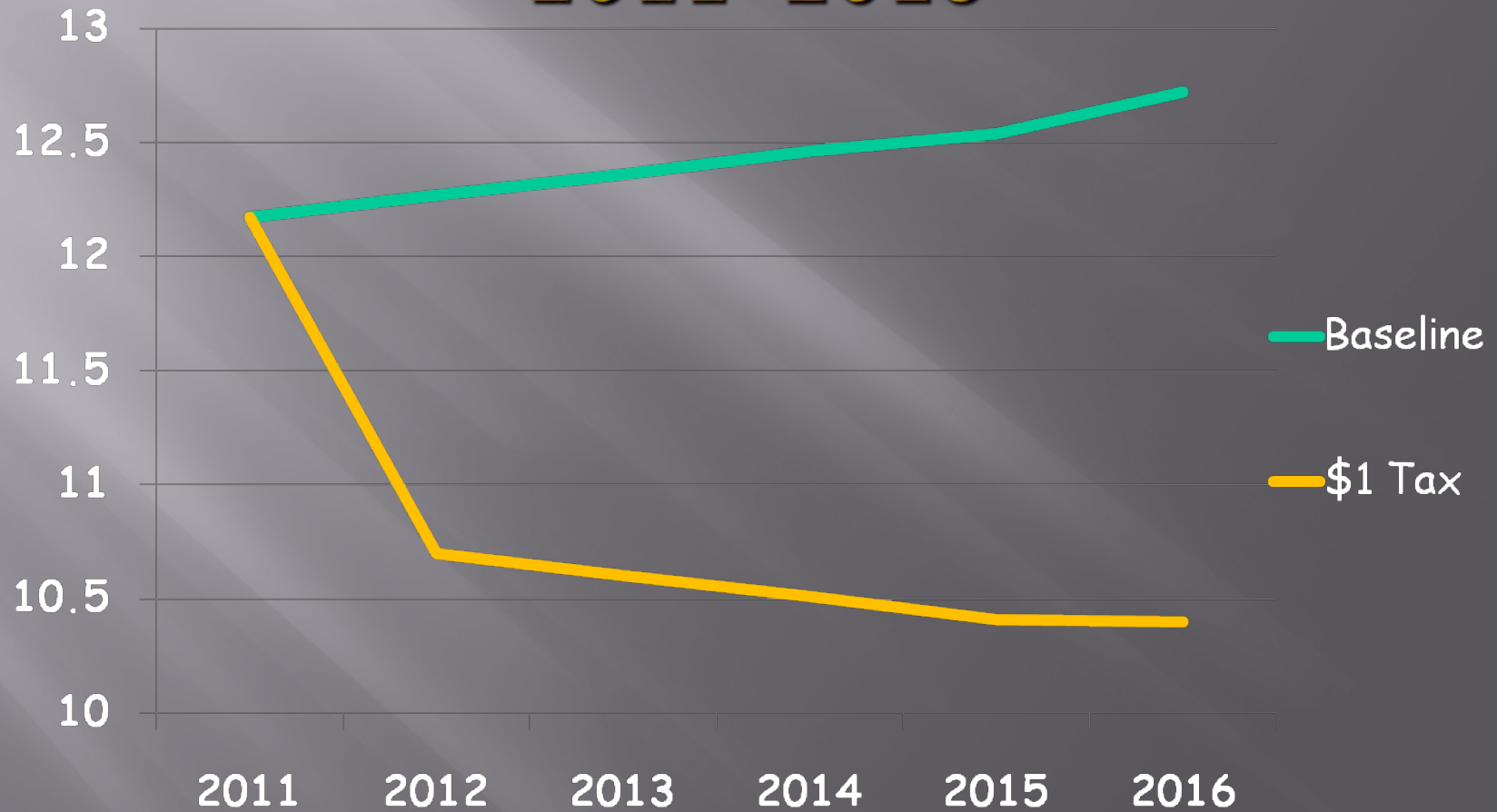
Funding Scenarios

- ▣ Baseline Case (status quo): tobacco control funding continues at current level of 5 cents/pack
- ▣ \$1.00/pack tax increase in 2012: 25 cents/pack (5 cents existing tax plus 20 cents additional from tax increase)

Prevalence

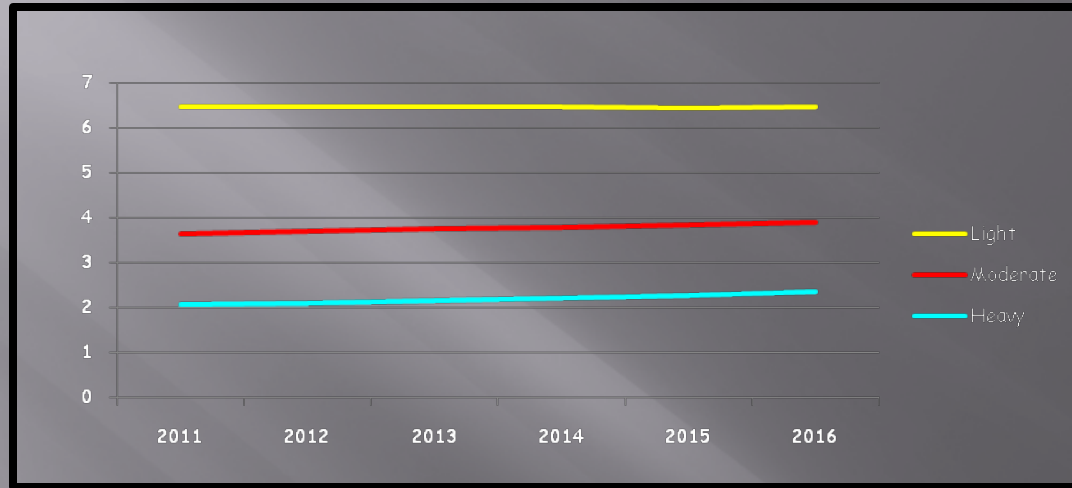
- The 2 scenarios are incorporated into the models by projecting smoking prevalence in each case
- Prevalence projections
 - Used co-integrated time series regression model comparing CA prevalence and prevalence in control states
 - Then disaggregated current prevalence into light, moderate, and heavy using proportions from CA data

Smoking Prevalence Under 2 Scenarios of CTCP Funding: 2011-2016

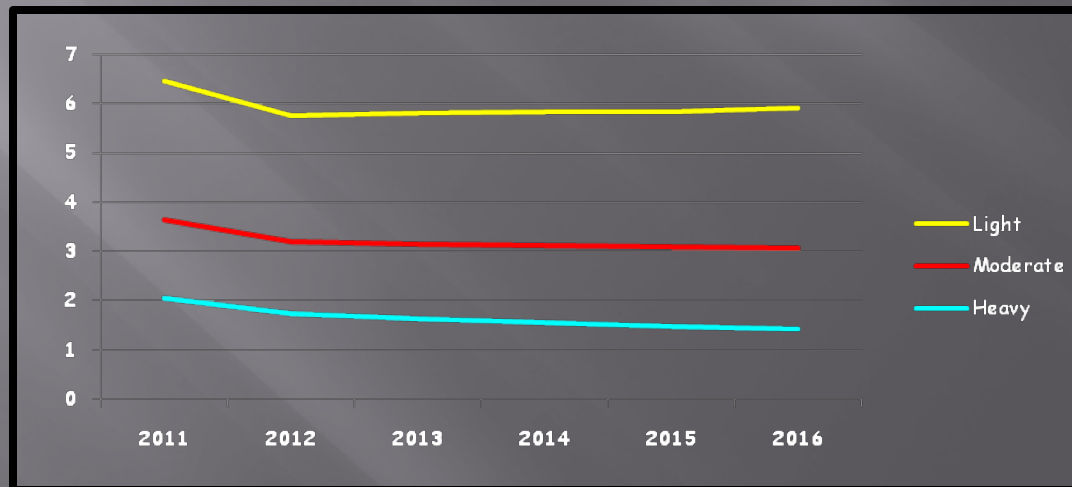


Smoking Prevalence by Intensity Under 2 Scenarios of CTCF Funding: 2011-2016

Baseline

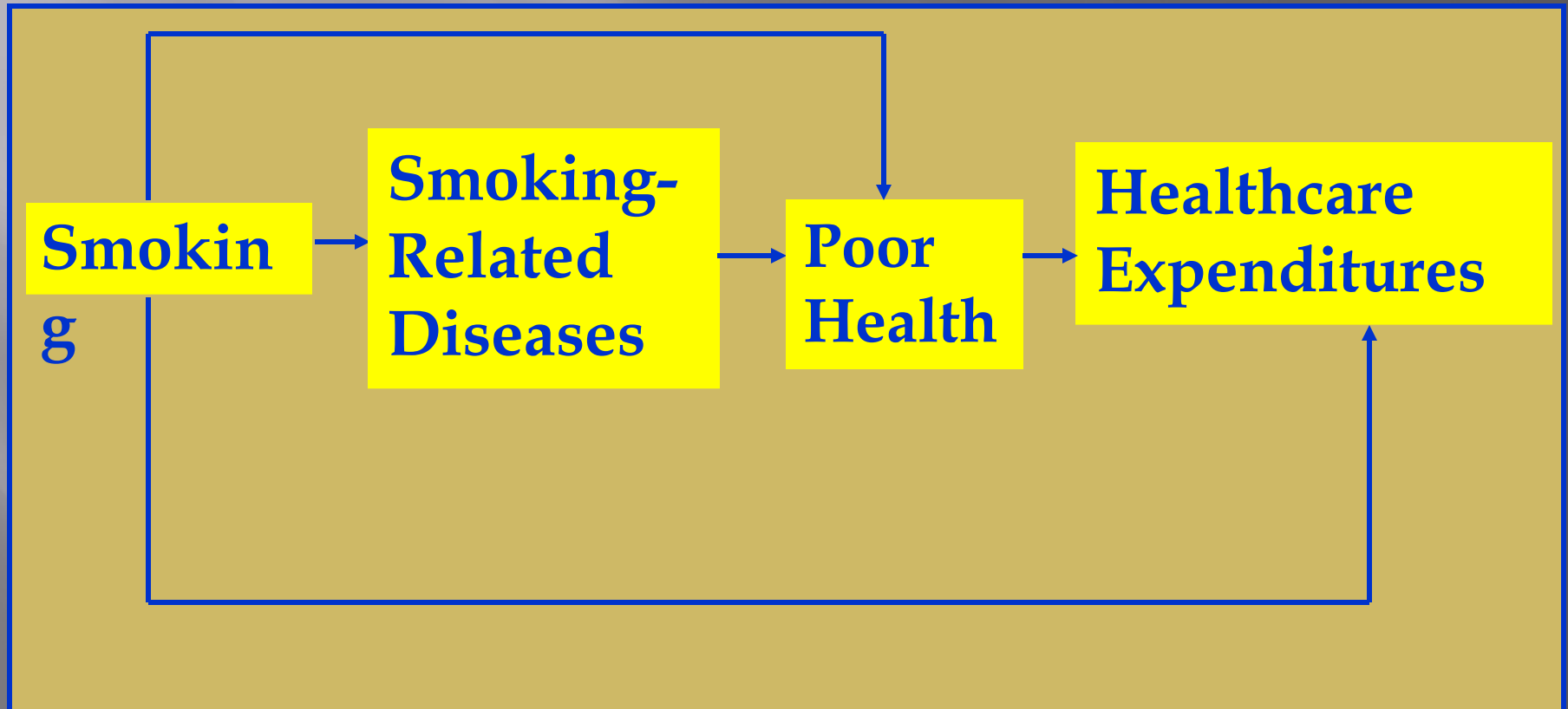


**\$1 Tobacco
Tax**

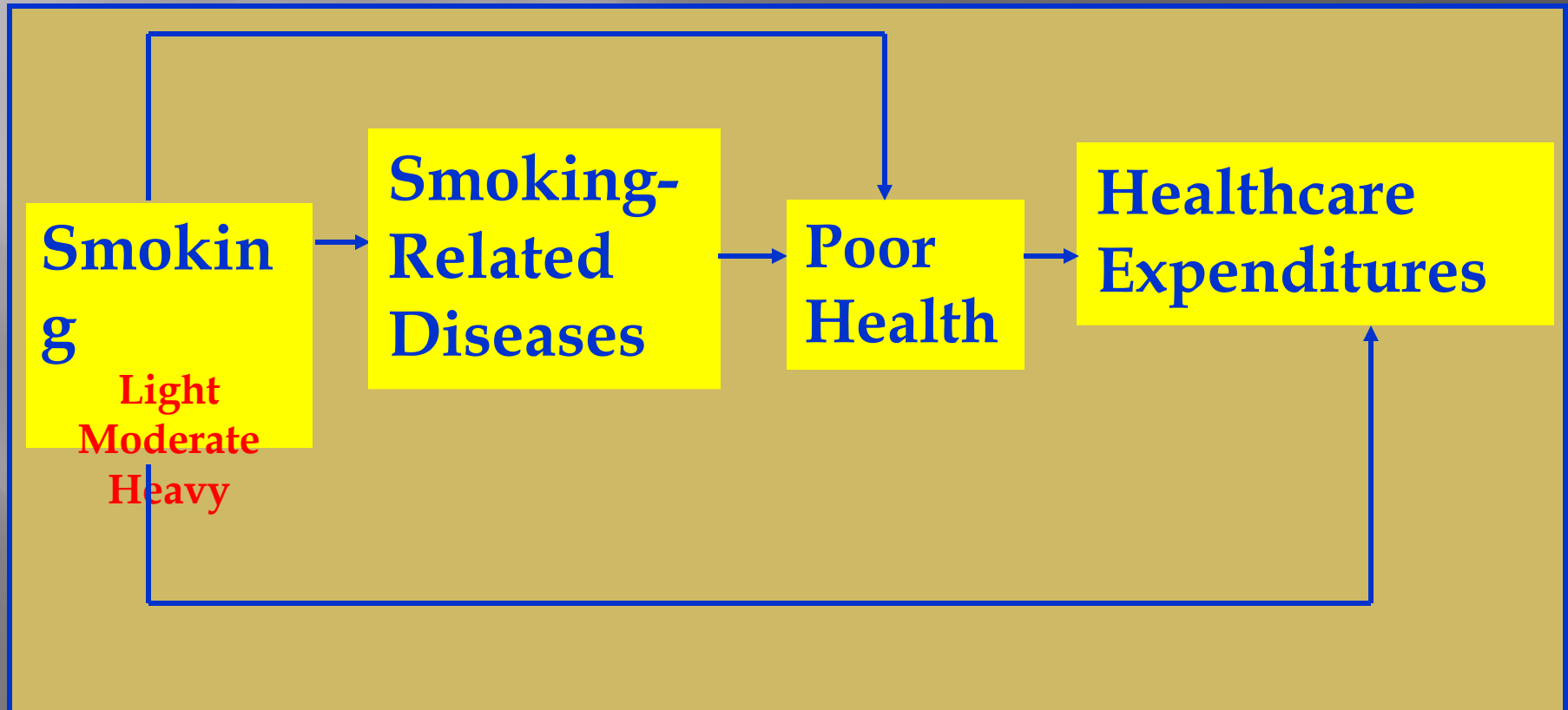


Healthcare Expenditures

Conceptual Framework: Impact of Smoking on Healthcare Expenditures



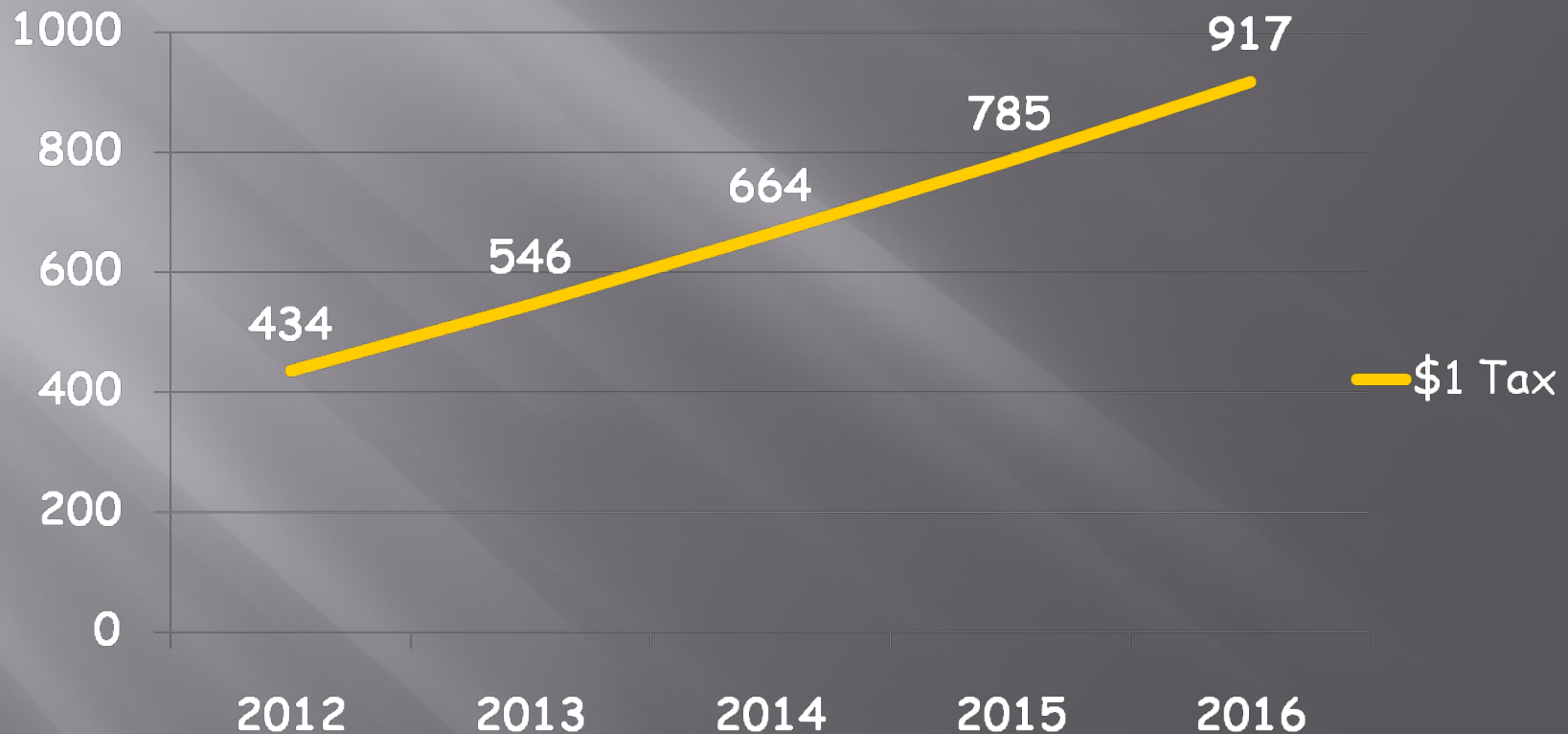
Conceptual Framework: Impact of Smoking on Healthcare Expenditures



Methods: Healthcare Expenditure Models

- Series of microeconomic econometric models
 - based on individual data
 - 60 equations
- Estimated using national survey data
 - Medical Expenditures Panel Survey
 - National Health Interview Survey
- Models are then applied to California data

Savings in Healthcare Expenditures from the Tax Compared to Baseline: 2012–2016 (\$ millions 2009)



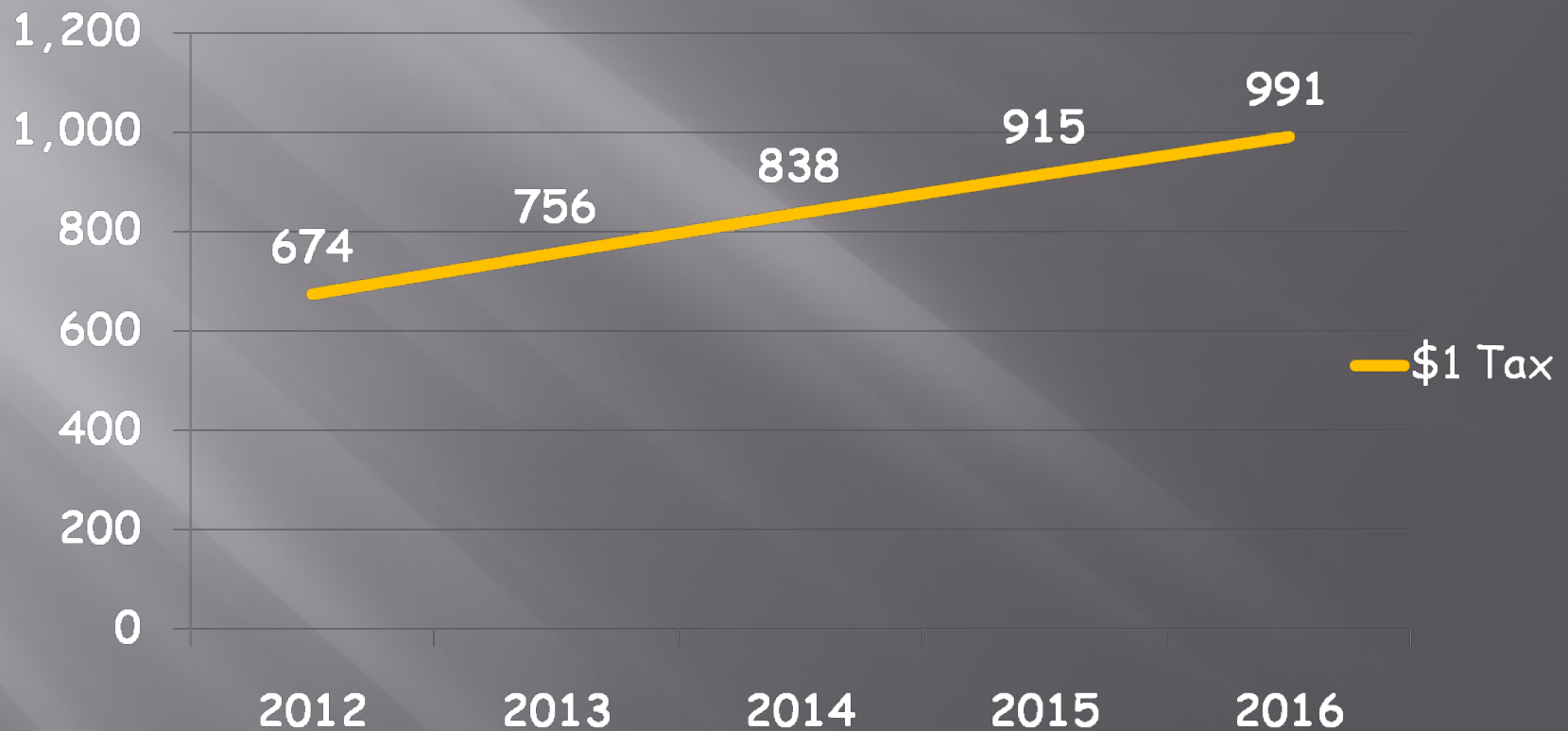
Cumulative saving (2012-2016): \$3.345 billion

Mortality

Exploratory Look at the Impact on Mortality

- Epidemiologic model using
 - published relative risks of death
 - smoking prevalence
- Calculate a smoking-attributable fraction and apply that to deaths
- Exploratory, because we changed only the smoking prevalence under each scenario
 - Didn't change total deaths, population

Smoking-Attributable Deaths Compared to Baseline Case: 2012-2016



Cumulative impact (2012-2016): 4,174 lives saved

Policy Implications

Baseline Case

- ▣ Smoking prevalence will increase
 - 12.2% (2011) to 12.7% (2016)
 - Reflecting the erosion of CTCP expenditures due to inflation

\$1 Tax per Pack

- Smoking prevalence will fall with a large initial drop due to the combined effect of CTCP spending and the tax
 - 12.2% (2011) to 10.4% (2016)
- Between 2012 and 2016, compared to baseline:
 - Healthcare expenditures will fall by \$3.3 billion
 - 4,174 fewer smokers will die