I. Regression (BRFSS, HUD Income Limits, State Cigarette Excise Tax)

Data Sources
BRFSS
https://www.cdc.gov/brfss/annual_data/annual_2015.html
BRFSS Codebook: https://www.cdc.gov/brfss/annual_data/2015/pdf/codebook15_llcp.pdf
HUD Income Limits
https://www.huduser.gov/portal/datasets/il/il16/
State Cigarette Excise Tax Rate
http://kff.org/other/state-indicator/cigarette-excise-tax/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D

For each row in BRFSS, we matched the cigarette tax that corresponds with the state on that row. We imported the columns X_STATE, MSCODE, SEX, INCOME2, VETERAN3, X_RACE, HLTHPLN1, MARITAL, EDUCA, EMPLOY1, X_CHLDCNT, USEEQUIP, X_AGEG5YR X_RFSMOK3, PHYSHLTH, MENTHLTH, NUMADULT, BLIND, and CIG_TAX from our BRFSS data into R. We filtered the data to eliminate those whose income is higher than the 80% limit for their corresponding state and household size. We cleaned up the data to eliminate any data entry errors or unanswered responses to the variables we are analyzing.

We created two new variables. GenMaChild is a variable with five categories. Each category specifies the person's gender, marital status, and having none or at least one child. These attributes can be found in the GENDER, MARITAL, and CHLDCNT columns from the BRFSS data. The second variable that we put together is Age65_Dis. This variable has four categories. Each category specifies if the person is under 65 and if the person has a disability. We defined disability status based on the BLIND and EMPLOY1 columns from our BRFSS data.

We performed a logistics regression model:

X_RFSMOK3 ~ CIG_TAX + MSCODE + X_RACE + X_AGEG5YR + INCOME2 + GenMaChild + Age65_Dis
We used 75% of our data for model training and the rest for testing and predicting. We used the ROC curve method to decide on the optimal cutoff of .33 to differentiate a non-smoker from a smoker in our prediction.

We evaluated our model by randomly generating numbers between 0 and 1 and used these numbers to "predict" the actual data. We compared the performance of the random generation prediction to our model prediction on a confusion matrix, measuring percentages of true positive, true negative, false positive, and false negative.

We also ran our regression model 100 times using 1/5 of our data each time to feed into our simulation model. We ran the regression multiple times to ensure variation in our coefficients that will provide us a confidence interval for our smoker percentages in HUD units.

Below is the regression summary of our model using 75% of our data for training:

	Estimate	Std. Error	z value	Pr(>|z|)	
(Intercept)	-3.947339	0.05438	-72.588	< 2e-16 ***	
CIG_TAX	-0.08904	0.006591	-13.509	< 2e-16 ***	State-based average tax for a pack of 20 cigarettes
MSCODE1	0.121657	0.016896	7.2	6.00e-13 ***	If individual lives in a metropolitan area code. City and suburbs (1)
MSCODE5	0.12984	0.020104	6.458	1.06e-10 ***	Rural (5)
X_RACE2	-0.22169	0.024716	-8.969	< 2e-16 ***	White (1), Black/African American (2)
X_RACE3	0.407172	0.044156	9.221	< 2e-16 ***	American Indian/Alaskan Native (3)
X_RACE4	-0.539271	0.054824	-9.836	< 2e-16 ***	Asian and Native Hawaiian/Pacific Islander (4)
X_RACE6	0.242278	0.038599	6.277	3.46e-10 ***	Other or Multiracial (6)
X_RACE8	-0.632573	0.027574	-22.941	< 2e-16 ***	Hispanics (8)
X_AGEG5YR1	1.236358	0.06154	20.09	< 2e-16 ***	18-24 (1), 80 or above (5)
X_AGEG5YR4	1.340085	0.049532	27.055	< 2e-16 ***	60-79 (4)
X_AGEG5YR2	1.819906	0.055708	32.669	< 2e-16 ***	25-49 (2)
X_AGEG5YR3	1.659464	0.055301	30.008	< 2e-16 ***	50-59 (3)
INCOME21	0.777444	0.025193	30.86	< 2e-16 ***	Under 10K (1), 20K or more (4)
INCOME22	0.760121	0.0248	30.65	< 2e-16 ***	10K - 15K (2)
INCOME23	0.609751	0.022102	27.589	< 2e-16 ***	15K - 20K (3)
GenMaChild2	0.697688	0.028061	24.863	< 2e-16 ***	Female, not married, with kids (2) Two spouses, married, with kids (1)
GenMaChild3	0.492553	0.025038	19.672	< 2e-16 ***	Female, not married, no kids (3)
GenMaChild4	1.058165	0.034875	30.341	< 2e-16 ***	Male, not married, with kids (4)
GenMaChild5	0.45367	0.021976	20.644	< 2e-16 ***	Male, not married, no kids, OR Couple, married, no kids (5)
Age65_Dis1	0.993947	0.032488	30.594	< 2e-16 ***	Age < 65, with disability (1) Age > 65, no disability (4)
Age65_Dis2	0.55672	0.058034	9.593	< 2e-16 ***	Age > 65, with disability (2)
Age65_Dis3	0.493493	0.026066	18.933	< 2e-16 ***	Age < 65, no disability (3)

II. Simulation Output

The regression result is an input of our simulation, which includes coefficients of significant variables (from the regression) and a cutoff to predict whether a virtually generated person is a current smoker or not. Public Housing Developments is a csv file from HUD.gov. It provides information on each public housing development. We mainly use the following attributes:

- PHA code of PHA;
- Total Number of People (in thousands) and Total Number of Children;
- Average Households Income information, such as Percent of Households with Income between 5000 – 9999 per year;
- Gender of head of households, Marital status, and with or without child, derived from attributes such as Percent with 2 Spouses and 1 or more Children Under 18 years;
- Age and Disability, such as Percent of Households Below Age 62 where Head or Spouse has Disability;
- Race/ Ethnicity: Percent of Black non-Hispanic, Native American non-Hispanic, Asians or Pacific Islander non-Hispanic, Hispanic (of any race);
- Ages of Head or Spouse of Households, such as Percent of Households Where Head or Spouse are Less Than 24 Years;
- Metropolitan Statistical Area Code.

According to the total number of people in a public housing development, we generate that number of people, each person has 7 characteristics, such as race, age, income, etc. All the people in the same public housing development have 2 set attributes: same cigarette tax and same metropolitan statistical area code.

For each characteristic, such as race, we generate a random number between 0 and 1. We use the Public Housing Developments csv file to create a cumulative probability for race, and check which range the random number falls into in order to determine this virtually generated person's race. If this person happens to be an Asian, we assign 1 to attribute Asian and 0 to every other race. The next step uses regression results. There is an empirical distribution with 100 variables for each kind of coefficient. Every time, 1 out of 100 variables would be randomly picked. In this example, multiply 1 with coefficient randomly picked from empirical distribution of coefficients for Asians and 0 with other corresponding coefficients. This is the "race score" for one person. We repeat the process for other characteristics and in the end, we sum up all characteristic scores and transform the number according to the logistic regression formula. We compare the transformed number with the regression cutoff of 0.33; if the transformed number is larger than cutoff, this person is predicted as a current smoker; otherwise, this person is predicted as a non-smoker. We sum up the number of smokers, divide it by the total number of adult residents using the total number of people minus total number of children to get the percentage of adult smokers in one public housing development. To increase the accuracy of the result, we repeat the process 50 times for each public housing development to get the average percentage of adult smokers. We repeat the process for all public housing developments.

III. Return on Investment Information

We calculated the return on investment (ROI) from a public housing development perspective and a state health perspective. The investments for each differ significantly in the source of the investment and the predicted outcomes. For each of the ROI models, the smoker population estimates in each of the public

housing developments were taken from the simulation model and the locations of the developments themselves were taken from the HUD open data set.

The general formula for both ROI calculations was:
[(costs without intervention per year) - (costs with intervention in effect per year)]/ (cost of intervention per year).

IV. ROI Calculations Methodology for State Health Departments

For the ROI from the perspective of the state health departments, the costs taken into account include estimated quitline costs for the smokers in each development, secondhand smoke costs, healthcare costs and the interventions as well. The list of interventions covered include four weeks of NRT treatment, eight weeks of NRT treatment, group counseling and fixed billboards.

The pre-Intervention costs were calculated at the beginning and are the same for all interventions. They are:

Total secondhand smoke cost per development: By assuming that each smoker "inflicts" one household's worth of secondhand smoke, the average household size (including number of children and number of adults) are taken into account. Multiply the number of smokers times the average number of children per household times the cost of secondhand smoke per child, and add it to the same calculation, taking into account adults instead. The average number of adults in the calculation is reduced by one since the smoker must be taken into account.

Total quitline cost per development: Multiply the cost of operating a quitline per smoker times the number of smokers in the development times the probability that a smoker in that state contacts the quitline in a given year.

Total healthcare cost per development: Multiply the cost induced by a smoker in that particular state due to smoking times the estimated number of smokers in that development.

These together are known as **Pre-Intervention Costs**.

1. 4 Week NRT

Post-Intervention Costs:

Total secondhand smoke cost per development: Same as Pre-Intervention, except that the cost is recalculated using the new, reduced number of smokers.

Total quitline cost per development: Same as Pre-Intervention, except that the cost is recalculated using the new, reduced number of smokers.

Total healthcare cost per development: Same as Pre-Intervention, except that the cost is recalculated using the new, reduced number of smokers.

Intervention Costs are the costs of 4 weeks of NRT times the total number of estimated smokers in the building.

$$Return\ on\ Investment\ = \frac{Pre\ Intervention\ Costs - (Post\ Intervention\ Costs + Intervention\ Costs)}{Intervention\ Costs}$$

2. 8 Week NRT

Post-Intervention Costs:

Total secondhand smoke cost per development: Same as Pre-Intervention, except that the cost is recalculated using the new, reduced number of smokers.

Total quitline cost per development: Same as Pre-Intervention, except that the cost is recalculated using the new, reduced number of smokers.

Total healthcare cost per development: Same as Pre-Intervention, except that the cost is recalculated using the new, reduced number of smokers.

Intervention Costs are the costs of 8 weeks of NRT times the total number of estimated smokers in the building.

$$Return\ on\ Investment\ = \frac{Pre\ Intervention\ Costs - (Post\ Intervention\ Costs + Intervention\ Costs)}{Intervention\ Costs}$$

3. Group Counseling

Post-Intervention Costs:

Total secondhand smoke cost per development: Same as Pre-Intervention, except that the cost is recalculated using the new, reduced number of smokers.

Total quitline cost per development: Same as Pre-Intervention, except that the cost is recalculated using the new, reduced number of smokers.

Total healthcare cost per development: Same as Pre-Intervention, except that the cost is recalculated using the new, reduced number of smokers.

A column detailing the number of counselors needed per development was added, but it does not factor into the development. The calculation assumes a maximum of 12 people per session, one hour per session and 8 work hours total, meaning each counselor can see a maximum of 96 people a day.

Intervention Costs are the costs of group counseling times the total number of estimated smokers in the building. If the development has less than 3 smokers total, individual counseling costs are taken into account instead.

$$Return\ on\ Investment\ = \frac{Pre\ Intervention\ Costs - (Post\ Intervention\ Costs + Intervention\ Costs)}{Intervention\ Costs}$$

4. Fixed Billboard

Post-Intervention Costs:

References for Georgia Tech-HUD Project Datasets

Total secondhand smoke cost per development: Same as Pre-Intervention, except that the cost is recalculated using the new, reduced number of smokers.

Total quitline cost per development: Same as Pre-Intervention, except that the cost is recalculated using the new, reduced number of smokers.

Total healthcare cost per development: Same as Pre-Intervention, except that the cost is recalculated using the new, reduced number of smokers.

Intervention Costs are the costs of running a billboard campaign on the property. The value is currently set to $6,250 regardless of the location of the development.

$$Return\ on\ Investment\ = \frac{Pre\ Intervention\ Costs - (Post\ Intervention\ Costs + Intervention\ Costs)}{Intervention\ Costs}$$

V. ROI Calculations Methodology for Nationwide Television Media Campaign

Under the state health department perspective, one intervention focuses on the impact of a nationwide television media campaign. The costs taken into account include estimated quitline costs for the smokers in all development, secondhand smoke costs, healthcare costs and the interventions as well.

The pre-Intervention costs were calculated at the beginning. They are:

Total secondhand smoke cost: By assuming that each smoker "inflicts" one household's worth of secondhand smoke, the average household size (including number of children and number of adults) in all developments is taken into account. Multiply the total number of smokers in public housing units times the average number of children per household times the cost of secondhand smoke per child, and add it to the same calculation, taking into account adults instead. The average number of adults in the calculation is reduced by one since the smoker must be taken into account.

Total quitline cost: Multiply the cost of operating a quitline per smoker times the number of smokers in total times the average probability that a smoker contacts the quitline in a given year.

Total healthcare cost per development: add up the total cost induced by smokers in public housing developments due to smoking, which itself is a calculation of the estimated number of smokers in each development times the healthcare costs incurred by smokers in that particular state.

These together are known as **Pre-Intervention Costs**.

Post-Intervention Costs:

Total secondhand smoke cost: Same as Pre-Intervention, except that the cost is recalculated using the new, reduced number of smokers.

Total quitline cost: Same as Pre-Intervention, except that the cost is recalculated using the new, reduced number of smokers.

Total healthcare cost: Same as Pre-Intervention, except that the cost is recalculated using the new, reduced number of smokers.

References for Georgia Tech-HUD Project Datasets

Intervention Costs include the cost of the campaign per quit times the total number of smokers in public housing developments times the probability of quitting given the intervention. The cost of the campaign per quit was found using a paper that estimated the cost of the Tips From Former Smokers campaign[1].

$$Return\ on\ Investment\ = \frac{Pre\ Intervention\ Costs - (Post\ Intervention\ Costs + Intervention\ Costs)}{Intervention\ Costs}$$

VI. Cost Savings Calculations Methodology for Public Housing Developments

From the perspective of the public housing developments (PHDs), the costs taken into account were from the probability of residents being evicted, turnovers of the smoking units, and smoking-related fires. The interventions were based on nicotine replacement therapy (NRT) options and counseling: four weeks of NRT treatment, eight weeks of NRT treatment, and group counseling.

The Pre-Intervention costs were calculated at the beginning and are the same for all interventions. They are:

Total eviction cost per development: Multiply the cost of one eviction times the probability of one eviction times the number of occupied units in the building.

Total turnover cost per development: Multiply the cost of one turnover times the probability of one turnover times the estimated number of adult smokers in the building.

Total fire cost per development: Multiply the cost of one fire times the probability of one fire times the number of smokers.

These together are known as **Pre-Intervention Costs**.

1. 4 Week NRT

Post-Intervention Costs:

Total eviction cost per development: Multiply the cost of one eviction times the probability of one eviction times the number of occupied units in the building, taking into account each smoker who quit given the intervention, assuming each smoker lives in their own unit.

Total turnover cost per development: Multiply the cost of one turnover times the probability of one turnover times the new reduced estimated number of adult smokers in the building.

Total fire cost per development: Multiply the cost of one fire times the probability of one fire times the new reduced estimated number of smokers.

$$Cost\ Savings = Pre\ Intervention\ Costs - Post\ Intervention\ Costs$$

2. 8 Week NRT

Post-Intervention Costs:

References for Georgia Tech-HUD Project Datasets

Total eviction cost per development: Multiply the cost of one eviction times the probability of one eviction times the number of occupied units in the building, taking into account each smoker who quit given the intervention, assuming each smoker lives in their own unit.

Total turnover cost per development: Multiply the cost of one turnover times the probability of one turnover times the new reduced estimated number of adult smokers in the building.

Total fire cost per development: Multiply the cost of one fire times the probability of one fire times the new reduced estimated number of smokers.

$$Cost\ Savings = Pre\ Intervention\ Costs - Post\ Intervention\ Costs$$

3. Group Counseling

Post-Intervention Costs:

Total eviction cost per development: Multiply the cost of one eviction times the probability of one eviction times the number of occupied units in the building, taking into account each smoker who quit given the intervention, assuming each smoker lives in their own unit.

Total turnover cost per development: Multiply the cost of one turnover times the probability of one turnover times the new reduced estimated number of adult smokers in the building.

Total fire cost per development: Multiply the cost of one fire times the probability of one fire times the new reduced estimated number of smokers.

$$Cost\ Savings = Pre\ Intervention\ Costs - Post\ Intervention\ Costs$$

Incremental Cost Effectiveness Ratio (ICER) Calculations

Net Benefit is calculated in terms of Quality-Adjusted Life Years (QALY) saved. Quitting smoking for those in the 25-50 years bracket nets them an extra 6.8 QALYs. Those in the 51-61 bracket gain 5.3 QALYs, while those in the 62-plus age bracket gain 2.5 QALYs, on average. Net Benefit takes a weighted average of the age makeup of the development in order to find the average QALYs saved per smoking quit in the development

$$ICER = \frac{(Post\ Intervention\ Costs + Intervention\ Costs) - Pre\ Intervention\ Costs}{-Net\ Benefit}$$

References for Georgia Tech-HUD Project Datasets

Number	Reference Name	Location	References
1	Development Information	State-Local	HUD.GOV. (2016, November 1). Retrieved April 4, 2017, from https://egis-hud.opendata.arcgis.com/datasets/5c96143f79c940a0a8cedae99a1ac562_0
2	Quitline Usage Rates	State-Local	Highlights 2012 State Map. (n.d.). Retrieved April 04, 2017, from https://www.cdc.gov/tobacco/data_statistics/state_data/state_highlights/2012/map/index.htm
3	Percentage Smokers	State-Local and PHDs	Estimated by Senior Design group
4	Secondhand Smoke Rates	State-Local	Mason, J., PhD, Wheeler, W., MPH, & Brown, M. J., ScD, RN. (2015). The Economic Burden of Exposure to Secondhand Smoke for Child and Adult Never Smokers Residing in U.S. Public Housing. Public Health Reports, 130(May-June), 230-244. Retrieved March 9, 2017, from The Economic Burden of Exposure to Secondhand Smoke for Child and Adult Never Smokers Residing in U.S. Public Housing.
5	Healthcare Costs	State-Local	Best Practices for Comprehensive Tobacco Control Programs—2014. (2014, April 24). Retrieved April 04, 2017, from https://www.cdc.gov/tobacco/stateandcommunity/best_practices/
6	Healthcare Costs	State-Local	The Henry J. Kaiser Family Foundation. (2015). Retrieved April 4, 2017, from http://kff.org/other/state-indicator/smoking-adults/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D
7	Healthcare Costs	State-Local	Population Distribution by Age. (2016, November 11). Retrieved April 04, 2017, from http://kff.org/other/state-indicator/distribution-by-age/?dataView=1¤tTimeframe=0&sortModel=%7B%22colId%22%3A%22Location%22%2C%22sort%22%3A%22asc%22%7D
8	Healthcare Costs	State-Local	Smoking-Attributable Mortality, Years of Potential Life Lost, and Productivity Losses --- United States, 2000--2004. (n.d.). Retrieved from https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5745a3.htm
9	Healthcare Costs	State-Local	Centers for Disease Control and Prevention. Smoking-Attributable Mortality, Years of Potential Life Lost, and Productivity Losses — United States, 2000–2004. Morbidity and Mortality Weekly Report. 2008 ; 57(45):12 26 – 8 .
10	Healthcare Costs	State-Local	Bureau, U. C. (n.d.). Census.gov. Retrieved from https://www.census.gov/

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11	Healthcare Costs	State-Local	Behavioral Risk Factor Surveillance System. (2016, August 26). Retrieved from https://www.cdc.gov/brfss/
12	Healthcare Costs	State-Local	Index. (2014, May 05). Retrieved from https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/index.html
13	Healthcare Costs	State-Local	Orzechowski , W., & Walker, R. (2013). The Tax Burden on Tobacco. Retrieved from http://www2.taxadmin.org/fta/tobacco/papers/tax_burden_2012.pdf
14	Healthcare Costs	State-Local	CDC - State Tobacco Activities Tracking and Evaluation (STATE) System - Smoking & Tobacco Use. (n.d.). Retrieved from http://www.cdc.gov/tobacco/statesystem
15	Healthcare Costs	State-Local	Current Population Survey (CPS), Annual Social and Economic Supplement (ASEC) of the Current Population Survey (CPS) (n.d.). Retrieved from http://www.census.gov/cps/data/cpstablecreator.html
16	Healthcare Costs	State-Local	Databases, Tables & Calculators by Subject. Quarterly Census of Employment and Wages (n.d.). Retrieved from http://data.bls.gov/
17	Healthcare Costs	State-Local	National Association of County and City Health Officials. Local Health Units, by State. Unpublished data. 2012.
18	Healthcare Costs	State-Local	PlowShare Group Inc. Unpublished data. 2013.
19	Healthcare Costs	State-Local	State Area Measurements and Internal Point Coordinates. Retrieved from http://www.census.gov/geo/reference/state-area.html
20	Healthcare Costs	State-Local	CPI Tables. (n.d.). Retrieved from http://www.bls.gov/cpi/tables.htm
21	4 week NRT Costs	State-Local and PHDs	Equate Nicotine Transdermal System Step 1, 21mg Clear Patch, 14 Patches. (2013). Retrieved April 4, 2017, from https://www.walmart.com/ip/Equate-Nicotine-Transdermal-System-Step-1-21mg-Clear-Patch-14-Patches/12556780
22	4 week NRT Probability	State-Local and PHDs	Cummings, K. M., Fix, B. V., Celestino, P., Hyland, A., Mahoney, M., Ossip, D. J., & Bauer, U. (2010). Does the number of free nicotine patches given to smokers calling a quitline influence quit rates: results from a quasi-experimental study. BMC Public Health, 10, 181. http://doi.org/10.1186/1471-2458-10-181
23	8 week NRT Costs	State-Local and PHDs	Equate Nicotine Transdermal System Step 1, 21mg Clear Patch, 14 Patches. (2013, December 05). Retrieved April 04, 2017, from https://www.walmart.com/ip/Equate-Nicotine-Transdermal-System-Step-1-21mg-Clear-Patch-14-Patches/12556780
24	8 week NRT Probability	State-Local and PHDs	Cummings, K. M., Fix, B. V., Celestino, P., Hyland, A., Mahoney, M., Ossip, D. J., & Bauer, U. (2010). Does the number of free nicotine patches given to smokers calling a quitline influence quit rates: results from a quasi-experimental study. BMC Public Health, 10(1). doi:10.1186/1471-2458-10-181

References for Georgia Tech-HUD Project Datasets

25	Group Counseling Costs	State-Local	Information for Providers about Tobacco Cessation Benefits through MassHealth and Commonwealth Care. (2012, December). Retrieved April 4, 2017, from http://quitworks.makesmokinghistory.org/uploads/section_quitworks/ProviderFactSheetUpdated.pdf
26	Group Counseling Probability	State-Local	Tobacco Use and Dependence Guideline Panel. Treating Tobacco Use and Dependence: 2008 Update. Rockville (MD): US Department of Health and Human Services; 2008 May. 6, Evidence and Recommendations. Available from: https://www.ncbi.nlm.nih.gov/books/NBK63943/
27	Group Counseling Probability (given 3 or less people)	State-Local	Barker, D., MSH, Bentz, C. J., MD, Bjornson, W., MPH, Joseph, A., MD,MPH, Rigotti, N. A., MD, & Swartz, S., MD. (2001). Cost of Smoking Cessation Interventions. Reimbursement for Smoking Cessation Therapy- A Healthcare Practitioner's Guide, 1-42. Retrieved April 4, 2017, from https://www2.aap.org/richmondcenter/pdfs/PACTReimbursementforSmokingCessation.pdf
28	Local Fixed Billboard Cost	State-Local	Aland, M., & Chiong, J. (2017, March 08). How Much Does Billboard Advertising Cost? Retrieved April 03, 2017, from http://fitsmallbusiness.com/how-much-does-billboard-advertising-cost/
29	Local Fixed Billboard Probability	State-Local	Sparks, R. E., & Green, L. W. (2000, November). Mass Media in Support of Smoking Cessation. Retrieved April 4, 2017, from https://cancercontrol.cancer.gov/brp/tcrb/monographs/12/Chapter_9.pdf
30	Nationwide Television Campaign Cost	Nationwide	Bernstein, L. (2014, December 10). Government anti-smoking campaign cost just $480 per quitter, study finds. Retrieved April 03, 2017, from https://www.washingtonpost.com/news/to-your-health/wp/2014/12/10/government-anti-smoking-campaign-cost-just-480-per-quitter-study-finds/?utm_term=.51cc698f6443
31	Nationwide Television Campaign Probability	Nationwide	Zu, Xu, Alexander, Robert.L. (2015). A Cost-Effectiveness Analysis of the First Federally Funded Antismoking Campaign. American Journal of Preventative Medicine, Volume 48 (3), 318-325.
32	Number of Quitline NRT Weeks for Uninsured	PHD	State Specific Quitline Resources [Telephone interview]. (2017, January).
33	Eviction Cost	PHD	Regulatory Impact Analysis Instituting Smoke-Free Public Housing Proposed Rule. (2015, October). Retrieved April 4, 2017, from http://www.publichealthlawcenter.org/sites/default/files/HUD-2012-0103-0116-RIA.pdf
34	Eviction Probability	PHD	Regulatory Impact Analysis Instituting Smoke-Free Public Housing Proposed Rule. (2015, October). Retrieved April 4, 2017, from http://www.publichealthlawcenter.org/sites/default/files/HUD-2012-0103-0116-RIA.pdf

References for Georgia Tech-HUD Project Datasets

35	Turnover Cost	PHD	Regulatory Impact Analysis Instituting Smoke-Free Public Housing Proposed Rule. (2015, October). Retrieved April 4, 2017, from http://www.publichealthlawcenter.org/sites/default/files/HUD-2012-0103-0116-RIA.pdf
36	Turnover Probability	PHD	Regulatory Impact Analysis Instituting Smoke-Free Public Housing Proposed Rule. (2015, October). Retrieved April 4, 2017, from http://www.publichealthlawcenter.org/sites/default/files/HUD-2012-0103-0116-RIA.pdf
37	Fire Cost	PHD	Up in Flames: The Dangers of Smoking in Apartment Units . (2009). Retrieved April 5, 2017, from http://www.mnsmokefreehousing.org/documents/Fire_fact_sheet.pdf
38	Fire Probability (Total number of fires)	PHD	The Smoking-Material Fire Problem. (n.d.). Retrieved April 04, 2017, from http://www.nfpa.org/news-and-research/fire-statistics-and-reports/fire-statistics/fire-causes/smoking-materials
39	Fire Probability (Total number of smokers)	PHD	Current Cigarette Smoking Among Adults — United States, 2011. (2012, November 09). Retrieved April 04, 2017, from https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6144a2.htm
40	ICER with QALYs	PHD	Bertram, M. Y., Lim, S. S., Wallace, A. L., & Vos, T. (2007). Costs and benefits of smoking cessation aids: making a case for public reimbursement of nicotine replacement therapy in Australia. Tobacco Control, 16(4), 255–260. http://doi.org/10.1136/tc.2006.017657
41	Smoking Fire Probability	PHD	NFPA's Latest Estimates of Home Fires Started by Smoking Materials - 2014. (2016, August). Retrieved April 4, 2017, from http://www.nfpa.org/~/media/files/news-and-research/fire-statistics/latest-estimates/latestestimatessmokingmaterials.pdf?la=en
42	Total number of Home Fires	PHD	Home fires. (n.d.). Retrieved April 04, 2017, from http://www.nfpa.org/news-and-research/fire-statistics-and-reports/fire-statistics/fires-by-property-type/residential/home-fires
43	Inflation Calculator	State-Local and PHDs	CPI Inflation Calculator. (n.d.). Retrieved April 05, 2017, from https://www.bls.gov/data/inflation_calculator.htm