Florida’s Medicaid program began in 1970 and has grown to encompass 10.6 to 18.1 percent of the state population. With 3.1 million Floridians enrolled (excluding CHIP) and $29 billion spent on Medicaid, which is about 31 percent of the Florida budget. Currently, Florida’s Medicaid eligibility only extends to children, adults with dependents, and the elderly, all with varying income thresholds relative to the Federal Poverty Level (FPL).

Under the Patient Protection and Affordable Care Act (ACA), Medicaid can be extended to those between the ages of 19 to 64, without dependents or disabilities relative to their income of the FPL. The ACA also extended this eligibility by 5 percentage points from 133 percent to 138 percent of the FPL.

**Costs-Benefit Methodology**

The method of our study will be a cost-benefit analysis, where we will find the net loss or benefit of Medicaid expansion in Florida. assessed against the total cost of expanding Medicaid to this newly eligible population.

To find the estimated cost of expanding Medicaid in Florida, we will identify Floridians who would qualify under the ACA rules and multiply this amount by the per capita cost to the state.

The benefits of expansion will be composed of five gains found in states who have already expanded:

- **Increases:**
  - Education
  - Employment

- **Decreases:**
  - Bankruptcy
  - Crime
  - Mortality
Net Effect

Cost

Max Number Enrollees: 1.2 Million
Per Capita State Cost: $3,006
Education: $24.33 Million
Employment: $2.2 Million
Bankruptcy: $6.65 Million
Crime: $81.97 Million
Mortality: $161 Thousand

Total Cost: $3.6 Billion

Benefits

Total Benefit: $115.3m Million

Findings

Using wage data from the American Consumer Survey, AERG found the number of newly eligible individuals to be 1.2 million people. Multiplying this by the estimated Medicaid per capita expenditure for Florida from The Center for Medicare & Medicaid Services, AERG estimates a cost of $3.6 billion to the state if every newly eligible person enrolls.

Using our most conservative estimate for benefits, $115.3 million, AERG's results show that expanding Medicaid under ACA in Florida will result in a $3.48 billion net loss to the state.

While this is a notably large loss, there are two factors that drastically affect this. First we are using the maximum cost amount of all newly eligible people enrolling. This is an unlikely scenario and later in the report we discuss other possible enrollment amounts. Second, we are only observing benefits to the state. There are many monetary societal benefits that would come from expanding Medicaid that are not visible in the yearly state budget. AERG estimates the financial impact of Medicaid expansion would create between $3.23 billion and $7.82 billion per year in total value when considering societal and fiscal aftermath.
This is a project performed by M.S. students in Applied Economics. The Applied Project course is the capstone course for the degree of M.S. in Economics. The course is a three-month consulting project that takes the student from the proposal stage through the final presentation and final report.

The students are “hired” as associates in a fictitious consulting company called Applied Economics Research Group (AERG). The consulting company is fictitious, and is only mentioned to enhance the realism of the project.

To further enhance the realism of the projects, we sometimes use hypothetical client requests for proposals with actual client names. However, the client requests may not be real. Please contact the Director of the Applied Master’s program at Florida State University to find out if a client request is real or not.

Although every effort has been made to verify the accuracy of the student projects, Florida State University makes no claims, promises, or guarantees about the accuracy, completeness, or adequacy of the projects, and disclaims liability for errors and omissions of content, statements and conclusions of the projects. In addition, note that these projects are the work of students, and do not necessarily reflect the views of the Department of Economics or Florida State University.

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The Patient Protection and Affordable Care Act (ACA) was implemented on March 23rd, 2010. The ACA expanded access to healthcare through a combination of expanding the income limit thresholds and providing subsidies for private insurance, made available on the federal exchange. As of 2022, 39 states have expanded Medicaid coverage under the provisions of the ACA. Florida has not elected to expand Medicaid under the ACA provisions.

This study will estimate the net cost to the State of Florida for expanding Medicaid, including any quantifiable benefits given recent findings in the literature from other states that have already expanded coverage.
Medicaid was signed into law by President Lyndon B Johnson on July 30, 1965. Medicaid provides health insurance coverage to those most vulnerable, including low-income families, children, elderly, pregnant women, and people with disabilities. Medicaid is jointly funded by the states and federal government, therefore states can tailor their own versions of the Medicaid program, within the bounds of federal guidelines. This has led to widespread variation in who qualifies, and services offered by each state’s program.

Across all states, there are 80.91 million low-income families enrolled in Medicaid. 4.80 million Floridians are enrolled in Medicaid/Chip[1] as of May 2022. In Appendix 1, we report the growth in Medicaid enrollments over time.

The Florida Medicaid program began in 1970, and offers 43 benefits in total[2]; such as dental care, speech therapy, physical therapy, etc. Florida Medicaid services are administered by the Agency for Health Care and Administration with current eligibility for Medicaid being determined jointly by the Department of Children and Family Services (DCFS) and the Social Security Administration (for SSI recipients).

[1] CHIP, the Children health insurance plan, established in 1997 as a “build on” to Medicaid and provides coverage to eligible children, operated in conjunction with the state Medicaid services and separate programs. (benefits.gov- What to Know About Applying for Medicaid and CHIP in Your State)
[2] Florida even offers less common, specialized services, such as nutrition services and acupuncture (Ballotpedia, 2017)
In 2004 Gov. Jeb Bush’s proposed reforms to Florida’s Medicaid program. These reforms were intended to reduce costs and improve system delivery, rather than expand access to new populations. These reforms were implemented, in select counties (Duval, and Broward), beginning in 2005 and became known as the Medicaid Medical Assistance programs (MMA). Full implementation was achieved across the state in 2014. The introduction of MMA reforms had significant fiscal and social impact [3], saving about $161 million annually, reducing costs by about 18 percent since 2014. As of 2020-2021 fiscal year Florida’s Medicaid spending totaled $29.28 billion dollars and Medicaid expenditures compromised about 31.76 percent of Florida’s total state budget [4] which is consistently on trend with previous years Medicaid share of the state budget (Usually falling around 30 percent).

Figure 1: Total Medicaid Spending in Florida from 2012 to 2016

[4] Program expenditures totaled $29,281.4 million after reconciliation according to Social Services estimating conference for Medicaid caseloads and expenditures executive summary. And the total state budget for Florida in the fiscal year 2020 came out to 92.2 billion according to Florida Leads the nation- statewide overview and taxes. Dividing the two gave the percent of Medicaid spending for that year.
The program incentivized early identification of illness, improved care coordination, accessible supplemental benefits not previously available through Medicaid, and increased consumer control in the Medicaid marketplace as well as preventative services.[5]

**Current Medicaid Eligibility in Florida**

In Florida, people will qualify for Medicaid if they are pregnant, with dependents, are disabled or blind, are children or 65 years and older, as well as below 133 percent of the Federal Poverty Level (FPL). Regardless of income relative to FPL, able-bodied adults are not currently covered under Florida Medicaid.

**Figure 2: 2020 Federal Poverty Level Income Thresholds**

[5] In many states, income thresholds were significantly below 133 percent, where eligibility for Medicaid only went as high as 100 percent of the FPL this translated to an annual income of $12,884 for an individual (aspe.hhs- Poverty Guidelines, 48 Contiguous States).
As of 2020, 133 percent of the FPL translated to an annual income limit of $16,971 for an individual or $34,846 for a family of four.

Economists form the Agency for Healthcare Administration estimated Florida’s average monthly eligible of Medicaid recipients is more than 5 million Floridians, this is backed by Florida’s post-pandemic Medicaid enrollment projections (Sexton, 2021). Beginning in 2010, states had the option to expand Medicaid under the auspices of the Patient Protection and Affordable Care Act (ACA). We will discuss details pertaining to the ACA below in the next Section.

**Patient Protection and Affordable Care Act**

On March 23rd, 2010, President Barack Obama signed the Patient Protection and Affordable Care Act (ACA) into law. The ACA had 3 major components. Firstly, the ACA expanded Medicaid eligibility by 5 percentage points; from 133% to 138% of the FPL. This expansion made 32 uninsured million Americans eligible for Medicaid coverage (King, 2011). Secondly, the ACA created the ACA exchange or the Health Insurance Market place, a single market where people can purchase a qualified private health insurance plan. Thirdly, the ACA came with an individual mandate that required that all applicable citizens maintain health insurance coverage or face a monetary penalty beginning in 2014. The ACA also came with additional stipulations, such as those preventing insurance companies from denying coverage based on pre-existing conditions.
Two major features of the ACA, the individual mandate, and the Medicaid expansion, were challenged in National Federation of Independent Business v. Sibelius. The Supreme Court of the United States (SCOTUS) ruled the individual mandate was constitutional under the taxing powers of the federal government but found the Medicaid expansion unconstitutional. SCOTUS ruled Medicaid expansion as unconstitutionally coercive of states due to inadequate notice for voluntary consent while the (HHS) secretary could withhold all existing Medicaid funds for non-compliance. The solution was to leave expansion intact in the ACA but restrict the secretary’s enforcement power so to prevent withholding of funds from a state for non-compliance with Medicaid FPL threshold expansion, effectively given states the choice to expand or not.

Under the implementation of the ACA’s Medicaid expansion, childless non-pregnant non-dependent and able-bodied adults between the ages of 19 to 64 can qualify for Medicaid based on their income alone, if their income is below 138 percent of the federal poverty level. At this percentage of the FPL, the income limit in 2020 translated to an annual salary of $17,774 for an individual and $36,570 for a family of four as well as a monthly income of $1,481 for an individual and $3,048 for a family of four, according to the Office of the Assistant Secretary for Evaluation and Planning. A key component of our analysis is identifying the sub-population within Florida that satisfies this new eligibility criteria.
Methodology

The problem statement that precedes our research is as follows, Florida has yet to opt for Medicaid expansion under ACA provisions which would extend eligibility thresholds to a new population of non-elderly (age 19-64), childless, able-bodied adults without dependents. HHS estimates potentially 400,000 to 796,000 uninsured Floridians in the coverage gap would be eligible in this new population. The question we’re aimed to address; what are the costs and benefits to society and to the state budget of Florida for enacting ACA Medicaid expansion and is it possible the net benefits of expansion would outweigh the costs of implementation.

To answer these questions, the overall approach utilized for this research is a cost-benefit analysis (CBA), more specifically a net-benefit (or rather net-loss) formula. This method best suits our objective, because this formulation will allow us to identify, quantify, and add all the positive factors (benefits) to get the total positive effect of expansion. Once benefits are quantified, the next step is to compare the quantified the negatives factor (cost) of expansion and subtract by the net benefits. Our total values are based on the financial and adjudicational gains to the state, to get a concrete baseline estimate. The focus of our research is not the social welfare nor value to the community of these benefits (although we will be getting into these later), instead our focus is the direct benefits the state can expect to see as a return to their budget line.
Our initial estimate of ACA Medicaid Eligibility expansion to those low-income adults will be an exceedingly conservative estimate of the positive net effect and an exceptionally generous estimate of our net costs. This translates to an extreme discrepancy of cost should everyone who is newly eligible to enroll decide to enroll, and a minimalist positive effect should the impacts associated with implementation be less than satisfactory. This will equate to the largest discrepancy that can be expected but is also unlikely. Using a combination of quantitative and qualitative data we build a data set for fielding those previously stated research questions in Stata, in addition to making use of R Studio, Python and Microsoft Excel for data visualization.
Data

The primary data employed is collected through existing variables on Integrated Public Use Microdata Series (IPUMS USA), which collects and harmonizes U.S. census microdata from the American Community Services (ACS) from 2000 to present. From IPUMS we gather a data set with samples from 2020 (the most recent available year for data variables in the American Community Survey) and use selected variables to restrict our sample to Floridians aged 19 to 64. Specifically which variables are used will be expounded upon in the Cost section of this paper, but to name a few of the primary variables that formed the structure of our data. The ‘StateFips’ variable identifies the U.S. state and related associated areas by numeric and two-letter alphabetic code defined in U.S. Federal information processing Publication. By ‘StateFips’ we filter the sample for Florida observations only.

Another essential variable, ‘Hhweight’, indicates how many households in the U.S. population are represented by a given household in the IPUMS sample. By utilizing this variable, we get the total of U.S. households represented by one observation in the sample. Once we have these, restricting a few more variables will identify our target population. Such as the ‘Age’ variable, restricted for those 19 to 64 years old and the ‘NChild’ variable to filter out those who are with dependents. Descriptive variables such as sex, race, and usual hours worked are added to better familiarize ourselves with our newly eligible population demographics.
Secondary data was collected by previous literature, such as percentage changes in recorded statistics of benefits that those states who opted for expansion have seen, we use this to assist in calculating the positive effects that Florida can expect. These secondary pieces of information will also be described in greater detail in the benefits section of our paper, where exact calculations can be found. The key secondary data utilized consists of percent changes such as in mortality, crime, percentage changes in education, bankruptcy filings, and percent changes in employment. The primary data is used for cost estimates, which are the direct effects of ACA Medicaid eligibility expansion. The secondary data is indirect effects of the ACA Medicaid Expansion. These benefits are the positive effects that are statically significant and associated with ACA Medicaid Expansion. Benefits are calculated using secondary data and converted into financial metrics i.e., benefits the state can expect through tax revenue, wages, and costs saved through changes in expenditures.

Literature and experiments, including those that contrast and compare differences among states who have implemented ACA specifications and states that have not, have found that increasing the access health coverage optionality (either through expanding FPL income thresholds or extending coverage to childless low-income adults.) are associated with positive effects that flow across different sections of the state. Such as economical gains, increased consumer financial security, reduction in per-capita expenditures, or increase in societal opportunities.
Since the initial implementation of the ACA and the state led expansion of Medicaid, academic researchers have attempted to quantify its impact on a variety of outcomes. According to research by (Baiker, Finkelstein, 2010), commonly referred to as The Oregon Health, Rand Health Experiment, Medicaid expansion is associated with changes in criminal charges, labor force participation, mental health, healthcare utilization, and bankruptcy.

Although not address directly as a benefit in our research, one notable and immediate effect after the implementation of the Medicaid expansion under the ACA have been a reduction in the uninsured rate, which dropped 41 percent between the years 2010 to 2016 (Branham, Peters, and Sommers, 2021). The number of non-elderly uninsured adults decreased from 48.2 million to 28.2 million, although this is attributed to a combination of expansion and accessibility to the marketplace. In Florida the uninsured rate has reached an all-time low of 13.2 percent as of the most recent data from 2021.

Perhaps surprisingly, Medicaid expansion has potentially reduced the growth rate of healthcare spending. National health expenditures grew by 5.6 percent a year between 2003 to 2010 but the growth rate slowed to 4.4 percent a year between the years 2010 to 2018, the same could be found for state-level expenditures as well (Perterson-Kff, 2022). Expansion also slowed increases in out-of-pocket costs for charges such as doctor visits and
prescription drugs, which rose an average of 0.2 percent per year since 2010 but were rising 1 percent per year prior to 2010 (JAMA Netw Open. 2021). The slower rate of healthcare spending growth is further supported by Ward (2020), who found that Medicaid expansion is associated with a 4.4 percent to 4.7 percent reduction in state spending on traditional Medicaid during 2014 to 2017.

Academic literature has also shown a link between health insurance and criminal activity. Simes, Jahn, Taxman, (2022) estimate that Medicaid expansion reduced arrests rates by 20 to 32 percent in the first three years after expansion. The largest effects were found for drug related arrests, which fell by 25 to 41 percent in the three years following Medicaid expansion. Refer to Figure 6 below to view the change in total and drug arrests per 100,000 residents in a county according to Simes' study.

**Figure 4: Changes in Total and Drug Arrests, Expansion vs. Non-Expansion**
Recent literature has also documented a link between insurance coverage and financial health. For example, White (1998) and Domowitz et al (1999) found that Medicaid expansion is associated with decreases in the bankruptcy rate, even since the 1990s expansions. Gross (2011) utilized a difference-in-differences regression to analyze the impact of Medicaid expansions at a state level between 1992 and 2004. Gross found that a 10 percent increase in the Medicaid eligibility rate, in a state, results in an 8 percent decrease in consumer bankruptcies. Using a similar methodology, Zwiefel (2019) estimates that Medicaid expansions since the ACA led to statistically significant decrease in the bankruptcy rates, consistent with previous literature.

Evidence of Medicaid expansion’s impact on employment has also been noted by Gooptu, et al (2016). They found expansion did not have a statistically significant impact on employment changes or job reductions but was associated with small changes in behaviors such as job lock, and job switching. Gooptu et al. (2016) compares labor market outcomes for those who satisfy expansion eligibility criteria in expansion and non-expansion states and found a 2.1 percentage point increase in part-time work. Although some studies note a decrease in full-time employment due to decrease in job lock, the necessity for a person to maintain the job for the specified benefits, Holahan, et al (2013) finds that opting for ACA Medicaid eligibility expansions could mean 59,821 new full-time jobs across all sectors of FL’s economy. Peng, Guo, and Meyerhoefer (2018) compare employment in border counties of expansion and non-expansion states and find a 1.3 percent decline in
employment in the year after expansion, that then returns to pre-expansion levels within two years.

This section is just a brief informative of what our research will hopefully find for benefits to Florida and is detailed more in our Benefits section next.
Prefacing the overall benefit aspect of Medicaid expansion under ACA in Florida, we must define some relevant attributes regarding our analysis. Firstly, the benefits to the state of Florida which may be recouped through tax contributions such as property tax and sales tax. Secondly, the benefits to the community of Florida which may be introduced to society through intangibles such as the valuations of life, employment, bankruptcies, reduction in specific crimes and dropping out of high school from recent literature and studies. The state benefit will be a portion of the total amount demonstrated by the generated total benefit.

**Education**

The first benefit of Medicaid expansion under ACA we will observe is education. This is seen in student retention rates that are increased due to drop-out rates decreasing. The newly eligible group enrolls into Medicaid once expansion occurs in their state, the cycle continues by the parent when they also enroll their child into public insurance programs. Children may have conditions that have not been addressed prior to being covered by the public insurance programs like Medicaid and Children’s Health Insurance Program (CHIP). It is likely that health insurance and student performance is correlated due to circumstances of better health once covered. There has been evidence that expansions impact child insurance rates and their health concerns being addressed. The drop-out rate is a significant identifier for the effects that Medicaid expansion has on children.
A literature by Yeung (2020) looks into the effects on dropout rates after Medicaid expansion under the Affordable Care act. The design study is incorporated by a difference-in-differences analysis which gets estimates from state-level variables. Once states decided to expand Medicaid under the ACA, there was a notable reduction in dropout rates by 0.658 percentage points. Yeung states the Medicaid expansion of the Affordable Care Act is more than just a health insurance program; it is a dropout prevention program. This is significant as the percentage point change is quite a lot in many states compared to their average dropout rate. This is conceived from the spillover effects, or even the extension of benefits that parents that now gain health insurance coverage will push it onto their children by getting them access to health insurance also. Continuing by improving the overall health of the parent and the child. The child will likely stay in school due to these benefits and continue their educational journey.

Florida has a high school enrollment amount of 840,000 in 2016 school year. The average dropout rate is 3.8% which is equivalent to approximately 32,000 dropouts annually. Regarding Florida’s average dropout rate of 3.8% and the percentage point change within the study of 0.658, the new dropout rate is 3.142%. If Florida adopted Medicaid expansion with its current eligibility thresholds, the reduction in dropouts will be approximately 5,600 fewer dropouts. This amount of fewer dropouts is equivalent to a 17.5% reduction in overall high school dropouts.
The state benefit will be calculated by the estimated amount of lifetime earnings missed out on due to not completing high school multiplied by the number of dropouts. This figure will then be divided by the difference of life expectancy in Florida and the average age of a high schooler to receive the one-year saving estimate. The dropout cost estimate to the state economy will be equivalent to $278,000 (Levin and Belfield, 2007). This figure is equal to $1,556,800,000 in lifetime tax contributions. The life expectancy in Florida is 80.2 years of age. The average age of a high schooler is 16. The aforementioned figure divided by the difference is equal to $24.33 million that the state will save if the reduction in dropouts were to occur. Medicaid expansion under ACA seems to be extremely significant to dropout rates and students' performance in school.
Employment

This benefit is broken into full-time and part-time effects of ACA Medicaid eligibility expansion. When comparing expansion states and non-expansion states Gooptu found a 2 percent increase in number of those with part-time jobs by ratio of population as well as those with income less than 138 percent of FPL. He does note that the impacts to employment they found were not statistically significant but a 2 percent change in job does still translate to financial gain to Florida.

As for effect in full-time employment, many studies (both organizational and independent, such as the Congressional Budgets Office’s estimates of ACA labor market effects) find a relationship that is negatively correlate with Medicaid expansion. This is partly due to changes in behavior, economic theory suggests that Medicaid Expansion benefits workers who would no longer be tied to specific jobs to gain health insurance (Decreasing job lock for some people) allowing them more flexibility in their choice of employment (increasing job switching) (Gooptu, et al 2016). This is backed by research from Meyerhoefer, 2019 who found a transitory effect of disemployment after Medicaid expansion of 1.3 percent primarily in low-wage sectors, but employment returned to pre-expansion levels after two-years. Regardless of those who find negative impacts for full-time employment, due to changes in employed behavior, there are studies that estimate job growth through expanding Medicaid. The Commonwealths Fund’s 2021 News release found that should Florida opt to become an ACA
Medicaid Expansion state employment would rise by 113,265 [6] full-time jobs (this is backed by a study from Families USA, 2013 which also estimated an increase in full-time jobs to Florida). With this information, we calculate the conservative return to Florida for ACA Medicaid expansion using only impacts to part-time employment, then a more generous gain to Florida using full-time employment as well.

We find that Part-time employment will return $2.2 million to Florida’s budget. In our dataset we use usual hours worked to separate our new eligible population into those who work full-time and part-time. After finding the total of those who are eligible and work part-time (141,940) we multiply by the percent change after Medicaid Expansion (2 %) to get the total increase in part-time employment associated with expansion (2,981). From here the next step is to find the mean wage of this part-time sample ($8,962.38) and multiply by our increase in jobs (2,981) to get the total increase in wage and income. Now to get Florida’s benefit from this we multiply this total income by the effective state tax rate (8.23%) to get a state benefit of $2.2 million.

As for full-time, we’ll do the same process but using the increase in employment found by studies from the Commonwealth fund. 113,265 new full-time jobs multiplied by the mean wage of our sample ($13,450.18) to get the total of new income ($15,234,346,377). Now multiplying this total

[6] The Commonwealth Fund estimates a total of 135,000 new jobs brought to Florida but to find the percent of full-time jobs from this estimate we multiply by percentage of all employment that is full time (83.9% according to Mislinski, 2022)
income by what the state can expect to receive in tax revenue (8.23%) we get ($125,378,670.68) the total positive impact of Medicaid expansion to Florida which equates to $125 million.

**Bankruptcy**

This benefit is broken into two types of medical bankruptcy filings, those filed under chapter 7 and those under chapter 13. The difference between the two are the qualifications, for Chapter 7 one must earn below the Median income to file, one would be forced to file under Chapter 13 is their income exceeds the Median or they've retained debt that is not dischargeable under Chapter 7. When a bankruptcy is discharged the state of Florida and the court absorb all financial obligations and debts which results in a negative impact to Florida's budget. Chapter 7 bankruptcies account for majority of bankruptcies filed, but literature is in dispute on the percentage of bankruptcies that consistent “true” medical bankruptcies (depending on courthouse data versus survey data in which people answer what they believe to have caused their filing).

Regardless of the dispute in literature over “true” medical debt, studies note Medicaid eligibility expansions consistently associated with reduction in bankruptcy rate, results remain the same for replicated studies. Brevoort et all, 2017, using differences-in-difference model found that Medicaid expansion is responsible for a decrease in medical debt. Gross (2011) used the same type of regression to analyze impact of Medicaid expansion at the
state level, following in the steps of Yarbrough (2007), he found that a 10 percent increase in Medicaid eligibility rate is associated with a 8 percent decrease in consumer bankruptcies. Once replicated at the per zip-code level nearly identical results were yielded. Research from Zwiefel (2019) also backs these findings.

Given our resources and the data we were able to access, we calculate the return to Florida for a reduction in both Chapter 13 and chapter 7 bankruptcy filings. The American Bankruptcy institute published bankruptcy filing trends for Florida. Their report revealed for 2021, chapter 13 filings totaled 8,339 (accounting for 26.4 percent of total FL filings) and chapter 7 filings totaled 22,675 (accounting for 71.9 percent of total Fl filings) for the state of Florida, the sum of this equates to 31,014 medical bankruptcies filed in 2021.

Using a 4 percent decrease in bankruptcy filings (for a 5-percentage point increase in Medicaid eligibility expansions should Florida opt to increase FPL thresholds from 133 to 138 percent) we get the total decrease in bankruptcy filings. A 5-percentage point increase in FPL thresholds would have resulted in 1,240.56 fewer bankruptcy filings in Florida (total filed times .04). In terms of savings, we use the percentage of filings that are discharged for each chapter, then multiply by the average cost of charges that are forgiven to get the total dollar amount that Florida must absorb.

Chapter 7 bankruptcies are discharged at a 96 percent rate, multiplying this by the total of chapter 7 filings gives us 893 fewer chapter 7 bankruptcies discharged. 40 percent of chapter 13 bankruptcies are discharged,
multiplying this by the total of chapter 13 bankruptcies amounts to 129 fewer chapter 13 bankruptcies. If Florida has expanded Medicaid eligibility thresholds this could have translated to 1,022 fewer medical bankruptcies in 2021. Now, with the total of bankruptcies discharged, we multiply by the average costs associated in these cases. Which, for our conservative estimate; is the a range for the sum of attorney fees, filing fees, administrative fees, as well as trustee surcharges. We take the median of this range to get an average cost per bankruptcy of $6,601. This dollar amount is lastly multiplied by the total decrease in bankruptcies (1,022) and deflated to 2020 dollars to obtain a total savings of $6,654,526.18.

Crime

Another main benefit of the expansion of Medicaid under ACA is a reduction in crime. Recent literature has concluded that expansion states will see a reduction in overall crime of 3.3% (Vogler, 2018) and 4.9% (He and Barkowski, 2020). Crime is separated into two groups: violent crime and property crime. Violent crimes will be compiled of homicide, robbery, aggravated assault, and rape. Property crime will be composed of burglary, motor vehicle theft, and larceny. To identify the state and societal benefits that are generated, we must use literature and databases to aid our calculations. To retrieve the total amount of crimes committed in Florida, we used the statewide 2020 annual report of crimes in each county from the Florida Department of Law Enforcement. Another resource from FDLE, was the Total Index Crime for Florida by Jurisdiction, 2020 as this allowed us to see the total amount of
arrests in Florida. Both of these items are retrieved through Florida’s Uniform Crime Reports data collection. All calculations that will be addressed regarding crime will be in 2020 dollars. It is necessary to understand the valuations of crime which are aided by McCollister (2010) and Chalfin (2013). These evaluations are broken up into tangible costs, quantifiable costs that are easily identifiable, and intangible costs that are identifiable but cannot be easily quantified. Some examples of tangible costs will be crime victim costs that were calculated due to personal costs, court costs, or in the case of a homicide victim, it will be the present value of lifetime earnings that were missed out on. Other tangible costs include criminal justice system costs and crime career costs. Examples of intangible costs will be pain and suffering costs and corrected risk-of-homicide costs. Another piece of literature by Hunt et al., (2018) demonstrated the law enforcement costs by crime type. These costs will then be translated into benefits for the state and society by the reduction demonstrated for each crime in expansion states compared to non-expansion states.

**Florida’s Total Crime Index**

In 2020, Florida had a total crime index of approximately 457,000 crimes. The distribution was as such: murder (1,285), robbery (13,439), aggravated assault (60,567), burglary (51,928), larceny (291,923) and motor vehicle theft (38,013). Rape/sexual assault is excluded from calculations due to the definition being revised in 2013. Referencing the Total Index Crime for Florida by Jurisdiction, 2020, the total amount of clearances was equal to 116,714. The cleared
amounts are as such: murder (800), robbery (5,697), aggravated assault (32,100), burglary (11,969), larceny (56,202), and motor vehicle theft (8,621). Clearances are reported when an offense is cleared due to arrest or was solved. Non-cleared amounts are purely the difference between the total crime index amounts and cleared amounts.

**Vogler**

The aforementioned literature by Vogler (2018) worked to identify the causal relationship between the expansion of Medicaid coverage due to ACA and crime. Vogler used Federal Bureau of Investigation Uniform Crime Reports in expansion and non-expansion states between the years of 2009 to 2018. While looking at data for Medicaid coverage variation during the same timespan. The methodology continued with a difference-in-differences analysis which found a 3.3% reduction in overall crime, 5.3% reduction in violent crime, and 3.1% reduction in property crime. Firstly, the overall reduction of crime (3.3%) would be equivalent to 15,081 fewer crimes committed in Florida as a result of Medicaid expansion under ACA. This analysis provides insight that expanding insurance eligibility through Medicaid coverage resulted in a decrease in the rate of reported crimes.

To calculate the state benefit, we must employ a portion of crimes cleared for each category multiplied by the sum of enforcement costs per crime type and adjudicator costs per crime type and then multiplied by the percent change in crime. The previously calculated amount must then be added to the
amount of non-cleared crimes multiplied by their enforcement costs. The enforcement cost for violent crime is equal to $11,300 and for property crime, it is equal to $1,352 (Hunt et al., 2018). The adjudicator costs per crime type is: murder ($479,200), robbery ($16,887), aggravated assault ($10,553), burglary ($5,040), larceny ($3,516) and motor vehicle theft ($4,723). This concludes that a 3.3% reduction in overall crime is equivalent to $81,973,054 in 2020 dollars.

To calculate the societal benefit based on crime valuations, we must multiply the percent change of each crime category by the number of crimes committed and then multiply by the crime valuation. The crime valuations in Chalfin (2013) are equal to $142,000 for violent crimes and $3,500 for property crimes. The crime valuations in McCollister (2010) are equal to $213,000 for violent crimes and $5,600 for property crimes. With a 5.3 percent reduction in violent crime, multiplied by approximately 75,000 violent crimes and the average violent crime valuation of $142,000 (Chalfin) | $213,000 (McCollister), the outcome is a range of $564,450,000 to $846,675,000. With a 3.1 percent reduction in property crime, multiplied by approximately 382,000 property crimes and the average property crime valuation of $3,500 (Chalfin) | $5,600 (McCollister), the outcome is a range of $41,500,000 to $66,320,000. The societal benefit based on crime valuations is equivalent to a range of $605,950,000 and $912,995,000. The total societal benefit includes both crime valuations and state benefit, it is equivalent to a range of $687,923,054 and $994,968,054. This concludes with a total societal saving of $45,800 to $66,300 per 1 less offense committed in Florida. The
average societal saving would be $56,050 per 1 less offense committed in Florida. There will be around 4,000 fewer violent crimes committed per year and around 11,000 fewer property crimes committed per year. This study showcases that Medicaid expansion correlates to a reduction in overall crime, violent crime, and property crime.

**He and Barkowski (2020)**

Another recent piece of literature that dives into the casual relationship between the effects of health insurance and crime is by (He and Barkowski, 2020). This study also specifically looks into evidence from the Affordable Care Act and its roots within Medicaid expansion. The methodology of this study was designed upon a difference-in-differences analysis and estimating the effects that occur from expansion by using panel datasets that include state and county-level crime rates in non-expansion and expansion states. It is argued throughout this piece that the expansion’s effect will increase the opportunity cost associated with criminal behavior. This increase in opportunity cost will push toward a reduction in crime rates while individuals decide to focus on choosing activities that are not illegal over illegal ones. This study discovers a 4.9% reduction in crime which equates to 22,500 fewer crimes committed in Florida, annually.

To calculate the state benefit, we will use the same methodology as aforementioned in the previous literature. The enforcement costs and adjudicator costs will remain constant. The number of crimes will remain the
same. The only changes that occur are in the percent change of crime type. The state benefit will be approximately $121,717,565. To calculate the societal benefit, we must once again utilize the crime valuations from Chalfin (2013) and McCollister (2010). For violent crime, the societal benefit from crime valuations will be equivalent to $913,500,000 based on Chalfin’s numbers and $1,480,000,000 based on McCollister’s numbers. For property crime, the societal benefit from crime valuations will be equivalent from $54,000,000 to $68,100,000 based on Chalfin to McCollister respectively. For overall crime, the societal benefit from crime valuations will equal $967,500,000 to $1,548,100,000.

To calculate the total societal benefit, we must combine the crime valuations and the state benefit. It is equivalent to a range of $1,089,217,565 to $1,669,817,565. This concludes with a total societal saving of $48,400 to $74,200 per 1 less offense committed in Florida. The average societal savings would be $61,300 per 1 less offense committed in Florida. There will be around 3,300 fewer violent crimes committed per year and around 6,000 fewer property crimes committed per year. This study found no significant changes to larceny when Medicaid expansion was enacted in expansion states. This study also concludes that a reduction in overall crime is associated with Medicaid expansion under the Affordable Care Act.

**Mortality**

One of the main benefits produced from the expansion of Medicaid is the
reduction in mortality rate in states that have expanded. The impact on mortality rate and the size of its benefit is directly correlated with the extent of expansion. Referencing the aforementioned coverage gap, where it is estimated that 400,000 to 796,000 uninsured Floridians are not currently receiving Medicaid or health insurance at all. The new Medicaid recipients are representative of 2-4% of the total population in Florida. Regarding the indigent and minority residents, they may have the most to gain from Medicaid expansion as the largest reduction in mortality rates is within these groups. With the expansion, the type of care widens regarding preventive care given to newly Medicaid recipients. With preventive care, an individual can reap the benefits of detecting and preventing any medical issues and chronic diseases from developing into something significant to their health. With the lessening of the mortality rate due to the nature of preventive care, Florida will realize a baseline of approximately 156 fewer deaths, up to 456 annually. These lives will correlate to increased economic activity that would produce between $161,256 and $510,645 in additional tax revenue for the state.

A recent study by (Lee et al., 2021) found that Medicaid expansion was associated with reductions in overall mortality. The reduction in mortality rate is noted as approximately 12 fewer deaths per 100,000 adults. This study’s methodology includes the design encompassing the population in both expanded and non-expanded states, state characteristics regarding demographics, and observing reported deaths among adults aged 25-64 years from Center for Disease Control and Prevention (CDC) data, starting in...
2010 to 2018. The methods went further by obtaining data on time-varying covariates at the state level. Data gathered from the US Census Bureau included the population in all states, median household income, and individuals living in poverty. Data collected from the US Bureau of Labor Statistics was the unemployment rate. Data assembled from the Behavioral Risk Factor Surveillance System consisted of the proportion of adults with medical conditions if one is regarded as obese if one is a smoker if one consumes alcohol, self-reported health status, and an individual’s medical care routine rate in recent years.

The statistical analysis throughout this study included fixed sample size and used the total population of each state. This allowed for the study to showcase an impact nationally and the measurement would be sufficient to demonstrate such. Lee utilized state-specific difference-in-differences for each state that expanded and non-expansion states. This allowed for any sort of secular trend to be addressed. Each state was evaluated prior to Medicaid expansion and after to identify precise changes in mortality due to specific conditions and overall mortality. To confirm the results, there was an additional analysis of state-specific all-cause mortality in terms of an interrupted time series. The time-series analysis indicated statistical significance and backed the results from the original analysis. The results in overall mortality associated with Medicaid expansion were attributed to fewer deaths in cardiovascular, respiratory, neoplasia, and infection. The reduction in deaths can be represented by preventive care. The variability seen in this study in relation to each state’s characteristics is due to the
proportion of sex, proportion in race groups, and the proportion of specific conditions. This study does have restrictions, but many of these were addressed by taking multiple analytical approaches to identify overall mortality and the results were similar.

Relating this to Florida and its population, we can make use of the reduction in the mortality rate of [12/100,000] by multiplying it by our total number of newly eligible recipients if Medicaid expansion was to occur. The total number of newly eligible recipients would be 1.2 million. The outcome of this would be 144 fewer deaths annually. To calculate the state benefit gained from this reduction in mortality rate, the amount of fewer deaths multiplied by the mean wage of the eligible group as well as the effective tax rate in Florida. The mean wage of the eligible group is $13,492. The effective tax rate in Florida is 8.31% in 2020. This results in a total state benefit of $161,256 in 2020 dollars. If all were to live to the current life expectancy in Florida, 80.2 years of age, the state would realize a minimum total benefit of $12,900,480 over this timespan. These are all amassed from tax contributions to the state throughout their lives. To calculate the societal benefit attainable from this reduction in mortality rate, the amount of fewer deaths multiplied by the average value of life from several pieces of literature. The value of life is an economic value that is expressed through a quantified amount that showcases the benefit of nullifying a death. The average value of life is $6.6m in 2020 dollars. The outcome of this would be $950,400,000 in societal benefit. The most current value of life is approximately $10m in 2020 dollars. The outcome of this would be $1,440,000,000 in societal benefit.
A study by (Miller et al., 2019) found that Medicaid was associated with reductions in overall mortality by 50% among those in the sample aged 19 to 64 through new insurance coverage. This reduction in mortality rate was associated with 30 fewer deaths per 100,000 adults. This result is similar to other studies targeting the same age group such as Sommers (2017) and Borgschulte and Vogler (2020) which found between a 47.3 percent and 64.5 percent reduction in mortality among individuals aged 19-64 that will now receive insurance after expansion. The methodology within this study focuses on individual characteristics rather than population-level data to identify effects that may not be representative of the whole. Some population-level data-focused studies may be insignificant in determining the accurate effects at play when Medicaid expansion occurs. This is of note because some studies have acquired results with large confidence intervals that do not sway in either direction and cannot pinpoint the exact effect at hand. Miller attempts to negate these limitations through an approach of a much larger sample size than any other study of ACA Medicaid expansion. This sample is composed of American Community Survey data from 2008 to 2017. The characteristics of this sample included individuals with prior ACA characteristics who would have probable benefit from Medicaid expansion under ACA. This covered individuals that correlated to income thresholds of the Federal Poverty Line of 138% or less as well as ones which did not finish high school. The data from ACA was then linked to the Census Numident where an individual's data point will be transferable to other datasets and made it possible to pinpoint death. Linking this data allowed for an individual's health status to be monitored from 2013 to 2017.
The statistical analysis throughout this study had an emphasis on individual parameters and their corresponding economic variables while linking these to their enrollment in Medicaid. The continuation of cross-section respondents was the major component of this study to gather data on mortality. When considering time-varying characteristics, changes to an individual’s related economic conditions may also vary throughout time. This means one could alleviate from lower-income status to a higher-income status during the time of the study and misidentify them during Medicaid expansion. This can allow for further errors in categorizing individuals who have moved to other states during the time frame studied as they may no longer be impacted by Medicaid expansion. Another limitation of this study was there was no specific cause of death. To address this, further analyses were conducted utilizing the Mortality Disparities in American Communities to express valuations regarding deaths that were not related to disease and the deaths that were related to the disease. Nonetheless, the results showcased the individual parameters were significant and capable of identifying ones who would be impacted by expansion. The results were demonstrated through a difference-in-differences estimate which combined all of the years where expansion was implemented. The impact to mortality rate continues to be impacted by fewer deaths in disease-related causes which has a positive growth trend as time goes on. Disease-related deaths continue to decline when insurance coverage is expanded. This again can be expressed through new insurance coverage which encompasses preventive care one would not receive prior to not having any health insurance at all. Identifying this back to Florida and its population, we can make use of the
reduction in the mortality rate of \([30/100,000]\) and utilize the aforementioned methodology for calculations. If Medicaid expansion under ACA was to occur in Florida, the outcome of this would contribute to approximately 360 fewer deaths among newly eligible recipients. Calculating the state benefit when using the same mean wage of the eligible group and effective tax rate in Florida, we receive an amount of $403,141. If these individuals were to live to life expectancy in Florida, 80.2 years of age, the state would realize a minimum total benefit of $32,331,908 over their lifetime. This is the minimum total benefit as for time-varying characteristics, one may progress in their career and attribute higher tax contributions to the state which would increase this amount. When relating it to the state's benefit, it is once again only expressed through tax contributions. Calculating the societal benefit while using the aforementioned numbers of the value of life and the respective number of fewer deaths, the outcome would be $2,376,000,000. In 2020 numbers, this outcome would be valued at $3,600,000,000 in societal benefit.

Another study by (Lycurgus et al., 2021) aimed at discovering the impacts of Medicaid expansion through the Affordable Care Act while looking at more recent years of mortality, 2015-2018. The reduction in mortality rate is suggested to be 38 fewer deaths per 100,000 adults. This study focalizes on the newly eligible group which would benefit the most from expanding Medicaid. The group is adults where income falls below 138% of the federal property threshold who would not be eligible without expansion. The scope of this study includes observing adults aged 20-64 and identifying the change
when Medicaid expansion occurs under ACA. Data was gathered from the National Center for Health Statistics (NCHS) to demonstrate the total amounts of mortality throughout the states involved in both expansion and non-expansion of Medicaid. Data obtained from the CDC, to target the specific causes of death amounts and understand the changes in mortality in various conditions. Population-level data retrieved from the Census Bureau allowed for aggregating the amounts of mortality toward race, gender, and age.

The methodology within this study is centered on matching. The matching relates to building pairs of counties in states which have expanded Medicaid under ACA and states that have not expanded. The goal of this methodology is to reduce bias in non-randomized and observational studies. To configure well-balanced pairs, three areas of concern were identified and accounted for. One includes maximizing pairs where one is in the treatment group and at least one other is not while accounting for propensity scores. The propensity score is constructed by the probability of a county receiving the treatment of Medicaid expansion under ACA and comparing it to counties in the control group while considering any measured covariates. The covariates in this study are both correlated with mortality and the deliverance of Medicaid expansion within a state. Secondly, introducing propensity score calipers, a designated threshold where the width of the caliper is configured. This caliper allows a certain amount of differences between each pair. Lastly, setting forth penalties for any pairs that do not match well together and exceed the caliper set. The study breaks up into two analyses: one where it
standardizes the effect of Medicaid expansion on mortality through the specified time and another where it incorporates a weighted measure by the proportion of newly eligible recipients. To confirm results in this weighted analysis, the standardized analysis is visited to compare outcomes. The overall mortality reduction rate was calculated by the difference in the control group and treatment group after matching. The control group is 354.8 and the treatment group is 316.5 where the difference is equivalent to 38.3.

Connecting this to Florida and its population, we can make use of the reduction in the mortality rate of [38/100,000] and employ the previous methodology for calculations once again to demonstrate the change in mortality. If Medicaid expansion under ACA was to occur in Florida, the outcome of this would contribute to approximately 456 deaths among newly eligible recipients. The state benefit will be calculated like before by using the mean wage of the eligible group and the effective tax rate in Florida, the amount is $510,645 in annual tax contributions. If the newly eligible recipients were to live fully to life expectancy in Florida, 80.2 years of age, the state would receive a minimum total benefit of $40,953,729 over their lifetime. The societal benefit will be calculated as before with the average value of life and the number of fewer deaths than this mortality rate would reduce, the outcome would be $3,010,000,000. In 2020 numbers, this outcome would be valued at $4,560,000,000 in societal benefit.
Benefit Totals

By our calculations, the direct benefits for Florida state's gain translate to a minimum sum of $115,313,782 and a maximum of $155,408,17. The value of these benefits to the community translates to an overall social gain of $3.23 billion on the low end and $7.82 billion on the high end. The total net range of this is a minimum cost of $37 million and a maximum benefit of $4.22 billion, as a result of opting for Medicaid eligibility expansions under ACA specifications.
ESTIMATING THE COST

Finding out how much it would cost to expand Medicaid in Florida under the ACA rules will give policy makers key insight into whether the action should be taken. Our method for finding the cost is simple: find the number Floridians who would be eligible under the expansion, multiply this number of people by the expected state per capita cost.

The Expansion Group

To find the expected number of people, we will use data from the American Consumer Survey (ACS) obtained from IPUMS. The (ACS) is an ongoing survey done by the United States Census Bureau that collects data every year on social, economic, demographic, and housing characteristics of the U.S. population. From census.gov:

“The 5-year estimates from the ACS are "period" estimates that represent data collected over a period. The primary advantage of using multiyear estimates is the increased statistical reliability of the data for less populated areas and small population subgroups.”
Variables

From this survey, we will estimate the expected number of newly eligible people using 7 primary variables.

- **State FIP**: The data set includes information on all US states, so we will use this variable to limit the data to the state of Florida.
- **Age**: Our expansion group only includes those aged 19-64. Those with low family incomes younger than 19 are eligible for The Children’s Health Insurance Program (CHIP), and those older than 64 are eligible for Medicare.
- **nchild (Number of Children)**: Used to restrict our sample to childless adults.
- **hhincome (Household Income)**: FPL limits are determined based on number of people in the household. We will use this variable to find whose incomes are eligible based on household size.
- **numprec (Household Size)**: Used with household income to find number of qualified individuals.
- **hinscaid (Medicaid Enrollment)**: It is likely that there are individuals within these income and household limits who are already enrolled in Medicaid based on current categorical requirements. Using this variable, we can remove this overestimation.
- **hhwt (Household Weight)**: Shows how many households are represented by a given household in the sample. i.e., a household with a weight of four represents four households in the population.
**Results**

Using the variables described above, the sample was restricted to childless Floridians, aged 19-64, who are not currently enrolled in Medicaid. Next, a dummy variable was constructed for eligibility equal to one if the individual’s income is at or below 138% of the FPL based on household size and else equal to zero. Observing the values of this variable AERG found that if the expansion under ACA rules was implemented, 1,198,612 Floridians would be eligible for coverage through Medicaid. The histogram below displays the incomes of the expansion group compared to the rest of Florida.
**Demographics**

**Race**
- White
  - 562,198
- Hispanic
  - 334,930
- Black
  - 227,799
- Asian
  - 35,568
- Other
  - 38,117

**Age**
- 19-29
  - 380,036
- 30-39
  - 157,072
- 40-49
  - 143,680
- 50-59
  - 300,358
- 60-64
  - 217,466

**Sex**
- Male
  - 584,277
- Female
  - 614,335
Per Capita Cost

To find the per capita cost to the state, AERG followed the methodology of the Centers for Medicare & Medicaid Services’ article from 2019, “Medicaid Per Capita Expenditures. They obtained total expenditure data reported by states to the Medicaid Budget and Expenditure System (MBES) and divided this amount by the number of enrollees and reported by states.

Expenditure data from Medicaid Program Expenditure Forms and obtained from the Kaiser Family Foundation showed that Florida’s total Medicaid spending in FY2020 was $25,377,406,571. Based on 2020 data from the Florida Agency of Health Care Administration (AHCA), Florida’s total enrollment in Medicaid was 4,315,244 people. To find per capita cost: However, the enrollment data includes children enrolled in CHIP and MediKids. To find the adult share of total per capita costs, we used the 2019 values for “Total” and “Adult: non-expansion, non-disabled, under age 65” from the Centers for Medicare & Medicaid Services data.

\[
\frac{25,377,406,571}{4,315,244} \approx 5880.87\text{ Dollars}
\]

Dividing the cost for adults by the total will give us the percent share which can then be multiplied by our total cost:

\[
\left(\frac{2,754}{5,387}\right) \times 100\% \approx 51.1\%
\]

\[
5880.87 \times 51.1\% \approx 3,006.48\text{ Dollars}
\]

Multiplying the percent share by our cost estimate, AERG found that Florida spent roughly \textbf{3,006} dollars per enrollee in 2020.
**Total Cost to the State**

Using the number of people in the newly eligible group and our per capita cost estimate, we estimate the following:

\[
1,198,612 \times 3,006 = 3,630,607,333
\]

If all newly eligible people enroll, Florida’s Medicaid expenditures would increase by 3.6 billion dollars.
NET EFFECT

From the total of our sums, we conclude by comparing the net effects. The extreme conservative estimate of our direct benefits to the state subtracted from the liberal estimation of costs should everyone enroll equates to a net loss of $3.49 billion.

Comparing the lowest end of the total for the social value of benefits equates to a net loss of $373,607,33 million.

Please note these discrepancies are not reflective of reality as not 100 percent of eligible people are expected to enroll. Should only 75 percent of our eligible population enroll, then the sum of direct costs equals $2.71 billion.

Using a 75 percent take-up rate while utilizing the estimate for the most conservative benefit directly to the state, will yield a net loss of $2.59 billion dollars.

Utilizing a more liberal estimate of benefits (which included the social value) to compare results in a net loss of $643,043,028.


He, Q. H. (2020, January 1). The effect of health insurance on crime: Evidence from the Affordable Care Act Medicaid expansion. TigerPrints. https://tigerprints.clemson.edu/cgi/viewcontent.cgi?article=1017&context=economics_pubs


References

**Appendices**

**Appendix 1:**

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<th>Variable</th>
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Table 1.

Covariates used in modeling and matching and their sources as well as years available. When ranges of years are given, the variable used is the average across those years.
Appendix 2:

Classification of counties and their inclusion in the outcome analyses. Trimmed counties refers to counties that are excluded due to extreme propensity scores or outlying mortality values, which is described in later sections. “Later expansion” refers to expansion after June 2014.
## Appendix 3

| Table 2. Differences between control and treatment (ACA Medicaid expansion by June 2014) counties before and after matching along with the pooled, weighted standard deviation of the covariates between treatment and control counties ("Overall") and the root mean squared of the distances in covariates between adjacent counties, divided by √2 for comparability ("Adjacent"). The test of overall balance results in a p-value of .55 which is insignificant, indicating good balance. |