Hand in Hand: The Impacts of Parental Insurance on Child Health

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Healthy parents equals healthy kids. While this statement seems intuitive, policy does not always translate as so. Insurance for children is widely available, yet more controversial for adults. However, this neglects the relationship between parent and child, and the influence their health can have on each other. This paper utilizes parental insurance is a tangible measure that can be used as a proxy to establish correlations and further the conversation about parental and child social networks in health. After exploring a brief history of insurance coverage, I discuss the theories of social networks in health as a mechanism between parent and child. I then highlight the findings from the data analysis. Finally, I examine the policy implications of this body of work and limitations, as well as future research directions.

INTRODUCTION

In the city of Birmingham, Alabama, Phoebe is a parent with a child enrolled in federally funded healthcare, CHIP. This healthcare program provides low-cost health coverage to children in families that earn too much money to qualify for Medicaid. Each state offers CHIP coverage, and works closely with its state Medicaid program. Because of her income, her family is ineligible for Medicaid, but Phoebe has chosen to enroll her child in CHIP. Her income merely allows her to provide her child with coverage, but not herself. She delays her own medical care, opting to only devote resources on her child.

> *"I mean, we definitely put the wants on the back burner. Just from a medical standpoint, because I need to go to the eye doctor. I can't see at all. I'm not going to the eye doctor because I would rather my kid go to the doctor when they're sick.* (Rudowitz 2015)

For parents, like Phoebe, it is not a hard choice to choose to put the wellbeing of a child over oneself. Many parents, who are limited in their access, openly admit that they often delayed care for themselves, but would not delay care for their children. Without health insurance, parents may rely on home remedies for ailments or wait until the last minute, in emergencies, before obtaining care. Phoebe could be considered legally blind, yet cannot afford to see an optometrist. While this is a question of both affordability and general accessibility, the problem is that her vision is being neglected for her child's well being. Phoebe's performance at work might be severely affected by her vision. Her supervisor might not realize this and merely assumes she lacks the ability or intelligence

for a higher position. Because of this, she is unable to attain a higher income that could provide the funds to remedy her health problem.

Parents comprehend the importance of health, however, limited resources ultimately means their children takes precedence. Health coverage for children is widely available and mostly affordable. Coverage for children has improved health outcomes by facilitating access to physicians, ERs, and clinics. In sacrificing for their children, parents neglect their own health without realizing the impact it has on their children. While most child health interventions understandably focus on intervening directly in the child's health, child health advocates should also focus on the unappreciated indirect impacts of parental health care on child health outcomes.

Parent and child relationships are inherently linked; therefore their health is as well. Yet only a minimal research has tried to establish links between insurance coverage and health outcomes. Furthermore, for those that have, none has attempted to demonstrate the mechanisms between parental insurance and child health. This is thoroughly problematic not recognize this aspect ignores an essential part of health prevalent throughout society. Therefore, I apply theories of social networks in health as an explanation of this phenomenon. Although this paper focuses strongly on insurance coverage in both research and discussion, in reality it is merely a proxy for how parental health can influence child health. This is not another paper about universal health insurance, but taking a broader perspective. In this, it attempts to focus on a more social deterministic view of health. Essentially, this study is one small contribution to a larger conversation about parental health impacting child health.

Essentially, do children of uninsured parents, compared to children of insured parents have better health outcomes? I am interested in how parents who have insurance coverage affect their child's health. Having health insurance promotes parents' access to care and financial security for families. Uninsured low-income parents are more likely than their insured counterparts to lack a usual source of care, to have postponed or not gotten care due to cost, and to have had their families' finances affected by medical costs (Rosenbaum and Perez 2007). Specifically, parental insurance's effects are measured in terms of health perceptions, access and illness. This is a preliminary attempt to explain possible these associations. To this end, parental insurance can act as a gateway to child health; maintenance and reinforcement of positive health outcomes.

HISTORY & CURRENT POLICIES

From the year 2000 to 2010, health insurance coverage dropped, due to "decreasing employer sponsored insurance coverage and rising healthcare costs, and growth in the uninsured accelerated during recessionary periods when people lost their jobs" (Kaiser Foundation). Lack of insurance left many vulnerable to detrimental circumstances without a safeguard. As the economy recovered, the Patient Protection and Affordable Care Act (PPACA), or commonly referred to the Affordable Care Act (ACA) was signed into law in 2010. Early ACA "provisions went into effect, the number of uninsured people declined slightly from 2010 to 2013" (Kaiser Foundation). The aim of the ACA was to create better health outcomes by lowering cost and increasing accessibility. It increased the affordability of health insurance and lowered the uninsured rate by expanding public and private insurance coverage. "As of 2014, the ACA

expanded coverage to millions of previously uninsured people through the expansion of Medicaid eligibility and establishment of Health Insurance Marketplaces" (Kaiser Foundation). Evidence from the 2015 shows significant gains in coverage rates and historical gains for health policies within the U.S.

However, despite these efforts, in the first quarter of 2015, about 10.7% of Americans remained uninsured, which amounts to over 33 million Americans (Rudowitz 2015). People are uninsured simply because they cannot afford the cost. While employers might offer coverage, premiums are usually too high for parents to buy into insurance. Parents find "high deductibles as well as copayments of $30 to $40 for a doctor visit and unpredictable levels of coinsurance" as barriers to accessing care (Rudowitz 2015). Alternatively, programs like Medicaid and the Children's Health Insurance Program (CHIP) cover many low-income individuals, but children enjoy exclusive benefits. Medicaid eligibility for adults remains limited in some states, and few people can afford to purchase coverage on their own without financial assistance. Some people who are eligible for coverage under the ACA may not know they can get help. While financial assistance for Marketplace coverage is available for moderate-income people, others may still "find the cost of coverage prohibitive" (Kaiser Foundation). While all parents in Rudowitz's study had coverage, many parents indicated that they had experienced periods when they were uninsured in recent years. They lost coverage as they moved between jobs or could not afford to pay their employers' premiums and therefore chose not to enroll (Rudowitz 2015).

Of those who remain uninsured, low-income working families make up over 40% of the remaining uninsured (Fact Sheet). Families at risk are not always the lowest income, those of whom can find coverage support through programs, but those that fall between coverage gaps, between the lines of affordability. Furthermore, people who live in the South or West are more likely to be uninsured. Those who remain uninsured have been without coverage for long periods of time. Individuals below poverty are at the highest risk of being uninsured. In total, over eight in ten of the uninsured are in low- or moderate-income families, meaning they have incomes below 400% of poverty (Fact Sheet).

Having health insurance promotes parents' access to care and financial security for families. Parent eligibility lags far behind that of children, which can be problematic due to parental-child relationships. Where children are concerned, carrying coverage over to parents could potentially represent sound child health policy. This author indicates "that coverage of parents is not only good for parents but furthermore, that extending coverage to parents promotes not only coverage of children but also the more effective use of coverage in terms of increased access to care and a greater use of appropriate care" (Rosenbaum and Perez 2007). This assertion of the beneficial pediatric effects of family coverage makes the case for creating parallel coverage flexibility, which prioritizes children and their parents.

THEORY & LITERATURE

Social network studies focuses on the web of social relations around an individual

who the contacts are and the nature of the ties that connect. I argue that social network studies are pivotal to understanding parent child relationships in relations to their health. The study of the effects of social networks on health emerged in the 1970s through the work of innovators such as Cassel, Cobb, and Berkman. They first theorized and demonstrated empirically that social networks could affect a person's mortality through their network. Before their breakthrough, social networks were neglected in the discussion of social health dilemmas and health interventions. In the last few decades, there has been a growing awareness in conceptual and empirical studies over the impacts of social networks on health. People are thoroughly interconnected in everything, and therefore, so is their health (Christakis and Smith 2008). Understanding the true implications of social networks results in the acceptance of the fact that a person's "health is interdependent and that health and health care can transcend the individual in ways that patients, doctors, policy makers, and researchers should care about" (Christakis and Smith 2008). The focus of this paper is narrowly casted on the role of social networks in determining health outcomes, especially in those between parents and children.

Social networks privileges the relationships between individuals; it presumes the actors and actions are interdependent and that social ties facilitate the flow of information and influence (Christakis and Smith 2008). The simplest form of a social network is a social dyad, that of a two person relationship. In this, spouses are the most studied pair with respect to how the health of members of a dyad is interrelated. In relationships, spouses gain mortality advantage – those married are likely to live longer. Social dyads

are not limited to spouses, as parental-child relationships have also been studied. In many cases, "parent physical or mental health impairment can adversely affect the physical and mental health of children" (Christakis and Smith 2008). For example, maternal depression is associated with more behavior problems, depression and substance abuse as well as more emergency room visits, hospitalizations, allergies, asthma, colds, and other ailments in offspring (Jacob and Johnson 1997). Adversely, child disabilities can affect parents, as well as their sibling's health (Breslau et al., 1987). Furthermore, parental physical health problems, like chronic back problems, have been linked to both depression and poor physical health in offspring.

Social networks can affect health through a variety of factors within the relationship. This includes the provision of social support (both perceived and actual), social influence such as norms, social control, social engagement, person to-person contacts like pathogen exposure, and access to resources such as money, jobs, information (Berkman & Glass 2000). Sociologists Christakis and Fowler analyzed obesity social networks, to discover that numerous other health behaviors might also spread within social networks - such as smoking, eating, exercising, alcohol consumption, or drug use (2007). Very similarly, other health related behaviors that might spread within social networks include the propensity to get health screenings, visit doctors, complying with doctor's recommendations, or even visits particular hospitals or providers (Christakis and Smith 2008).

These specific health behaviors could easily translate from parent to child. Truly, it is not the child making their health decisions, as parents are the one dictating the

multitude of aspects of their child's health. In their social dyad, parental health behaviors reflect strongly upon the child. There could be lack of development of previously mentioned health behaviors due to inability to afford insurance. Furthermore, absence of health coverage for adults can result in poorer health. Lack of insurance leaves parents more vulnerable to sickness. Disability from sickness can further inhibit other aspects of life, such as work performance, educational attainment, or even social mobility.

Past research has established parental insurance to affect, and subsequently not affect children in different ways. Firstly, parental coverage does not affect eligibility standards for children. In fact, "children's eligibility standards typically are higher than those used for adults" (Aizer and Grogger 2003). In this, covering parents does not diminish coverage for children. In actuality, studies have uniformly showed that parental coverage increases enrollment rates among eligible children (Sommers et al., 2006). By not covering children, states are essentially also diminishing coverage for children.

Most research has come to simply conclude that parental coverage improves the continuity of coverage in children and reduces the likelihood of breaks in coverage, neglecting to look at health outcomes. Some studies have shown that parental coverage has a positive effect on access to health care in terms of use of any care, use of preventive services, having a regular source of care, and having unmet health care needs. Research has also established that parental coverage also lessens feelings of discrimination, suggesting the broader psychological value of family coverage in addition to its value in achieving higher levels of more appropriate health care use (Gundelman and Pearl 2006). In overall, multiple "studies show positive coverage effects on children – in some cases

modest, and in some, substantial – from parental coverage" (Rosenbaum and Perez 2007). However, much of these past research have only concluded on the positive coverage benefits children enjoy if their parents are covered. A variety of researchers have suggested broader implications, but mostly neglected mechanisms and effects of insurance coverage. Thus, I attempt to establish links between insurance coverage and health outcomes.

METHODS & DATA

To determine if parental insurance has any affect on children health outcomes, data was analyzed from the Connecticut Health Care Survey. The principal investigator was the University of Massachusetts Medical School. The survey was a statewide, probability based, random digit-dial telephone survey conducted from June 2012 to February 2013. The sample was stratified by geographic location to ensure the Connecticut population was accurately represented in the final survey results. The sampling was divided into two different frames, based on landline or cellphone. Screening questions were designed to restrict respondent overlap between these two sample frames. For the landline, a random selection process was used to sample a single adult respondent among households with multiple adults. For both sample frames, if a selected household included multiple children, a single child was randomly selected and the respondent was asked questions regarding this child only. The entire survey has 4,608 observations in all. The entire survey contains a multitude of questions that portray health-related experiences, information, and perspectives from Connecticut residents about themselves and children within their households. However, for this purpose, only

certain survey questions were considered.

Independent Variable: Parental Insurance Coverage

The independent, or predictor variable is parental insurance coverage, whether the adult had some form of insurance or not. First, the data was filtered to eliminate any observations where the household did not include a child or children. The data was left with 978 observations, of which, 910 adults were insured and 68 were not. Of those insured, coverage came from a multitude of aspects, such as Medicare, TRICARE, private insurance company, employer, etc. Questions were aimed to confirm that those uninsured were not covered in any form.

Dependent Variable: Child Health Outcomes

The dependent variable is much more complex and multifaceted, than the independent variable. Child health outcomes could be defined in a variety of ways. From the data, health outcomes was delineated into three different categories (1) health perceptions, (2) health care access/barriers, and (3) actual health diagnoses. These categories aim to comprehensively understand the various aspects of health outcomes.

Health perceptions are individual assessments of health status, the relative level of well being gauged from presence of biological or physiological dysfunction, symptoms, or impairments (Rosenbaum and Perez 2007). Health perception was chosen as an indicator of health outcomes; personal opinions are an interpretation of health. Self-rating of general health is commonly used to assess health status; they hold a central place in

determination of health outcomes. It is a comprehensive definition of health status, as they are presumed to assess a construct underlying both physical and mental health (Davies and Ware 1981). While they do not focus on specific components of health such as physiologic, physical, or mental, they do operate on an overall, broad scheme that can explicitly understand one's personal health. Participants "indicate the objective information they have about their own health and how they feel about or evaluate that information" (Davies and Ware 1981). This evaluative aspect allows participants to place greater emphasis on their own health components – physical or mental – in rating their general health. Subjective health ratings can reflect strongly on health seeking behavior and how one regards health in terms of diagnosis and treatment. Furthermore, past research has established correlations between general health ratings and measures of mental health and of health and illness behavior (Davies and Ware 1981). The question was specifically aimed to understanding perceived health. Adult respondents were asked, in regards to their child: "Would you say that in general your child's health is..." and then allowed to rate on a scale ranging from poor (1) to excellent (5). While perceptions could be misleading, it is more likely to be accurate and representative of participant's health.

Health access and barriers to health can be measurements of health outcomes. In health emergencies, access to care is pertinent. Health access because access plays a vital role in outcomes. Access means the ability to attain healthcare when it is necessary. Health access changes outcomes – by being able to meet with health providers or getting emergency care changes health projections. In this, a parent who can take their child to the ER when they have an abnormally high fever. This could easily translate as a parent

who understands what temperature is considered abnormally high, in order to proceed to the ER. In attaining a full measure of access, access was gauged on two levels - physical and informational access. Physical access refers to being able to acquire medical care when necessary. If the child needs medical care, but can't get it, then there is a barrier. There is a desire to know if this barrier doesn't exist or is lessen for insured parents. Adult respondents were asked, in regards to their child: "During the past 12 months, was there any time when this child didn't get the medical care he/she needed?" This contributes to truly understanding physical access as a factor. The question targets directly what I am are trying to understand. Informational access refers to being equipped or informed with the necessary knowledge for health access. Despite contrary belief, even if health services are readily available, without the knowledge to navigate the system, these services might not be utilized, or used to their full extent. Adult respondents were asked, in regards to their child: "Did this provider's office give you information about what to do if your child needed care during evenings, weekends, or holidays?" In this, providers are facilitating the information necessary in case care is required. Additionally, informational access can strongly contribute to direct physical access.

The third main factor I was interested in is the idea of health due to illness. Assume that uninsured parents will have more children with illness than insured parents. Specifically, I wanted to test asthma as the illness, though this could easily be interchanged with other chronic illness such as ADHD or depression. Asthma was chosen due to its prevalence in literature of poverty. The National Health Interview Survey on Child Health showed that 4.3% of all children younger than 17 years of age had asthma,

with poor children demonstrating a slightly greater prevalence than non poor. This poor and non poor "differential was even greater for children younger than 6 years old while poor children were also more likely to have had more than 7 bed days in the past year because of their asthma" (Halfon and Newacheck 1992). Parents were asked, in regards to their child: "Have you ever been told by a doctor, nurse, or other health professional that your child has any of the following health problems or conditions?"

Control Variables

We want to make sure it is the effect of insurance that is significant in the analysis. Therefore control variables must be asserted, in order to eliminate other potential bias and confounding variables. In adults, control variables were implemented for employment, marital status, education, gender, relations to child, and race. These variables were specifically all controlled for due to their potential effects on health outcomes. Factors, such as "educational attainment and income are the indicators that are most commonly used to measure the effect of socioeconomic position on health. Research indicates that substantial educational and income disparities exist across many measures of health" (Daniels et al., 2002).

All the children in the dataset were controlled to have insurance coverage. Children not possessing insurance would conceivably have worse health outcomes; therefore a control would ensure that children have insurance. I want to ensure that although children have insurance, their health outcomes are improved with parental insurance coverage. Other control variables included child race, child age, child gender,

and child weight status derived from child BMI.

RESULTS

To test the hypothesis, the outcomes of children were compared between that of parents who were both insured and uninsured. Four different regressions were ran, in which adult insurance was tested against child health perceptions, informational access, physical access, and a health diagnosis. Control variables implemented for all the regressions. All children in the dataset had insurance coverage.

First, looking at parents of those who were uninsured, kids had lower perceived health ($\mu = 1.977$) compared to that of kids with insured parents ($\mu = 2.168$). To determine whether these differences are statistically significant, a linear regression test was ran with parental insurance as the predictor variable and child health perceptions as the response variable. The results demonstrated that here is significant difference ($P = .037$) between insured and uninsured parents (*See Table 1*). Concerns about multicollinearity were addressed by running additional statistical checks for homoscedasticity and robustness. Since both cases where significant thereafter, the results are reliable. Therefore, parents with insurance tend perceive their child as healthier, compared to parents without insurance. Within the control variables, child age an important factor, as the child became older. Child gender showed significance between males and females. Child weight status was important as the child deviated from the normal status to overweight and obese. Martial status seemed to play in an important factor if the parents were separated compared to those married.

The next regression looked at access, in terms of informational and physical. In terms of informational access, parents with insurance found more access (86%) then uninsured parents (78%). In terms of physical access, parents with insurance found more access (95%) then uninsured parents (90%). A linear regression of these two variables did not show any significance in informational (p= .979) or physical (p= .495) access. These results showed that there is no difference in access between insured and uninsured parents (*See Table 2 & 3*).

The last regression looked at health and diagnosis, specifically asthma. This is due to the fact that asthma is more prevalent among the poor, in children. In terms of asthma as a long-term health complication, parents with insurance had children with less asthma (13%) then uninsured parents (14%). These regression results (p= .574) showed that there is no difference between parents of those insured compared to those uninsured (*See Table 4*).

MORAL OBLIGATIONS

Policy recommendations are inherently normative; therefore applications of research to policies should pertain to moral arguments in order to conceptually understand why policies should be implemented. In a sense, justifying policies require moral arguments to be thoroughly articulated. Due to the preliminary results of the study, policy suggestions retain modest characteristics. Therefore, the moral arguments will be articulated in two ways. First, I will make an argument about obligations towards children if future studies reinforce the significance parameters found in this study.

Secondly, given the hypothetical argument true, I will suggest what societies can do in response. Regardless, I conclude that there exist substantial moral and social obligations that unquestionably warrants further future research.

The preliminary correlation between parental insurance and child health perceptions should obligate one to favor extension of health insurance. At the very least, it necessitates implementation of future research. There is an obligation not only to those in need but also to ourselves, to research, educate, and understand in order to make informed political decisions. Arguably, obligations for health already exist within our societal structure. This is proven by the fact that within society, we collectively discuss and address health disparities. These obligations are fulfilled through policies and programs that have been continuously implemented over the last decade. There has been a growing political census to increase programs and policies to improve parent and child health outcomes. For example, the availability of CHIP and Medicaid as expanded in the last few decades, working to improve life outcomes by providing health access (Kaiser Foundation).

If further research were to strengthen the correlation between parental insurance and child health outcomes, then there exists a resulting obligation for attainment of justice. This aspiration for justice is defined by what society would communally agree to as being fair. In this, I examine John Rawl's theory of Justice as Fairness, specifically, his principle of equality. A key component of Rawl's argument is that principles that support justice, in terms of fairness, would be willingly chosen in an original position. This *original position* is established through inducing a thought experiment. Here, people

subjected to these circumstances will select principles that will determine the basic structure of their society before its implementation. Imagine a world where you are floating in endless space, society wavering on a brink, up to decisions determined by all. Choices are made behind Rawl's famous 'veil of ignorance', in which people are in an indefinite status about their worldly characteristics. You don't know your social status, political affiliation, economic outcomes, ethnicity – you are completely subjected to unknown conditions. Participants could be born severely disadvantaged or incredibly privileged. These unknown life prospects would force you to select principles impartially and rationally that would mutually benefit all. Daniels, Kennedy, and Kawachi further extend Rawl's ideas of distributive justice in application to social determinants of health.

A focus on Rawlsian theory provides "a developed account of how to distribute the social determinates of health" (Daniels et al., 2002). Here, it is not about only having rights to opportunities, but an equal chance at attainment. In this, social determinants of health are an impediment, and parental insurance is a factor of these deterministic aspects. Behind the veil, your parents and their insurance coverage heavily impacts the your health outcomes and future prospects. In this, participants would choose to provide parental coverage in order protect those potentially vulnerable. "A theory of justice, such as Rawl's (or Sen's) requires us to pay attention" social constructs that play into health, and "emphasis on early childhood interventions," that would have the effect of addressing these issues (Daniels et al., 2002). Therefore, in order to achieve fair equality of opportunity requires one to regard insurance as a determinant of health through social networks implications in health. Overall, "justice and health policy gives us strong reason

to expand what is on our traditional policy agenda," where one is ethically compelled to future research.

Once this is morally and conceptually understood, there exists societal responsibility resulting from these obligations. In reiteration, behind the veil of ignorance, one would agree to this position due to unknown circumstances. This allows for just obligations to be fulfilled towards children and parental coverage be morally promoted and increased. Providing parental insurance would not only be beneficial to adults, but also dually help to ensure the health of children. This is simply advantageous and practical policy, in considering insurance coverage of parents as an extension of children's health.

Why would one prioritizing health of children over adults? Children are considered one of the most vulnerable populations. This is due to the fact they are not attributed to being at fault for their life circumstances. In addition, early interventions in childhood have proven to be most beneficial for society. Intervening early can set a life trend that divert away from a lifetime of poverty. While the focus is primarily on child health, this argument considers life outcomes and potential capabilities attainment for both parent and child. Regardless of the parent, ensuring their health is essential in our basic commitment to fairness and opportunities for children.

DISCUSSION & CONCLUSION

The original hypothesis predicted that parents who are insured would have children with better health outcomes than those who aren't. A substantial amount of past

research has looked at social networks and social determinants of health but has not focused on insurance as a measurement. Policy has focused primarily on direct intervention of children health, without considering the social dyadic influence from parental health. I work to add a new direction to child health interventions and social literature through the significant effect of parental insurance on child health outcomes. Based on the results, parental insurance is shown to have an effect on children's health outcomes. Specifically, the child's perceived health status. In this, I found that regardless of parental controls, a child of uninsured parents more like to have a more negative status than that of an insured parent.

While the results corroborated the theory, the study had certain limitations. The data set that was used in the study was very limited. Its results are only truly applicable to the state of Connecticut, and can be tentatively implied nation wide. Ideally, if one was to do another study, data should be self-collected to ensure complete variables. This would also avoid problems of misinterpretations or representation. Other limitations stem from the nature in which data was collected. Telephone interview might not fully capture the population – excludes those without phones such as homeless or transitional state, or those who simply cannot afford one. This data set also lacked certain variables that could have made my own research stronger. The predominant measure of health outcomes was parental perceived health of the child. This could be reinforced with physician health perception of the child. Similarly, a full health assessment of the child could be accounted for as well. However, the parent's subjective assessment of the child's health is arguably greater, as that is what primarily shapes health behaviors that translate into health

outcomes. As for the other measurements tested in this analysis, the questions considered different facets of health to achieve a measurement for child health outcomes, such as access and health diagnosis. However this may not have captured the entire picture that could translate into a measurement for outcomes, therefore no significance was found. There are many other manifestations of health outcomes that were not tested for, such as life expectancy, mortality rate, and functional status (Parrish 2010).

Additionally, while health perception is affected by insurance coverage, it would be unwise to assume that it is the only variable in parental child relationships. There is a multitude of possible means that could link parental insurance to child health outcomes through social network analysis. For example, there could be a strong value for health within the home that facilitates insurance coverage, or actual insurance availability reduces the physical and mental strain on the parents. In this study, I neglected factors behind social networks that play into their social dyad, due to data limitations. Here, in this study I was able to only establish perceived child health as an outcome that correlates with parental insurance. Indubitably, it is one of the most important, and telling outcomes.

Although our study confirmed the hypotheses and contained important social implications, there are further directions for this line of research. The study could also be expanded to examine the intersection between insurance coverage, health of parent, and health of child. The study may have assumed that all parents with insurance were healthier than parents without. Additionally, this did not truly account for health variations within a spectrum of health. Moreover, except for child health perceptions,

questions about informational and physical access and health illnesses did not directly ask about health outcomes, despite this being a clear inspiration and implication of the study. Future research could ask more direct questions about this topic in order to potentially establish a true relationship.

Given the fact that the data provides support for the theory, regardless of these limitations, I find that the study has important applications for understanding real social problems. With this, one would be able to delineate more clearly which children might be at higher health risk compared others, based on their parents coverage status. This knowledge could greatly impact the strategies that child resource programs in schools or in organizations use to address health concerns. If one were to know about the extensive impact that parental insurance can have, it can be prevented by improving coverage or circumvented in other ways for children. Therefore, it is pertinent that research look further to truly determine policy implications.

Regardless of the health intervention in children, it is could be considered counterintuitive if one was to neglect parental health in the equation. The avenues for future research as well as the specific obligations make this study relevant for many decades to come. As society is ever evolving and diversifying, it will remain essential for people to observe qualities and critique policies that impacts health of both parent and child.

APPENDIX

Table 1: Parental Insurance against Child Health Perceptions

Source	SS	df	MS
Model	55.6700718	32	1.73968974
Residual	220.329928	479	.459978973
Total	276	511	.540117417

Number of obs = 512
F(32, 479) = 3.78
Prob > F = 0.0000
R-squared = 0.2017
Adj R-squared = 0.1484
Root MSE = .67822

XK1	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
ADULT_INSURED	.3265626	.1558729	2.10	0.037	.0202835	.6328417
CHILD_AGEGRP						
5-9 years	.0187439	.1216585	0.15	0.878	-.2203063	.2577941
10-14 years	.2158499	.1157744	1.86	0.063	-.0116386	.4433384
15-17 years	.2188476	.120753	1.81	0.071	-.0184236	.4561187
CHILD_GENDER	.2605982	.0637658	4.09	0.000	.135303	.3858934
CHILD_WGTSTATUS						
Normal	.0851039	.1173856	0.72	0.469	-.1455506	.3157583
Overweight	.3244464	.1299234	2.50	0.013	.0691562	.5797365
Obese	.5005342	.1371386	3.65	0.000	.2310665	.7700019
C1						
Self-employed	-.035446	.1206111	-0.29	0.769	-.2724383	.2015463
Out of work for more than 1 year	.139979	.1512506	0.93	0.355	-.1572178	.4371757
Out of work for less than 1 year	.0478892	.1564454	0.31	0.760	-.2595149	.3552932
A Homemaker	.1447786	.1128491	1.28	0.200	-.0769618	.366519
A Student	.0455243	.2001715	0.23	0.820	-.3477985	.4388471
Retired	-.020227	.1929395	-0.10	0.917	-.3993393	.3588853
Unable to work	.261211	.1627437	1.61	0.109	-.0585687	.5809908
(DO NOT READ) Refusal	.8785431	.7805593	1.13	0.261	-.6552004	2.412286
M3						
Some high school, but did not graduate	-.1377616	.2926944	-0.47	0.638	-.7128852	.4373621
High school graduate or GED	.197881	.2496495	0.79	0.428	-.2926625	.6884244
Some college or 2-year degree	.0262164	.2479384	0.11	0.916	-.4609648	.5133976
4-year college graduate, OR	-.0419281	.2529602	-0.17	0.868	-.5389769	.4551207
More than 4-year college degree	-.0013477	.2558022	-0.01	0.996	-.5039808	.5012854
C2						
Separated	.4360765	.1687268	2.58	0.010	.1045403	.7676127
Widowed	.0878711	.2245604	0.39	0.696	-.3533741	.5291162
Divorced	-.0566929	.1017224	-0.56	0.578	-.2565703	.1431844
Single or never married	.0668775	.1002368	0.67	0.505	-.1300806	.2638356
(DO NOT READ) Refusal	-.125013	.7012634	-0.18	0.859	-1.502946	1.25292
ADULT_GENDER	-.0465642	.0711728	-0.65	0.513	-.1864137	.0932854
relation	-.0348569	.1354723	-0.26	0.797	-.3010504	.2313367
ADULT_RACEETHNICITY						
White, Non-Hispanic	-.2216831	.108847	-2.04	0.042	-.4355596	-.0078065
Black, Non-Hispanic	.037487	.1336381	0.28	0.779	-.2251023	.3000764
Asian, Non-Hispanic	.1829079	.2666537	0.69	0.493	-.3410477	.7068635
Some other race or multi-racial	.107186	.1964779	0.55	0.586	-.278879	.493251
_cons	.6109541	.4002134	1.53	0.128	-.1754368	1.397345

Table 2: Parental Insurance against Informational Access

Source	SS	df	MS
Model	5914.66654	35	168.990473
Residual	44947.9436	436	103.091614
Total	50862.6102	471	107.988557

Number of obs	= 472
F(35, 436)	= 1.64
Prob > F	= 0.0139
R-squared	= 0.1163
Adj R-squared	= 0.0453
Root MSE	= 10.153

XG3	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
ADULT_INSURED	.0657233	2.483711	0.03	0.979	-4.815811	4.947257
CHILD_AGEGRP						
5-9 years	.413523	1.86557	0.22	0.825	-3.253106	4.080152
10-14 years	.0135966	1.771043	0.01	0.994	-3.467247	3.49444
15-17 years	3.219729	1.854703	1.74	0.083	-.4255418	6.864999
CHILD_GENDER	-.0597094	.9975629	-0.06	0.952	-2.020339	1.900921
CHILD_RACEETHNICITY						
White, Non-Hispanic	1.705071	2.628003	0.65	0.517	-3.460059	6.870201
Black, Non-Hispanic	-2.647851	5.195146	-0.51	0.611	-12.85849	7.562793
Some other race or multi-racial	-4.498371	3.643827	-1.23	0.218	-11.66002	2.663279
CHILD_WGTSTATUS						
Normal	1.745333	1.804406	0.97	0.334	-1.801082	5.291747
Overweight	2.92685	2.015469	1.45	0.147	-1.034393	6.888094
Obese	2.143545	2.139272	1.00	0.317	-2.061022	6.348112
C1						
Self-employed	5.108334	1.918437	2.66	0.008	1.337799	8.878869
Out of work for more than 1 year	-1.165662	2.34659	-0.50	0.620	-5.777696	3.446372
Out of work for less than 1 year	-1.080327	2.470452	-0.44	0.662	-5.935802	3.775147
A Homemaker	-.1535563	1.762859	-0.09	0.931	-3.618315	3.311202
A Student	-5.723199	3.294093	-1.74	0.083	-12.19748	.7510778
Retired	-5.525704	3.205989	-1.72	0.085	-11.82682	.7754103
Unable to work	-1.066669	2.725283	-0.39	0.696	-6.422994	4.289657
(DO NOT READ) Refusal	-6.558411	12.07558	-0.54	0.587	-30.292	17.17518
M3						
Some high school, but did not graduate	.6401264	5.213421	0.12	0.902	-9.606435	10.88669
High school graduate or GED	2.960257	4.538669	0.65	0.515	-5.960132	11.88065
Some college or 2-year degree	.9373968	4.511865	0.21	0.836	-7.930312	9.805106
4-year college graduate, OR	1.345629	4.58197	0.29	0.769	-7.659866	10.35112
More than 4-year college degree	2.579023	4.610831	0.56	0.576	-6.483197	11.64124
C2						
Separated	-2.243962	2.794192	-0.80	0.422	-7.735722	3.247799
Widowed	-.4531767	3.519022	-0.13	0.898	-7.369532	6.463179
Divorced	.6631624	1.594413	0.42	0.678	-2.470528	3.796853
Single or never married	.9129286	1.638909	0.56	0.578	-2.308215	4.134073
(DO NOT READ) Refusal	3.317009	10.5319	0.31	0.753	-17.38259	24.01661
ADULT_GENDER	-2.14054	1.137513	-1.88	0.061	-4.376229	.0951503
relation	-8.350067	2.186432	-3.82	0.000	-12.64732	-4.05281
ADULT_RACEETHNICITY						
White, Non-Hispanic	-1.764102	2.934429	-0.60	0.548	-7.531487	4.003284
Black, Non-Hispanic	.3338353	5.315618	0.06	0.950	-10.11359	10.78126
Asian, Non-Hispanic	1.464738	5.574096	0.26	0.793	-9.490701	12.42018
Some other race or multi-racial	7.813956	4.387759	1.78	0.076	-.8098332	16.43774
_cons	9.629593	6.622385	1.45	0.147	-3.386174	22.64536

Table 3: Parental Insurance against Physical Access

Source	SS	df	MS
Model	987.139953	35	28.2039987
Residual	4657.97723	476	9.78566646
Total	5645.11719	511	11.0471961

Number of obs = 512
F(35, 476) = 2.88
Prob > F = 0.0000
R-squared = 0.1749
Adj R-squared = 0.1142
Root MSE = 3.1282

XC1	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
ADULT_INSURED	-.4940967	.7235047	-0.68	0.495	-1.915755	.9275612
CHILD_AGEGRP						
5-9 years	.0715814	.5633753	0.13	0.899	-1.035429	1.178591
10-14 years	.4019884	.5355012	0.75	0.453	-.6502501	1.454227
15-17 years	.0286323	.5578368	0.05	0.959	-1.067495	1.124759
CHILD_GENDER	.5420942	.2941702	1.84	0.066	-.0359385	1.120127
CHILD_RACEETHNICITY						
White, Non-Hispanic	.0988932	.7602792	0.13	0.897	-1.395025	1.592812
Black, Non-Hispanic	-.5947561	1.579807	-0.38	0.707	-3.699015	2.509503
Some other race or multi-racial	.9477239	1.07714	0.88	0.379	-1.168813	3.064261
CHILD_WGTSTATUS						
Normal	.5325921	.542271	0.98	0.327	-.5329488	1.598133
Overweight	.2500153	.5994638	0.42	0.677	-.9279072	1.427938
Obese	.218332	.6327604	0.35	0.730	-1.025017	1.461681
C1						
Self-employed	-.1983631	.5577162	-0.36	0.722	-1.294253	.8975271
Out of work for more than 1 year	.1965714	.7017883	0.28	0.780	-1.182415	1.575558
Out of work for less than 1 year	3.325954	.7230919	4.60	0.000	1.905107	4.746801
A Homemaker	.2190571	.5212494	0.42	0.674	-.8051772	1.243291
A Student	-1.961759	.9239334	-2.12	0.034	-3.777252	-.1462668
Retired	-1.112468	.8943608	-1.24	0.214	-2.869852	.6449153
Unable to work	-.465724	.7514436	-0.62	0.536	-1.942281	1.010833
(DO NOT READ) Refusal	-1.326123	3.603428	-0.37	0.713	-8.406715	5.754469
M3						
Some high school, but did not graduate	-.1695143	1.356493	-0.12	0.901	-2.834969	2.49594
High school graduate or GED	.0294233	1.151704	0.03	0.980	-2.233629	2.292475
Some college or 2-year degree	.1051094	1.143672	0.09	0.927	-2.14216	2.352378
4-year college graduate, OR	1.124255	1.16715	0.96	0.336	-1.169149	3.417659
More than 4-year college degree	.4770865	1.180166	0.40	0.686	-1.841893	2.796066
C2						
Separated	-.2654156	.7803994	-0.34	0.734	-1.798869	1.268038
Widowed	-.6037449	1.045197	-0.58	0.564	-2.657516	1.450026
Divorced	.0065058	.4705196	0.01	0.989	-.9180466	.9310582
Single or never married	.9912919	.4646671	2.13	0.033	.0782394	1.904344
(DO NOT READ) Refusal	1.665429	3.235943	0.51	0.607	-4.693069	8.023928
ADULT_GENDER	-.8502396	.3291217	-2.58	0.010	-1.496951	-.2035285
relation	-2.534743	.63121	-4.02	0.000	-3.775046	-1.29444
ADULT_RACEETHNICITY						
White, Non-Hispanic	-.1848332	.8498923	-0.22	0.828	-1.854838	1.485171
Black, Non-Hispanic	.1852107	1.61198	0.11	0.909	-2.982265	3.352686
Asian, Non-Hispanic	-1.22274	1.560972	-0.78	0.434	-4.289988	1.844508
Some other race or multi-racial	3.768993	1.268133	2.97	0.003	1.277162	6.260823
_cons	4.382673	1.85809	2.36	0.019	.7316002	8.033746

Table 4: Parental Insurance against Asthma

Source	SS	df	MS
Model	6.27454495	35	.179272713
Residual	63.2703769	476	.13292096
Total	69.5449219	511	.136095738

Number of obs = 512
F(35, 476) = 1.35
Prob > F = 0.0918
R-squared = 0.0902
Adj R-squared = 0.0233
Root MSE = .36458

XK2_B	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
ADULT_INSURED	.0474339	.0843224	0.56	0.574	-.1182563	.213124
CHILD_AGEGRP						
5-9 years	-.0579943	.0656598	-0.88	0.378	-.1870131	.0710245
10-14 years	-.0589893	.0624111	-0.95	0.345	-.1816247	.063646
15-17 years	-.1227005	.0650143	-1.89	0.060	-.2504509	.00505
CHILD_GENDER	-.0579822	.0342847	-1.69	0.091	-.1253502	.0093859
CHILD_RACEETHNICITY						
White, Non-Hispanic	.058522	.0886083	0.66	0.509	-.1155899	.2326338
Black, Non-Hispanic	.2237504	.184122	1.22	0.225	-.138042	.5855428
Some other race or multi-racial	.2159621	.1255375	1.72	0.086	-.0307142	.4626383
CHILD_WGTSTATUS						
Normal	.0510672	.0632001	0.81	0.419	-.0731185	.1752529
Overweight	-.0059426	.0698658	-0.09	0.932	-.1432261	.1313409
Obese	-.0407119	.0737464	-0.55	0.581	-.1856207	.1041968
C1						
Self-employed	.0538207	.0650002	0.83	0.408	-.0739022	.1815435
Out of work for more than 1 year	.0316491	.0817914	0.39	0.699	-.1290678	.192366
Out of work for less than 1 year	.0003293	.0842743	0.00	0.997	-.1652663	.1659249
A Homemaker	-.0211212	.0607501	-0.35	0.728	-.1404928	.0982504
A Student	.09013	.1076818	0.84	0.403	-.1214604	.3017204
Retired	.1846129	.1042352	1.77	0.077	-.0202051	.3894309
Unable to work	-.1387466	.0875786	-1.58	0.114	-.3108351	.0333418
(DO NOT READ) Refusal	.5270074	.4199691	1.25	0.210	-.2982152	1.35223
M3						
Some high school, but did not graduate	.214809	.1580953	1.36	0.175	-.0958421	.52546
High school graduate or GED	.0999488	.1342277	0.74	0.457	-.1638033	.363701
Some college or 2-year degree	.1359564	.1332916	1.02	0.308	-.1259563	.3978692
4-year college graduate, OR	.1184644	.136028	0.87	0.384	-.1488252	.385754
More than 4-year college degree	.0825943	.1375449	0.60	0.548	-.187676	.3528647
C2						
Separated	.0048298	.0909533	0.05	0.958	-.1738899	.1835494
Widowed	-.0160638	.1218147	-0.13	0.895	-.2554249	.2232973
Divorced	.0835376	.0548377	1.52	0.128	-.0242163	.1912915
Single or never married	-.0113021	.0541556	-0.21	0.835	-.1177157	.0951115
(DO NOT READ) Refusal	.3040987	.3771398	0.81	0.420	-.436966	1.045163
ADULT_GENDER	-.0665038	.0383582	-1.73	0.084	-.1418761	.0088686
relation	.1000633	.0735657	1.36	0.174	-.0444904	.244617
ADULT_RACEETHNICITY						
White, Non-Hispanic	.0086197	.0990525	0.09	0.931	-.1860145	.2032539
Black, Non-Hispanic	-.2765335	.1878716	-1.47	0.142	-.6456937	.0926267
Asian, Non-Hispanic	-.1061126	.1819268	-0.58	0.560	-.4635915	.2513663
Some other race or multi-racial	-.1552888	.1477972	-1.05	0.294	-.4457044	.1351268
_cons	1.767577	.216555	8.16	0.000	1.342055	2.193099

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