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PERSPECTIVES ON THE ILLINOIS HEALTHCARE DELIVERY SYSTEM CHALLENGES, STRUCTURAL ISSUES AND OPPORTUNITIES FOR REFORM

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APRIL 2016

THE SIMON REVIEW PAPER #46

PERSPECTIVES ON THE ILLINOIS HEALTHCARE DELIVERY SYSTEM

CHALLENGES, STRUCTURAL ISSUES AND OPPORTUNITIES FOR REFORM

Compiled by and presented with a foreword from:

Linda R. Baker, Ph.D., Paul Simon Public Policy Institute

SIU CARBONDALE

SOUTHERN ILLINOIS UNIVERSITY

PAUL SIMON PUBLIC POLICY INSTITUTE

THE SIMON REVIEW

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FOREWORD

The Paul Simon Public Policy Institute, as a department of Southern Illinois University Carbondale, in seeking to fulfill our founder's vision, works to support the development of public policy awareness among not just the Institute's students, but with other academic disciplines at the university and the broader public. Government and other public sector entities have a profound impact on the broader professions, firms, institutions, economy and society in which we take part. I am a professor of Healthcare Policy at the Institute.

As fourth year students in the program, students at SIU School of Medicine have enrolled in classes at the Institute and have spent a rotation studying public policy choices that impact the delivery of health care services and the profession itself. The choices made by these public entities will have ramifications for physicians, nurses, administrative support staff and most importantly, for patients and their families. Students have studied state healthcare policy formation up-close and have learned a great deal about the forces and factors that shape their fields of study. Common to all students' findings and much of the literature generally is a need to bring about a greater alignment of public policy and actual practice in medicine.

After observing the healthcare policy formation process, these students have all written about their experiences, pointing out issues of concern, and offering suggestions for improvement. In lieu of a single paper prepared on one topic, I am including three reports to share with the reader each of the students' observations on the intersection of health care and public policy. Isaac Tan makes an interesting proposal to assist physicians with the costs of providing indigent care. He offers a plan to allow physicians to receive a tax credit for indigent care provided during the course of a year, which would offset a significant share of the overall cost. Clare Zimmerman assesses deficiencies in nutrition among children in Illinois' foster care program. Her assessment led her to suggest incorporating nutritional education and a monitoring system into the overall foster care regime. Rustin Meister assesses the ongoing challenges to childhood immunization regulations and proposes removing or reducing the number of available exemptions. Each of the papers was developed with the idea of proposing systemic reforms in Illinois healthcare service delivery, designed to address problems that the students witnessed firsthand.

I am honored to introduce their efforts. I hope these proposals stimulate broader thinking about policy as well as supplementing the students' hands-on experience and their education. The essence of applied education is the mutually reinforcing dynamic between theory and practice. This can only enhance their ability to serve their patients in the future. I hope you find their contributions to the discussion enlightening.

Linda R. Baker, Ph.D.
Paul Simon Public Policy Institute
April 2016

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THE CHARITY CARE TAX CREDIT

A Proposal to Strengthen the Uninsured Safety Net

by Isaac Tan, Spring 2015

The Patient Protection Act and the Affordable Care Act (ACA) have granted health care coverage to 11.7 million people since 2014,[1] yet many people still slip through the cracks. The safety net for uninsured Americans needs to be reexamined and reworked to achieve greater health equity. One such reworking will be presented in this paper, which will first consider characteristics of the American uninsured population today. It will then briefly evaluate the scope and limitations of the current uninsured safety net. Finally, it will propose a new tax credit to encourage doctors to give free care for the uninsured, and suggest the possibility of large-scale adoption.

I. Who are the American Uninsured?

A recent poll by Gallup shows a national uninsured rate of 12.9%,[2] which represents 41.1 million Americans. The same poll breaks down the uninsured demographically and shows that disparities exist even among the uninsured (Figure 1).[2] Specifically, the data show disproportionately high rates of uninsured among Hispanics and poor people.

There are several reasons why Americans remain uninsured. Some of these reasons are currently being addressed. For example, among the 70% uninsured who weren't aware of the health coverage mandate, the majority (55%) planned to obtain coverage once they were made aware of the law.[4] Other reasons might never be resolved, like those rooted in political ideology.

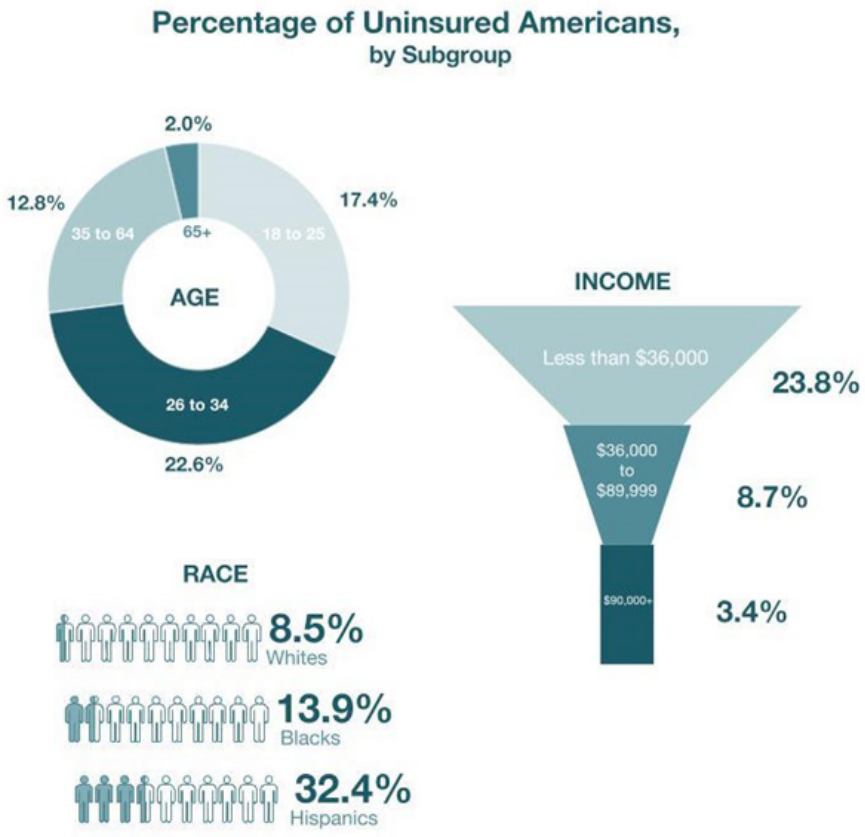
One poll showed that among the uninsured, more are Republican compared to Democrat, and more uninsured Republicans than Democrats plan to stay that way.[4] Other reasons persist despite recent changes. A high percentage of the uninsured still cannot afford insurance premiums. A few studies have illustrated this point.

For the destitute poor, even small increases in the cost of premiums affect rates of coverage. Salam Abdus and his colleagues studied poor children receiving government assistance over 11 years and observed that "a $10 increase in monthly premiums is associated with a 6.7-percentage-point reduction in Medicaid or CHIP coverage and a 3.3-percentage-point increase in uninsurance."[5]

Other research by Laura Dague showed that the a $10 per month increase in premiums among the poor resulted in a 12% reduction in the probability of coverage among that population.[6]

These papers both illustrate that the Affordable Care Act may still not be affordable for all. Unaffordability remains a major contributor to lack of insurance.

Figure 1:[2] Percentage of Uninsured Americans, by Subgroup



II. Who is Helping the Uninsured?

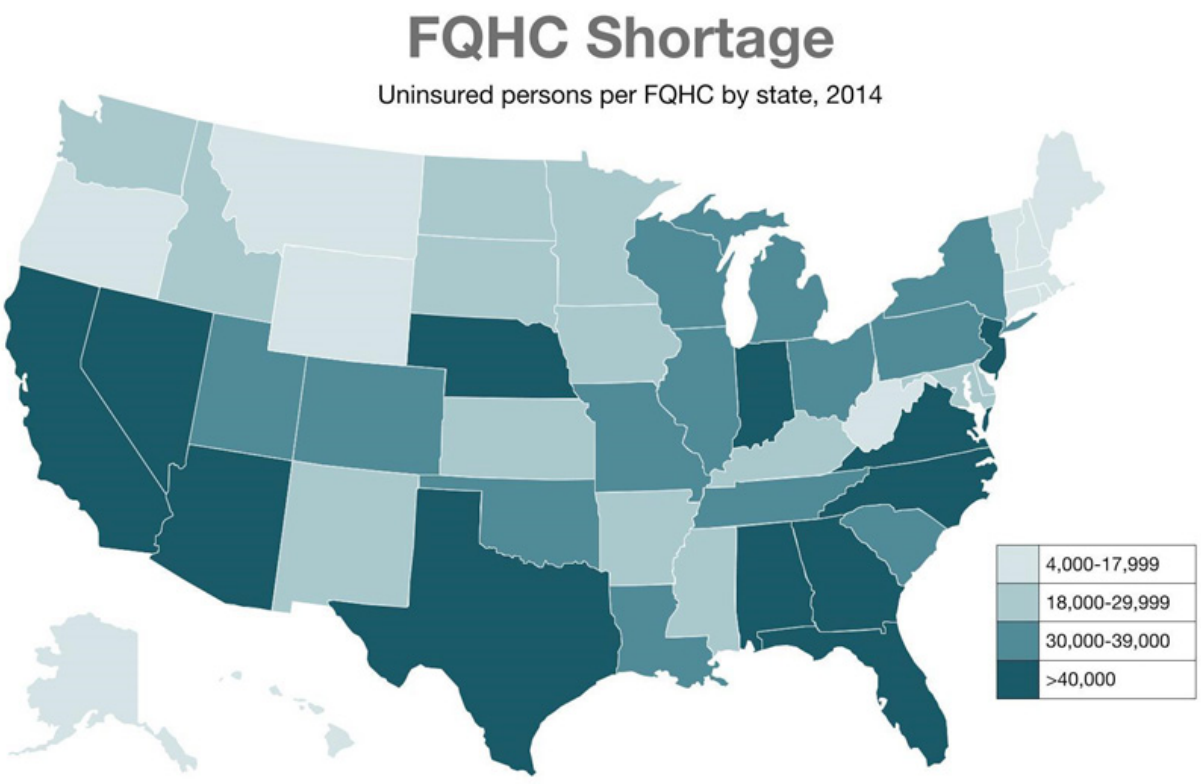
Three components of the health care safety net currently serve the uninsured population. These components are community health centers, Charity Care programs, and volunteer-driven free clinics.

1. **Community health centers**, like Federally Qualified Health Centers (FQHC), are subsidized mainly by Medicaid revenues and federal subsidies to provide care regardless of insurance status.[8] The ACA created a Community Health Center Fund, which provides $11 billion from 2011 to 2015 toward these centers.[15] Community health centers currently serve 21 million Americans.[16]

These centers are limited in geography and there are not enough centers to serve the uninsured population. As Figure 2 shows, there are large disparities in FQHC access among the states. For instance, Massachusetts has 1 FQHC for every 8,000 uninsured people, while Nevada has 1 FQHC for every 149,000 uninsured people.[12]

2. **Charity Care**, affiliated with private-sector health care organizations, provides discounted health care services, which are funded by county property taxes, private organizations, and some federal subsidy.[9]

Figure 2:[12] FQHC Shortage



These programs, like FQHCs, are limited in location. Most of these programs still require some payment from patients, which may not be affordable for the very poor.

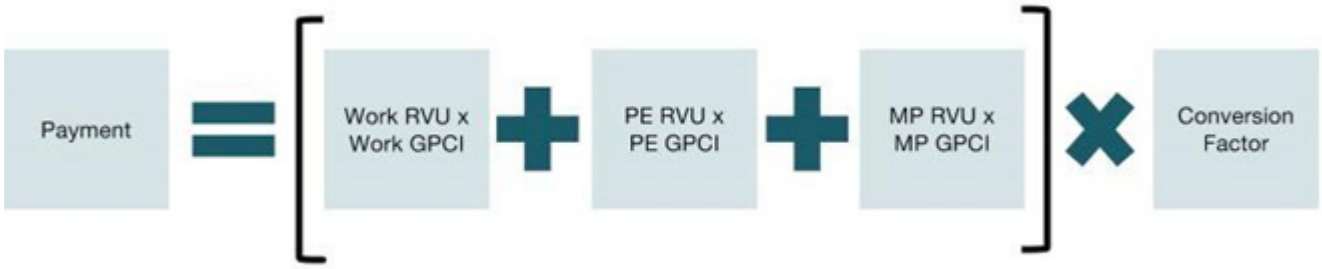
3. **Volunteer-driven free clinics** are increasing across the country,[10] but these have a limited scope, and suffer from lack of personnel, limited geographic coverage, and poor continuity of care. Nevertheless, they represent an enthusiastic and grassroots workforce dedicated to the poor.

Of note, the safety net does not include a broad base of private-sector medical practices.

III. A Proposal to Strengthen the Uninsured Safety Net

Our proposal aims to mobilize physicians to strengthen the uninsured health safety net by providing a tax incentive. Physicians would receive a tax credit for donating free health care to the 41 million currently uninsured.

Based upon the services provided through this 'charity care,' physicians would receive a tax credit, called the Charity Care Tax Credit (CCTC). Similar programs have not been passed in other states, nor at the federal level – however, our model draws from



components of existing health care services. The above is a brief overview of the proposed CCTC model.

The tax credit would be based upon the Medicare Physician Fee Schedule Payment Rates Formula:[14]

This formula is currently used to determine the payment of any given doctor visit, based on three main expenses: work expenses, practice expenses (PE), and malpractice expenses (MP). These three expenses are expressed as Relative Value Units (RVU) and Geographic Practice Cost Indices (GPCI), which assign value based upon practice characteristics and geographic fluctuations. A Conversion Factor, which varies year by year, takes into account large economic forces like inflation and Gross Domestic Product. This formula is the basis of the CCTC because it is currently widely used and accounts for state-by-state as well as national variations. In other words, its utility is universally recognized.

The Charity Care Tax Credit will be a determined percentage of the Payment Rates Formula. For example, let's set the CCTC at 25%. One Friday afternoon, a doctor from rural Illinois opens her doors for a free uninsured clinic. Using the Payment Rates Formula, assume her first patient's visit costs $70. Her CCTC in this case would be 25% of $70, or $17.50. Thus, the doctor would receive a $17.50 tax credit.

Implementation of this program would require minimal adjustments; care is delivered in existing health care structures. In order for physicians to distinguish uninsured patients from their regular patient pool, adding to the Current Procedural Terminology (CPT) code would provide a seamless transition. A modifier for visits of uninsured patients would be added to the CPT code. Doctors would simply select the modifier to the appropriate CPT for that visit. The rest of their practice would remain nearly unchanged.

How much will this tax credit cost the government? Currently, we can only speculate. In the United States today, there are 897,420 professionally active physicians.[13] Let's assume 5% of those physicians, or 44,871 doctors will participate in this credit. And let's predict that each doctor will see 60 uninsured patients a year (5 patients per month), and that each visit costs $70. By applying the 25% CCTC, the government would pay $47 million in tax credits for the year. This represents just a fraction of the $11 billion federal subsidy for community health centers. More importantly, the CCTC would help care for 2.6 million more uninsured people.

While this proposal will unavoidably lead to lost government revenues, it aims to avoid increases in total government spending. Therefore, waste in the current health care law needs to be eliminated and reallocated to fund this tax credit. One possible source of savings is the employer-paid tax credit, which is currently very expensive. In his book Health Policy Issues: An Economic Perspective, Paul Feldstein writes:

> Hundreds of billions of dollars in tax revenues have been lost because of employer-paid health insurance. The value of this tax subsidy was forecast to be $270 billion in 2010 in forgone federal, Social Security, and state taxes…In comparison, in 2010 the federal government spent $280 billion on Medicaid, a means-tested program for the poor (Congressional Budget Office 2010c).[11]

Economists favor reducing the employer-paid tax credit or setting a limit on the credits paid, (which generally favors those who are stable enough to afford health insurance) to subsidize programs targeted for the poor. Reworking the current employer-paid health insurance tax credit is a topic not covered in this paper, but reworking it is a promising way to fund the CCTC.

The model of the CCTC presented here puts forth some basic principles. Many of its complexities would need to be worked out through further scholarship and legislative discourse. Nevertheless, this economic model is universally scalable, and its grassroots, physician-led structure could potentially broaden the safety net immensely. We therefore believe that the CCTC could become a federal policy. Still, universal implementation would benefit first from a state-based pilot program in Illinois.

The initial pilot would serve to collect data about participation, costs, and effectiveness. It would also provide a model from which other states could learn from and follow, and through which enforcement and regulation practices could be drawn.

This proposal gives physicians the incentive to tackle a societal need, while allowing them the freedom to maintain their current practice structure, hours, records, etc. It also provides a cost-efficient, lean economic model that will not require deficit spending by the government. Tackling the enormous problem of health inequality will require these kinds of mutually beneficial partnerships between doctors and their government.

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CHILDREN IN FOSTER CARE AND NUTRITION

A proposal to improve child nutrition and physical health practices within the foster care system

by Clare Zimmerman, MS

More than one third of children are overweight or obese, making obesity the largest contributor to preventable disease among children (CDC 2014a). Childhood obesity rates have nearly tripled over the past thirty years (Let's Move 2015), putting each new generation at risk of suffering more health problems than the generation before it. Statistics suggest that one-third of Americans born after 2000 will have diabetes at some point in their lives (CDC 2010). Increasing numbers of obese or overweight youth are immediately at risk for heart disease, pre-diabetes, and bone or joint problems. Obese children are likely to become obese adults at risk for heart disease, Type 2 diabetes, stroke, cancer, and osteoarthritis.

Many environments and sectors of society influence the healthy lifestyle habits of children and thus obesity levels. Examples of environments or sectors that impact children are families, communities, schools, medical care providers, faith-based organizations, government agencies, and the media. In recent years schools have been the target of policies hoping to reduce childhood obesity rates. Schools are thought to provide a safe and supportive environment where young people can learn and practice healthy eating and engage in regular physical activity. However, increasing attention has also been paid to the family and the role of parents in promoting healthy living.

A recently published editorial in Time magazine entitled, "Should Parents of Obese Kids Lose Custody?" discusses an incident in which a mother lost custody of her 555-pound 14 year old child due to the child's obesity related health problems. The child's mother faced criminal child neglect charges. This article and others like it (AP 2011; Conley 2011; D'Arcy 2011; Faure 2009; Tanner 2012) signal increasing attention on the role of parents and caregivers in childhood obesity. However, this article also raises another important issue – if in fact obesity is considered neglect and a reason for placement into the foster care system, then foster parent regulations or guidance on diet and exercise are needed.

Currently, there is a lack of attention within the foster care system on promoting health and nutrition behaviors. Particularly, foster parents are not trained in encouraging healthy lifestyle habits and nutritional eating. Further, there is not a comprehensive system for tracking obesity and excess weight among foster children nor are there incentives for successfully encouraging healthy living in foster children under an individual foster parent's care. These problems

need to be addressed.

This paper will explore the phenomenon of childhood obesity including trends in childhood obesity, the links between childhood obesity and socio-demographic characteristics, and possible reasons for higher obesity rates in certain groups of children. We will then explore how these particular risk factors might be over-represented among foster youth. Next, we will examine the role of parents or caregivers in promoting or preventing obesity and look at what steps if any have been taken within the foster care system to better equip parents to provide a healthy environment for children and promote healthy behaviors. We will conclude by recommending changes to DCFS policy that might address and mitigate childhood obesity among foster children.

I. Childhood[1] Obesity and Foster Youth

Childhood Obesity Trends

As mentioned above, rates of obesity and overweight have grown exponentially in the past thirty years. According to the National Health and Nutrition Examination Survey in 2012, 31.8% of youths between age 2 and 19 years were overweight or obese with over half of this 2-9 year old population obese (53.1%) (Ogden et al. 2014). Like adults, significant differences in childhood obesity rates occur according to age, race or ethnicity, sex, and the socioeconomic status of parents.

Obesity or overweight rates are higher for children above six – although the average overweight or obese rate is 31.8%, 34.2% of children in the United States ages 6-11 are overweight or obese and 34.5% of children ages 12-19.

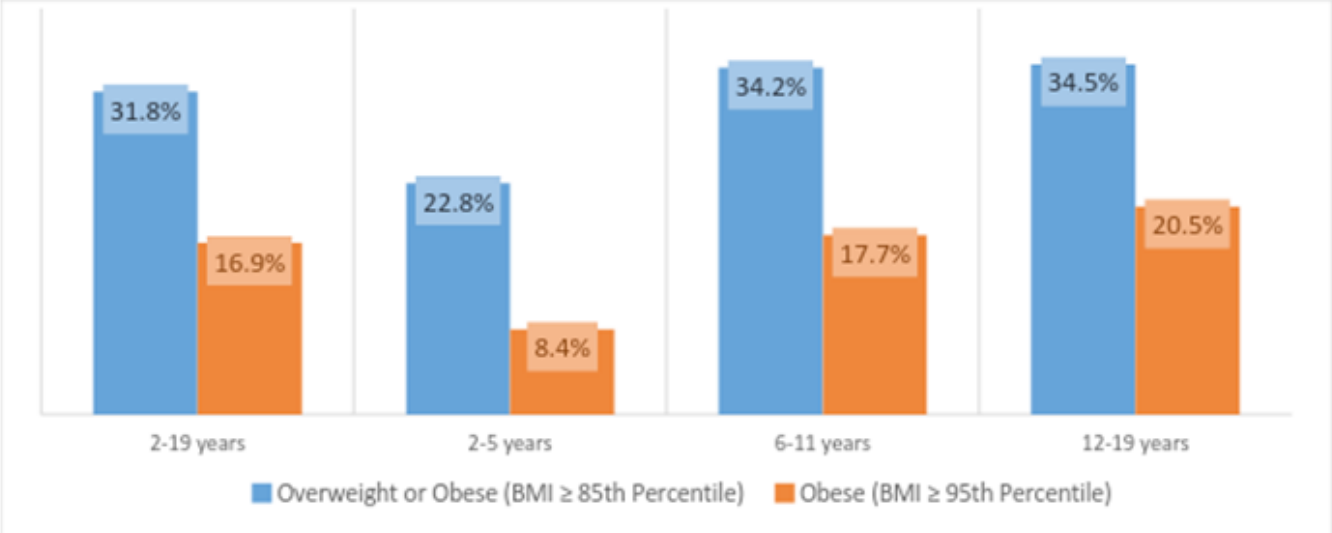

Figure 1. Obesity and Overweight Prevalence by Age Group

[1]Children are considered obese if their body mass index (BMI) is greater than or equal to the 95th percentile for their age group. They are considered overweight if their BMI is greater than or equal to the 85th percentile but less than the 95th.

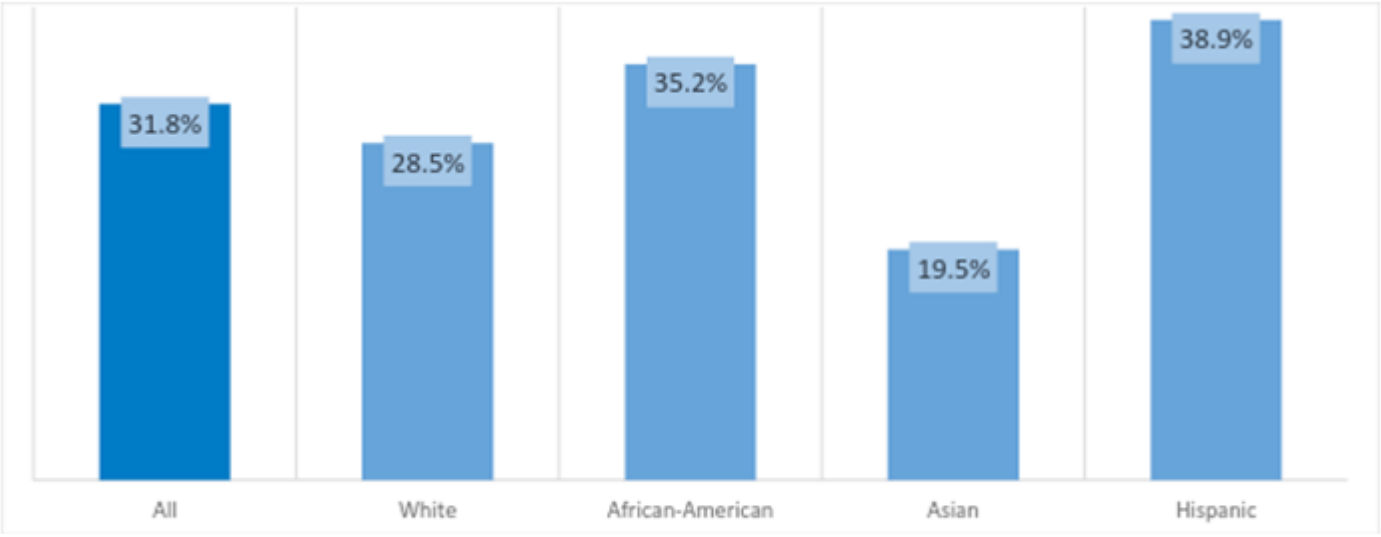

Figure 2. Obesity and Overweight by Race

Obesity has also been found to be correlated with race among children. From 1976 to 2002 the percentage of Mexican-American boys that were obese rose from 10.5% in 1980 to 25.6% in 2002. The lowest increase occurred for white girls – in 1980 4.9% were obese and in 2002 12.9% were.

By 2012 racial disparities in obesity rates had increased. White and Asian children of all ages had obesity rates lower than national averages, while African-American and Hispanic children had higher obesity rates than average. Particularly, while 19.5% of Asian children were overweight or obese, 38.9% of Hispanic children nationally were – that is, compared to Asian children, nearly twice as many Hispanic children are overweight or obese.

Disproportionate numbers of African-American and Hispanic children are in foster care across the United States. In Illinois 6% of foster children are Hispanic and 52% are African-American (The Annie E. Casey Foundation 2014). The proportion of foster kids that are Hispanic is less than might be expected while the proportion that are African-American is higher than expected – 22% of the state's children are Hispanic and 16% are African-American (Kaiser Family Foundation 2015).

Along with race, researchers have also noted disparities in obesity according to parents' education and income. A recent study by May and her colleagues (2013) used the National Health and Nutrition Examination Survey to examine social disparities in obesity rates for adults and children. They found that overall, children whose adult head of household or caregiver did not finish high school were twice as likely to be obese as children whose caregiver had completed college (19% v. 9% among girls, 21% v. 11% among boys).

Other studies have documented a negative relationship between childhood obesity and income – that is, as parent income goes down, the risk of childhood obesity goes up. Young (2014) found that as children age the difference in obesity rates between low-income and high-income children increases. Data from the CDC (2014b) reveals that nationally preschool age

children (age 2-4) whose parent's incomes are at or up to 50% below the poverty level are most at risk for obesity (14.5%), followed by children whose parents' incomes are less than 50% of the poverty level (14.2%), and those whose parents' incomes are just above the poverty level (100-130%, 13.4% obese). In Illinois, 15.4% of pre-schoolers whose parent's income is at or 50% of the poverty level are obese.

While it has been established that there are links between childhood obesity, age, sex, race, parent education, and parent income, there is less understanding as to why these correlations are observed. Chia (2013) explored the relationship between child weight and parent income status. She found that although it appears that there is a higher prevalence of obesity among the children of lower income individuals, once other variables such as parent education and social capital are added income does not have as much of an effect on obesity. That is, childhood obesity is correlated with parent education and social capital, factors that are also correlated with income. In a similar stream, one study has suggested that low-income parents are aware of food related obesity risks but not physical activity (Hernandez et al. 2012). In this case, a lack of education on healthy behaviors may be contributing to the higher rates of childhood obesity in low-income families. It has also been suggested that income determines the foods that are available to families and more often than not the cheapest, most accessible foods are highly processed and high in fat (Kenner 2009).

A study by Dr. William P. O'Hare (2008) found that foster parents and foster households are generally more disadvantaged than other family households. Specifically, households with foster children are on average larger than other households with a larger number of children, are less likely to be married couple households, are more likely to be single parent households, are more likely to be low income, more likely to have a severe financial housing burden, more likely to receive public assistance monies, more likely to be headed by someone who did not graduate from high school, and more likely to be headed by an underemployed person.

Demographically, foster children are vulnerable to obesity – making matters worse, certain experiences that many foster children share, increase the likelihood of eating disorders and other problematic food-related behaviors (Casey et al. 2012). Specifically, bulimia nervosa, anorexia, hoarding, obesity, and pica are observed at higher rates among foster children. There is evidence that this may be due to the association between childhood maltreatment or trauma and disordered eating. It also calls attention to the need for better training of both foster parents and social workers on child nutrition and the risks of foster child eating disorders.

Today, weight-related health complications are becoming increasingly common in the United States and illustrate the need for a greater focus on childhood health issues in the foster care system including nutrition, obesity, and active lifestyle maintenance. Like earlier initiatives in public schools, educational and obesity prevention initiatives within the foster care system are much needed and will come with relatively low cost because much of the infrastructure for implementation is already in place.

II. The Foster Care System – Current Policies

Children are placed into the foster care system for a variety of reasons. The most commonly assumed reason is neglect or abuse. In recent years, a debate has begun as to whether childhood obesity could be considered a form of

neglect. Generally, a physician reports suspected medical neglect when all three of the following conditions are present:

1. A high likelihood of serious and imminent harm;
2. A reasonable likelihood that an available intervention will result in effective treatment;
3. The absence of alternative options for addressing the problem (Varness 2009).

Illinois ranks third in the nation for longest foster care stays per child, averaging 28.6 months. Foster care is the temporary public placement of children outside of their own homes that occurs because of abuse, neglect, or other family problems. Whenever possible, the Department of Children and Family Services (DCFS) and other agencies work with families to reunite them. When not possible, the agency takes measures to get the children adopted or prepared to live independently. States are charged with ensuring that children who have been removed from their homes due to abuse or neglect are well cared for in their out-of-home placements. Foster care providers are responsible for directly providing the, food, clothing, shelter, supervision, educational necessities, and other incidentals to promote the safety, permanency, and well-being of children in their care.

A. Children in Need of Foster Homes

A variety of children need foster homes. Often the children who most need homes are also the most defenseless in society. These vulnerable populations include African-American infants, teenage mothers and their babies, children with special medical needs, adolescents, siblings who need to stay together, Hispanic children and babies born with the HIV (AIDS) virus or substance addiction due to contact passed to the child while in utero. Children likely to be in need of foster parents are also more likely to have experienced trauma, to have problematic eating or food-related behaviors, and to be overall more at risk for obesity.

Foster children are vulnerable members of society in a variety of ways and also suffer greater risk of poor health including being overweight and obese. In several studies, it has been shown that foster children are more likely to be obese and overweight compared with the standard growth curves of children. One study found that body mass index (BMI) increased while the child was in foster care for about a third of foster children (Hadfield 2008). In another study, it was found that children were also more likely to be overweight upon entering the foster care system (Schneiderman 2013).

Foster parents receive a monthly stipend to cover the child's food, clothing and personal allowance. Most often, this check is based on the child's age and the amount increases incrementally each year. The basic foster care rates in Illinois and the majority of other states fall well below the estimate of the actual costs of caring for a child. There are no uniform federal requirements regarding the specific payment or amounts provided. States have discretion in designing and administering their foster care payment systems.

Each foster child receives a medical card from the state that guarantees payment for all necessary medical care and preventive medicine. The medical card is also accepted by many hospitals and for approved prescriptions. Foster parents do not pay any medical bill directly out of their pocket and as they are publicly funded expenditures, there should be greater regulation of the care that is provided.

The lack of regulation of either food or medical benefits is problematic because of foster children's higher risk to medical problems, problematic eating behaviors, and obesity.

B. Foster Child Education

Most foster children go to state-funded public schools, unless they need special education, for which the individual state pays. DCFS provides overall support to licensed private child welfare agencies with foster care programs and maintains its own foster care program as well. DCFS also directly provides universal foster care information and impartial advocacy for all foster families statewide. While the education and funding foster children and their parents receive are quite extensive, they lack an important component, involving healthcare, nutrition, and active lifestyles.

C. Foster Child Nutrition

The at-risk population of children in the foster care system receives little or no specifically targeted education or funding addressing pediatric nutrition and exercise. Nutrition is not covered in foster parent training. The only mention made of nutrition in parental training is the prohibition against withholding food as a form of punishment. Foster parents are given an allocation of money for "room and board" costs that includes the price of food. However, there is no tracking of foster parents' purchases to monitor nutritional quality. With the risks of obesity so high, change in these procedures is needed for the benefit of foster children as well as their parents and families. With First Lady Michelle Obama's influence and her "Let's Move" program there has been a focus in the United States on the need of every child in the school system for healthy meals at school as well as increased physical activity throughout the day. Obesity and unhealthy lifestyle practices must also be addressed in the fostering population. Illinois schools include programs such as Generation Healthy (Gen H) Kids in their curriculum.

The program's mission statement is "to create a generation of healthy kids through education, empowerment, improved nourishment and increased physical activity, thereby reducing the incidence of childhood obesity and its detrimental health effects." Programs such as these are helpful in the school system and for low-income families. It is important to educate students early about childhood health and its link to better health in adulthood. Teaching children healthy habits such as proper nutrition and exercise leads to fewer obese adults and therefore lower medical and healthcare costs in the future.

III. Policy Recommendations for Mitigating Childhood Obesity in the Foster System

As mentioned above, a variety of factors make foster children more vulnerable to poor health, poor nutrition, and obesity. However, like school education initiatives, the infrastructure for educating parents, caseworkers, and children on proper nutrition practices is already in place. Relatively inexpensive (both in terms of time and money) steps can be taken to mitigate childhood obesity in the foster system in Illinois. In order to resolve the lack of proper education, the pediatric community and child welfare system need to work together to implement training in food budgeting as well as purchasing, regular child weight checks, monitored exercise and nutrition, educational tools, and independent living programs for all families. Weight percentiles should be included in the foster care files as well as better training and monitoring of child welfare caregivers performing

weight reduction interventions. Foster parents need to be brought into the process along with the child's pediatrician and be educated about healthy diets, meals, and activities to provide for the children in their care. Finally, incentives should be provided for those that show progress in encouraging healthy living and eating behaviors.

Food Budgeting

The budget for "room and board" should require healthy food options such as fresh fruits and vegetables. There should be a way to ensure that foster parents are providing their foster children with healthy diets when at home. Using a smart card system that could electronically track what is being bought with the "room and board" budget for children would be an easy way to determine if healthy food is being provided.

Monitoring

Weight checks of children should be obtained yearly at a pediatrics physical exam and if weights are trending upward, pediatricians need to report this to families and caseworkers and encourage weight reduction. Successes with weight loss or maintaining a healthy BMI within foster families could be used to help with insurance initiatives or tax breaks. The most obvious benefit of such programs would be a decrease in the cost of health care later in life.

Tracking exercise could be another way to monitor healthy lifestyles. Fitness trackers such as Fitbit could be used to track just how active children are throughout their days. Partnering with organizations such as Gen H Kids would help to educate these families through programs such as "Operation Dinner Table." This program teaches parents, who may not know how to cook and prepare fresh foods, new and easy ways to provide a healthy meal.

Education

Using education tools such as the "Healthy Plate," which helps with portion control or hanging the "Hunger Scale" on the fridge to help children determine how hungry they really are could be handed out to foster parents during their training time. There are many online education tools that can help parents learn how to prepare healthy meals and snacks as well as outdoor activity ideas.

As children age out of foster care there are some independent living programs for children ages 17 to 21. These classes for older children may include teaching about proper grocery shopping and meal preparation. Children who are about to become independent of the foster system are taught how to read nutrition labels and count calories. Teaching should also include how to incorporate exercise into a daily lifestyle as well as maintaining a healthy weight. Incorporating cooking classes could also maintain interest among this population.

The Spoon Foundation is an organization dedicated to improving nutrition and feeding in orphaned and vulnerable children so they may grow and develop to their full potential. Working together with policy makers and foundations can lead to a greater change and improvement in the nutrition and care of foster children especially with regard to obesity and healthy lifestyles. This population is unable to speak for itself so it is important that the government and those caring for them have the proper education and guidance to allow these children to live the healthiest lives they can and to grow to their full potential as independent adults. Childhood obesity is a serious issue that can create health problems that last into adulthood. Foster children, for a variety of reasons, are particularly vulnerable to obesity.

However, relatively inexpensive changes can be made to the foster care system that would greatly mitigate these issues.

A combination of education and incentive programs for case workers, foster parents, and foster children could greatly reduce the obesity rates of foster children. Such initiatives would help foster children grow into happy and healthy adults.

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CHILD VACCINATION IN ILLINOIS

A proposal to improve vaccination practices in Illinois

by Rustin A. Meister

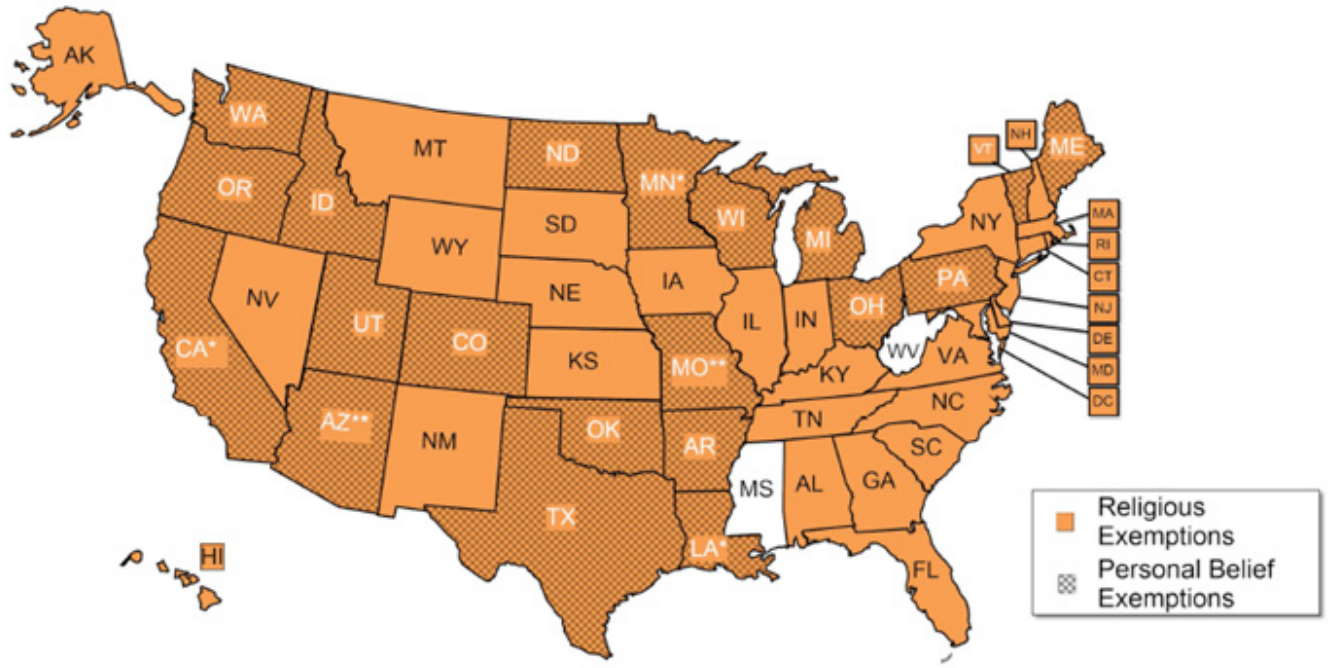
Advancements in medicine seem to happen every day. Every day we develop a way to treat a disease a little better, make surgery a bit safer, or begin trials of a new drug to treat a deadly cancer. Despite all of the marvels in medicine, there are still two interventions that reign supreme when it comes to reducing the burden of infectious disease. One of them is clean water. The other is not sterile surgery technique, antibiotics, or cleaner hospitals - it is vaccinations. Taken together, clean water and vaccinations are critical. However these essential health needs are treated in widely disparate ways - one is considered a basic human right, the other is subject to a campaign against it, particularly in developed countries.

The debate surrounding vaccinations persists despite efforts by organizations such as the World Health Organization and Centers for Disease Control's efforts to educate the public on their necessity. For example, the World Health Organization (WHO) released a bulletin on vaccines, their efficacy and other uses. Of note, vaccination can be linked to reduced disability, reduced burden of disease, promoting peace, bridging the gap in socioeconomic classes, and promoting a nation's economic growth1. This paper will specifically look into the current issues regarding vaccinations in Illinois and the U.S., as well as look at possible legislative changes designed to correct rising rates of both unvaccinated children and the increased prevalence of diseases for which there are vaccines available.

I. Current Legislation

Nearly all vaccination legislation is created at the state level. The state of Illinois requires vaccination against measles, mumps, rubella, pertussis, tetanus, diphtheria, and polio in order for a student to attend kindergarten. There are three possible exemptions that are currently allowed by states. All 50 states allow for a medical exemption. This grants an exemption to children with immune deficiencies because vaccines are often ineffective and unsafe for these populations. The second exemption is the religious exemption, which allows parents to refuse to vaccinate their children based on religious belief. Of note, in my research only two religious denominations of considerable size absolutely oppose vaccines in the US - Christian Scientists and the Dutch Reformed Church. The third exemption is the philosophical exemption. This exemption covers those who choose not to vaccinate based on personal beliefs that are not classified as religious. Figure 1 shows a map from the National Council of State Legislatures of the United States with the states labeled based on the exemptions allowed. As it demonstrates, Illinois allows the religious exemption but does not allow the philosophical exemption for vaccination.

Figure 1. Vaccination Exemptions by State



Source: http://www.ncsl.org/research/health/school-immunization-exemption-state-laws.aspx

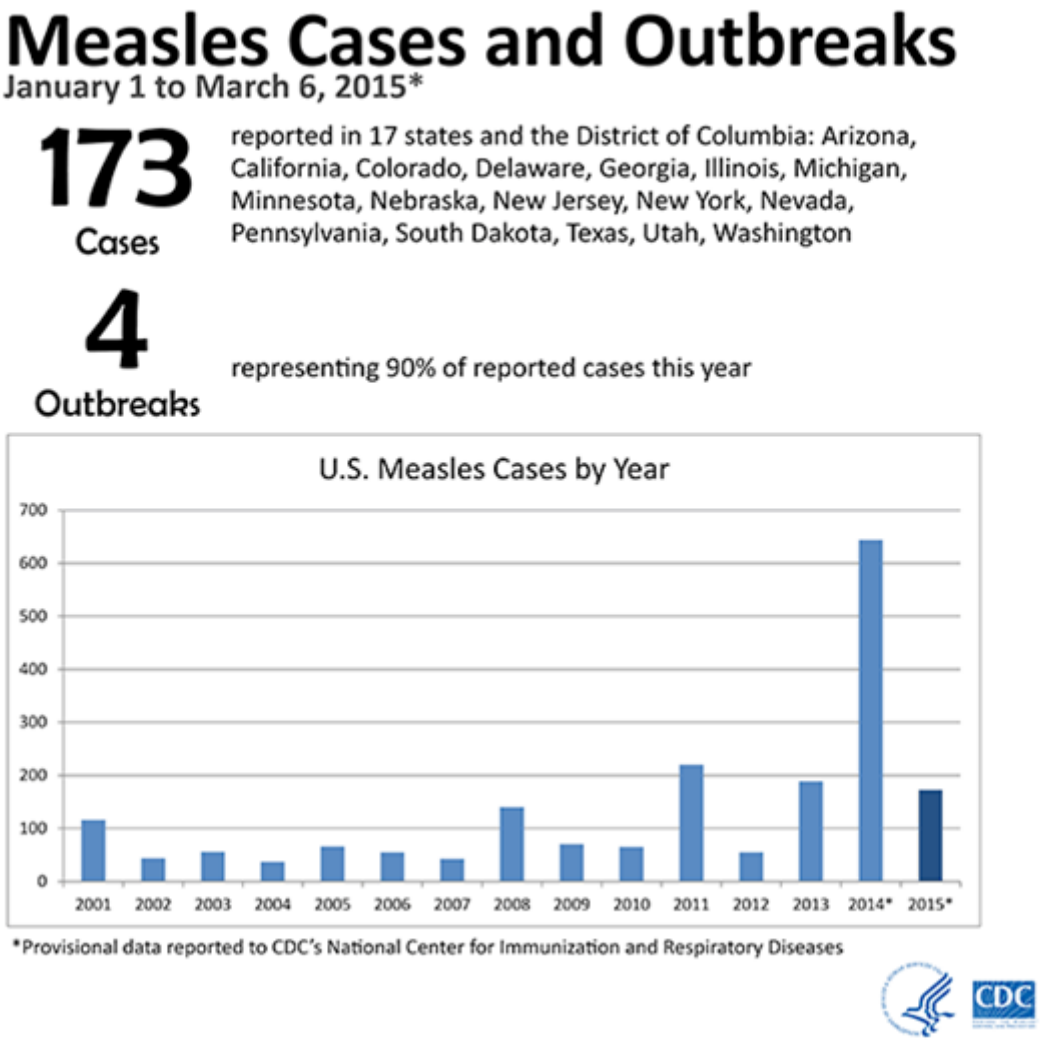
II. Current Problem

In the last 15 years, a movement against child vaccinations has grown in mainstream society. Oddly enough, this movement was born out of medical research published in Lancet, a respected British medical journal, in 1998. Andrew Wakefield, a surgeon, had suspicions that the MMR vaccine was causing Crohn's Disease and autism in children, and reported a study that showed a connection between administration of the vaccine and children subsequently developing signs and symptoms of autism. Investigations into this study showed several problems with Dr. Wakefield's results including financial conflicts of interest, acting without approval of his hospital's institutional review board, and most importantly, data falsification. In 2010, the Lancet fully retracted the 1998 publication. Mr. Wakefield was then removed from the UK medical register, barring him from practice in the UK. He has since moved to the U.S. where he has acquired a following. When questioned regarding the topic, people are generally aware of Wakefield's writing, and when asked, even those who are unfamiliar with medicine can reference a study linking autism and vaccines - that is generally the extent of popular awareness.

The anti-vaccine movement is strong among those in the general population who distrust government. This in large part explains how this view has maintained popularity, even after being debunked. If you distrust government, you won't believe government officials who tell you this research is false, or even researchers who tell you Wakefield was wrong.

There is a myriad of other beliefs that can foster interest in the anti-vaccine movement. These range from desire for all-natural products

Figure 2. Measles Cases and Outbreaks in the U.S.

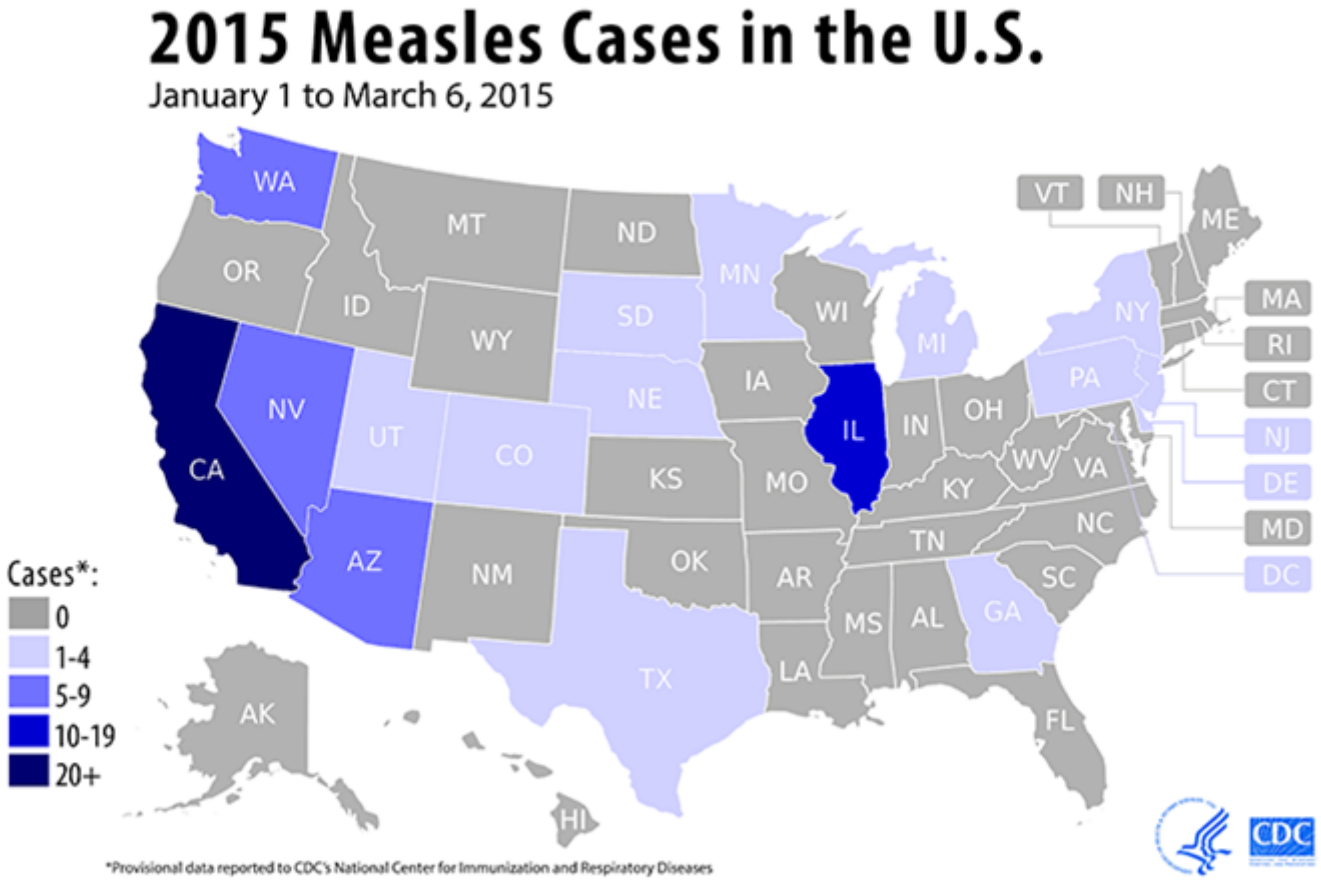


Source: http://www.cdc.gov/measles/cases-outbreaks.html

to fear of toxic chemicals in vaccines. The movement is also fueled by a lack of understanding about just how important and beneficial vaccines are. False beliefs are only further propagated by ill-informed celebrities like actress Jenny McCarthy, who argued that her son developed autism because of the mercury in vaccines. McCarthy's son has since not met the diagnostic criteria for autism, and McCarthy has softened her stance to one that argues that "the parents are in charge" in more recent interviews (6).

Whatever someone's belief is, there are two unfortunate truths. One, that this view is patently wrong and more importantly, that the view is beginning to have effects on the broader population – including those that are vaccinated. Fear of vaccines has led to a steady increase in incidences of diseases that could be prevented by vaccines in the United States. In figures 2 and 3 from the CDC, you can see how measles cases in the United States have increased over the last several years.

Figure 3. Measles Cases in the U.S. by State



Source: http://www.cdc.gov/measles/cases-outbreaks.html

III. Possible Solutions

In light of recent data from the CDC and state health departments, public officials have moved to strengthen legislation governing regulations regarding who can opt out of vaccinating their children. The National Conference of State Legislatures (NCSL) has released data showing vaccination legislation currently in the works in several states. Before these options are laid out, it is important to first understand the perspective of current Illinois legislators and state public health officials on the issue of vaccinations. In the following pages I will first summarize some data collected in qualitative interviews with Illinois state legislators on vaccination law. I will then propose some policy solutions to issues of vaccinations in the state of Illinois and the U.S. as a whole.

In an interview with Illinois State Representative Mary Flowers (Chair of the Health Care Availability Access Committee), her thirty years of experience in state legislation were obvious in her concerns about tightening legislation on vaccination requirements. Rep. Flowers voiced several concerns about tightening restrictions on vaccination exemptions. One point she made was that there are few laws that protect the rights

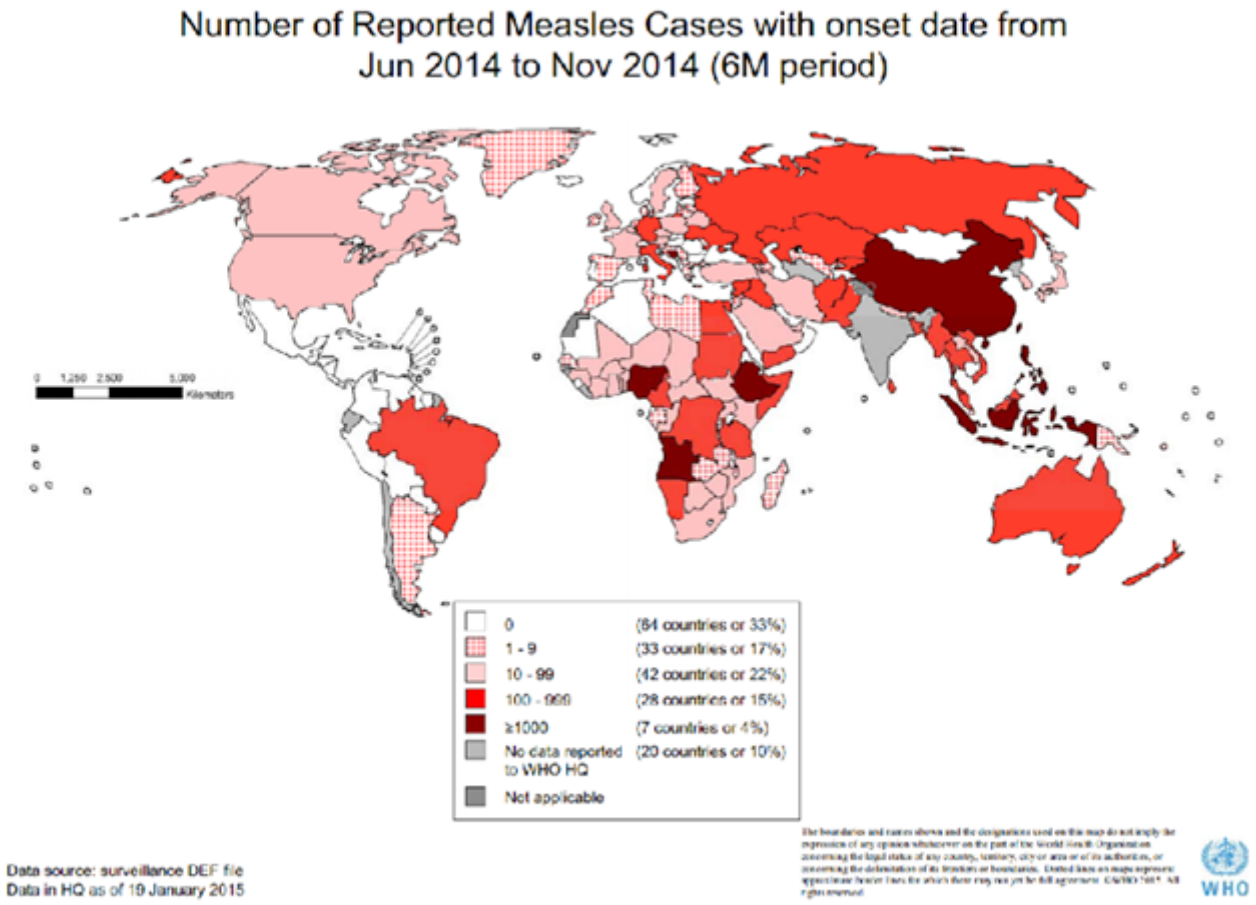
of families, and the rights of parents to make choices for their children. Another concern she has is the potential generation of profits for medical facilities that might come from a stricter government vaccination mandate. She brought up the Ebola scare, and the amount of money that was made by companies contracted by hospitals to be "Ebola ready." A final concern she had was the idea of reacting to popular disease fears with a legislative response (3). She referenced a recent example of fear driving allocation of funds from the government to private companies who benefited from such legislation. From a legislative perspective, Flowers' concerns about panic driving policy were certainly valid.

However, during our discussion several counterpoints regarding the right of others to vaccinations were raised. Do families not have a right to know their children are safe when they send them to school? Does the right of the anti-vaccination family trump the state's public safety duties? On the point of profit, it has been shown by the WHO that vaccination saves healthcare systems money (1). Sick children and adults take an economic toll on a family, state, or country. The child might miss school, parents would have to miss work or hire childcare to take care of them, and money would be lost both in terms of productivity (work hours) as well as family consumer spending. A recent article in the Chicago Tribune from February 2015, found that Illinois schools have an average of 90% to 95% compliance with vaccination legislation (2). This is a decent rate and suggests that few Illinoisans would be affected by stricter legislation on vaccinations. However, that small population of unvaccinated children does have the potential to affect a great number of vaccinated children by introducing diseases to schools.

My next conversation was with Dr. Craig Conover, an infectious disease physician and director of the Illinois Department of Public Health. He had a very different, but not surprising viewpoint. He shared data that is quite concerning for his department. These data, shown in figure 4, depict the number of exemptions in selected states and how those numbers relate to the total population. Interestingly enough, as you can see, Illinois has an unusually high number of medical exemptions. That number reflects 1.2% of the eligible population having a medical condition that exempts them from vaccination. Coupled with an unusually high number of religious vaccination exemptions - we actually have the highest percentage of exempt population in the union (6.1%). For example, a study of schools in a number of states found that in Georgia in 2012 only 4 individuals were not vaccinated for medical reasons while in Illinois 2,017 people were not vaccinated for medical reasons. For religious reasons, 8,082 Illinois children were not vaccinated compared to 73 children in Georgia. Can there really be such a legitimate disparity across state lines? Likely not. What is much more likely is that people are using these exemptions, either religious or medical, as a way to get around vaccinating their children for philosophical reasons since Illinois does not have a philosophical exemption.

Dr. Conover was fairly reluctant to recommend policy changes. He did raise a fair point, a very simple guide for deterring parents from not vaccinating their children. He said "It should be as hard to exempt your child from vaccination as to get the vaccination itself" (4). What Dr. Conover meant by that, is that currently, in order to claim an exemption, a parent simply has to fill out a form and send it in. A parent who wants their child vaccinated has to make an appointment, take their child to the clinic and receive the vaccine.

Figure 4. Number of Reported Measles Cases in the World



So it is actually more work for the parent to get the vaccines than it is to fill out the exemption form and send it in.

A final point that was discussed with Dr. Conover is the need to refute the suggestion that immigrants are the root cause of many cases of preventable diseases in the United States, particularly countries to the south. Figure 5 is a map of the world with countries who report measles cases to the WHO. As you can see, Mexico and Central America actually fare far better than the United States on reported measles cases – in a six month period the countries of Central America and Mexico had no reported cases of measles, while the U.S. had 10-99 cases. The bulk of immigrants to the U.S. come from these countries suggesting that immigrants are not the cause of these higher rates.

Given the seriousness of this issue and the prevalence of vaccination avoidance in Illinois, the importance of re-examining current legislation on vaccination in Illinois is paramount. An analysis of what has been done in other states regarding vaccination and what policies might best work in Illinois is important and will be conducted in the following pages. From my perspective, Illinois could follow one of four paths toward increasing vaccination rates: remove religious exemption from state law, leave legislation unchanged but more broadly publicize vaccination rates by school district, require signed approval by a physician in order to be exempt from vaccination, or do

Figure 5. Vaccination Exemptions by Select State

State/Area	Medical exemptions†		Nonmedical exemptions†				Total exemptions†	
	No.	(%)	Religious no.	Philosophic no.	Total no.	(%)	Total no.	2012–13 (%)
California	923	(0.2)	—**	14921	14921	(2.8)	15845	(3.0)
Florida	905	(0.4)	3281	—§	3281	(1.4)	4186	(1.8)
Georgia	4	(0.1)	73	—§	73	(2.2)	77	(2.3)
Illinois	2017	(1.2)	8082	—§	8082	(4.8)	10099	(6.1)
Michigan	699	(0.6)	1086	5540	6626	(5.3)	7325	(5.9)
New York††	331	(0.1)	1335	—§	1335	(0.6)	1666	(0.7)
North Carolina††	162	(0.1)	871	—§	871	(0.7)	1032	(0.8)
Ohio	650	(0.4)	—¶	—¶	2665	(1.6)	3315	(2.0)
Texas	2112	(0.5)	—¶	—¶	4936	(1.2)	7048	(1.7)
Pennsylvania	643	(0.4)	—¶	—¶	2339	(1.5)	2982	(2.0)

Source: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6230a3.htm

nothing to legislation and continue researching the issue.

1. Full removal of religious exemption from the state law.

This would certainly increase the vaccination rate in Illinois. But it begs the question, at what cost? As Rep. Flowers suggested, are we pushing too far into the family domain to get a desired public health outcome? By the 2012-2013 data, it would bring vaccination rates up to the desired 95%. However, it's not likely to get enough support from state legislators and would not pass.

2. Continue under current legislation, but do more to increase publicity of the vaccination rates in certain schools or school districts.

This is becoming a popular option for some states. Although this information is readily available through the Illinois public health department, bringing it to the attention of parents could

highlight exactly what (and where) the problem is. As long as no student's identifying information is given, it seems like a reasonable approach to simultaneously alert the community to a current problem and not have the state government overreach with harsh legislative restrictions (as in option 1). Illinois legislators are currently reviewing an option like this.

3. Require signed documents from physicians for vaccination exemption.

This highlights the changes Dr. Conover suggested implementing. As it currently stands, it is actually less work for a parent to exempt their child from vaccinations than to get the vaccinations themselves. Making a physician's signature a requirement for exemption might force parents to have a discussion with their physician before allowing them to avoid the vaccination requirement.

4. Hold any legislative changes, assess the impact of other states' changes, and continue to monitor vaccination rates in Illinois.

This idea speaks to another of Representative Flower's points. Legislation made out of fear is not responsible legislation. Although the number of measles cases is rising every year, it has not reached epidemic levels. No children in Illinois have died from measles. We as a state still have an option of holding off on legislative changes, while also increasing grassroots campaigns for vaccination.

IV. Conclusion

Based on the current options presented above, the most viable solution is probably to increase the availability of data on known vaccination rates of schools or school districts (option 2). This legislative change has the potential to address the vaccination issue without infringing upon an individual's right to not vaccinate their children. Such a policy would not impose on religious freedom, the family domain or parenting decisions, and would not specifically label a group of people. Because this is a public health issue, it embraces the concept of public and community involvement. For example, if a parent believes that their un-vaccinated child will be safe from disease because the majority of children at the school are vaccinated but finds that only 89% of the school district is vaccinated they may become more proactive about the issue. With such knowledge a parent might decide to vaccinate their child or become involved in community activities to encourage vaccination. Community driven responses such as the example described above might increase overall vaccination rates. All of this can be done without changing the laws already in place in Illinois.

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2. "Tribune Analysis: Illinois schools reach key measles vaccine threshold" Rubin, B and Berlin, J Chicago Tribune February 9, 2015 http://www.chicagotribune.com/news/local/ct-measles-illinois-schools-vaccination-rates-met-20150209-story.html

3. Phone interview with Illinois State Representative Mary Flowers. Interview was not taped and Representative Flowers' responses are summarized in this paper. February 25, 2015

4. Phone interview with Illinois Department of Public Health Director Dr. Craig Conover. Interview was not taped and Dr. Conover's responses are summarized unless quoted. February 26, 2015