International Journal of Vaccine Theory, Practice, and Research
IJVTPR

Revisiting Excess Diagnoses of Illnesses and Conditions in Children Whose Parents Provided Informed Permission to Vaccinate Them

James Lyons-Weiler, PhD[1,2] and Russell L. Blaylock, MD[3]

[1]Institute for Pure and Applied Knowledge
[2]IPAK-EDU LLC
[3]Theoretical Neuroscience Research, LLC

Abstract

Controversy over a reported increase in office visits specifically scheduled for illnesses and conditions in children has stalled progress in understanding adverse outcomes associated with an increasingly crowded schedule of pediatric vaccines. Studies finding associations between vaccines and adverse conditions have been targeted for retraction. Here, we revisit data from one such study, comparing the increase in office visits for conditions independent of the routine "well-child" visits (hereafter, Health Care Visits; HCVs). The retraction occurred after >1/4 of a million people had read the peer-reviewed study. It was targeted by one anonymous reader who complained he did not believe the published results. His complaint hinged on the supposition — unsupported by any data — that vaccinated children made their scheduled HCVs more regularly than unvaccinated, implying that those unkept appointments led to fewer diagnoses. We show, here, new data from the same practice that the opposite is true. When the data for vaccinated versus unvaccinated children are examined, the critic's claim is exactly reversed. Relative Risk and Odds Ratios sustain and augment the original report. Additional office visits, beyond scheduled HCVs, are quantified, controlling for variation in kept HCVs and age/days of care. *Estimates of Health Care Incidence (HCI) show that visits above regular HCVs increase due to vaccination by 2.56 to 4.98 additional office visits for vaccine-related health issues per unit increase in vaccination per year.* Blocking and multiple linear regression analysis of interactions indicate both that the unvaccinated are keeping scheduled HCVs more often than the vaccinated, and that vaccination comes with a net increase in non-routine office visits, i.e., not "well-baby visits" but trips to the doctor for reasons other than vaccination. Taking account of the complexities of healthcare-seeking with measured covariates and outcomes, especially adverse health events, suggests that vaccination may be driving the increased need for non-routine office visits for specific health complaints. Meanwhile, one reader's unsupported and false criticism of the former study, reflects a pervasive bias leading to systematic removal of many well-designed studies attributing adverse outcomes to vaccines. Hiding such well-designed and faithfully reported, not to mention peer-reviewed and published research, clears the way for marketing programs bought and paid for by vaccine manufacturers and the Centers for Disease Control and Prevention (CDC).

Keywords: *chronic illness, pediatric health, relative incidence of office visits, RIOV, scheduled pediatric vaccines, well-baby visits*

Introduction

Long-term vaccine safety studies have been restricted to observational, retrospective studies due to supposed concern over the alleged unethical nature of randomized clinical trials in which some candidates

would not receive the claimed benefits of vaccination. This position, however, begs the question of the net risk-to-benefit ratio of vaccinations and their effects on human health.

Contrary to media reports and biased online, non-peer-reviewed summaries produced by agencies such as the US CDC and FDA, past studies of vaccination have not universally supported the narrative claiming that childhood vaccines are safe (and effective). Here our focus is on the purported "safety" of childhood vaccines in the schedule. Studies conducted and funded by US agencies, such as the Centers for Disease Control and Prevention, are alleged by media outlets to have shown that vaccines in the CDC's recommended vaccine schedule are safe for every child, but that claim is an exaggeration of the conclusions of those studies. The accuracy of claims published on the CDC website, such as "Vaccines Do Not Cause Autism", are impossible to assess because the question of association has not been addressed for most of the pediatric vaccines in the CDC schedule, nor have the interactions between them been systematically addressed. Likewise, most such studies base their conclusions on a "lack of a mechanism" to explain such a link, when in fact well-designed studies conducted independently of vested interests in the vaccine industry — that is, without influence from government funding or pharmaceutical-supported marketing — tend to find a surprisingly higher rate of undesirable health outcomes associated with vaccination (Mogensen et al., 2017; Aaby et al., 2018; Mawson et al., 2017, Hooker & Miller, 2020) than are reported in the mainstream sanitized literature bought and paid for by a multi-trillion dollar industry (*E. P. I. C. Magazine*, 2017; Liu et al., 2017; Wong et al., 2017; Dal-Ré et al., 2019; Niforatos et al., 2020). The massive financial conflicts of interest in the American Academy of Pediatricians (AAP) and its members were enumerated by Lyons-Weiler and Thomas (2021).

Journals that seek favor and compensation from agencies and advertisers feel pressure either to not publish studies that find issues with vaccines, or, if they do publish any such study, the authors and editors may expect pressure to retract it later on (Shaw, 2020). There has been an increase in the practice of targeted retractions, often following a non-reviewed letter by an anonymous critic. This form of post-publication threat to a publication due to its results, with no evidence of fraud, nor hard evidence of the alleged problems with the published study, has been addressed by a group of Israeli criminology scientists, who found that authors of such retracted studies felt targeted (Elisha et al., 2020).

The retraction of studies due to variance from the outcomes predicted by the mainstream vaccine marketing narrative will, of course, bias the resulting literature, preventing meta-analyses that might pick up a systemic pattern of adverse effects. For vaccination studies, the anonymous readers' comments leading to a retraction of the initial publication in the instance at issue here can only be seen as a "ghouling" bias. Anonymous individuals targeting studies because they do not like or agree with the results of a study produce an unwelcome double jeopardy of dubious necessity. Such a practice is patently unfair: the reader's comments were not themselves subject to formal critical peer-review, and thus a power imbalance exists. Such post-publication anonymous attacks permitting a single reader's guesswork to overrule the recommendations of the original peer-reviewers is not consistent with any reasonable ethical standard for publishers. Journals should instead publish statements of concern following peer-review, allowing the authors to either defend their research or withdraw their study if the concerns expressed are true and bring valid issues to light that have been overlooked or misunderstood. Such rational discourse is part of the staid and honored practice in genuine science, allowing individual scientists and the community to engage in a transparent manner consistent with honor and integrity. Many legitimate journals allow readers to comment at the end of the article, thus encouraging useful scientific debate.

In this study, we examine the likelihood of alleged bias in the publication of the first round of results in the study "Relative incidence of office visits and cumulative rates of billed diagnoses along the axis of vaccination" (Lyons-Weiler & Thomas, 2020, retracted). That study reported an increased risk of the need

for medical attention for many conditions among the more vaccinated cohort compared to that required by the less vaccinated children in the same practice. For convenience, we will refer to the two groups as "vaccinated" and "unvaccinated" throughout this paper. The original study in question was retracted after an anonymous reader communicated the unsubstantiated opinion, evidently a personal suspicion, that the results were due entirely to variation in the health-seeking behavior of parents who provide informed permission for their children to be vaccinated compared to those who refuse to provide informed permission. That reader gave no evidence or explanation as to why such variation would necessarily exist.

The concern might be interpreted as a seemingly reasonable hypothesis. The logic is as follows: if vaccinated parents go to the "well-child" visits more frequently, physicians have more opportunities to find undesirable conditions, leading to higher diagnosis rates in the vaccinated. However, the critical reader provided no data to support such an idea, which had already been addressed during peer-review. An entire set of results had already been generated during the prior peer-review process showing that the reader's supposition was likely to be false.

The study in question had remarkable results. For example, the data analyzed by Lyons-Weiler and Thomas (2020) found zero cases of ADHD in the unvaccinated group (a condition usually diagnosed outside the practice). This result could not be due to methodological irregularities; the data are the data. No means of adjustment for covariates or methodological manipulation could change zero cases of ADHD in the unvaccinated into a non-zero number of cases. Lyons-Weiler and Thomas (2020) also reported the distinctive signal of Dr. Thomas' practice honoring the parent's decision to refuse to provide informed permission to vaccinate their child (or children) as required for human subjects research by the United States Code of Federal Regulations 45 CFR 46). That is the code governing the conduct of post-market, retrospective vaccine "pharmacovigilance" studies of patient whose data could be used in long-term vaccine safety studies regarding vaccine safety. Similarly, he abided by parent refusal to consent to vaccination as a medical procedure for all or any individual vaccinations, or for the cessation of vaccinations, as required by Oregon State law governing informed consent.

Materials and Methods

There are three options for studying variation that might be associated with healthcare-seeking behavior. The first is blocking groups on healthcare check-up "well-child" visits, referred to here and throughout as Health Care Visits (HCVs). The second is to match, patient per patient, vaccinated children to unvaccinated children that are most similar in age and in keeping up with their scheduled HCVs. The third option is to "adjust" for HCVs in a multivariate setting. The details for each of these analyses are as follows.

Blocking Study

To define three groups (blocks) of patients based on HCVs, patients were ranked irrespective of vaccination status and separated into the top, middle and lowest thirds; these define high, intermediate, and low HCV groups. Health outcomes were then compared between vaccinated and unvaccinated patients within each of these groups using the Relative Incidence of Odds Ratio (RIOV) — a method described by Lyons-Weiler and Thomas (2020).

Matching Study

Matching patients in different exposure groups can reduce variation associated with suspected confounders. To be effective, matching must be performed without prior knowledge of or reference to health outcomes. To meet this requirement, a total of 561 vaccinated patients were chosen to match the unvaccinated using a

minimum Euclidean distance computed by considering the variables Days of Care and HCVs. Importantly, because all the patients in the study were born into the practice, the independent variable Days of Care is essentially the same measure as Age but accounts for differences among patients who may have moved out of the practice. In this process, a patient with the next-smallest Euclidean distance was selected if a vaccinated patient had already been chosen as a match for a prior patient. To ensure unbiased matching, no other information was referenced or considered in the otherwise blinded selection of the 561 matched vaccinated patients.

Effects of Vaccine Cessation

In the original study, we noted that because physicians in the practice would review the vaccine information sheets with parents at each Health Care Visit, and also would be responsive to parents' concerns over seizures and developmental delays, the data appeared to show a lower rate of neurodevelopmental disorders in the vaccinated than in the unvaccinated; i.e., opting out of vaccination would enrich the non-vaccinated group for family members who might have a risk of developmental delay.

To address this aspect of the data on other health effects, we calculated the relative risk of the vaccinated (>0 vaccines), and older children (≥1,500 days of age) in two groups: the "Low Vaccine Adoption" group (<0.015 vaccines per Day of Care [DOC]; N=390) vs. the vaccinated "High Vaccine Adoption" group (>0.02 vaccines per DOC; N=467). Health outcome differences between these groups would reflect the effect of vaccine cessation on overall health. It could also supply information on the effects of various vaccines on specific developmental windows during the vaccination period and the health effects of avoiding further injections on later developmental windows.

Multivariate Study Adjusting for Suspected Confounders

Multiple linear regression (MLR) is classically used to help those studying the relationships among independent variables via model comparison, and the study of predictor variable effects, changes in effects in the presence of other independent variables, and interactions. Therefore, MLR was used to study the effect of variation that might be attributed to healthcare utilization, age, and "natural" lifestyle choice. To accomplish this, the compound variable "Health Care Visits per Day of Care" (HCV/DOC) was used as an independent measure to study, among the vaccinated, the effect of parameter inclusion in a model of the effects of vaccination exposure (number of vaccines) on requiring an office visit for any condition other than vaccination. Breastfeeding, a correlate of lifestyle choice, was also included to further study the effects of adjusting for the organic/natural lifestyle suspected to explain health differences among the more compliant "vaccinated" group and the group referred to as "unvaccinated" in which one or all vaccines were refused.

Results

In all our analyses, the remarkable outcome of zero ADHD cases among the unvaccinated, but 168 office visits for ADHD in the vaccinated were, of course, repeated. The health outcome of ADHD was not included in the results within each outcome but remains one of the most important findings given the data.

Blocking Study

The blocking design revealed differences between high, medium, and low health care visit (HCV) blocks, specifically in the average age of patients (Figure 1). The groups also varied concerning the differences in HCV, with the high HCV group exhibiting a difference in health care visit use (HCU in the figure) between

the "vaccinated" and "unvaccinated" patients (Figures 2a, 2b, and 2c). The difference is attenuated in the Medium HCV group, and non-existent in the Low HCV group. Given that the unvaccinated participated in HCVs with a greater frequency in the High and Medium HCV blocks, higher risks of adverse health outcomes are not expected in the comparisons of vaccinated and non-vaccinated patients within these blocks.

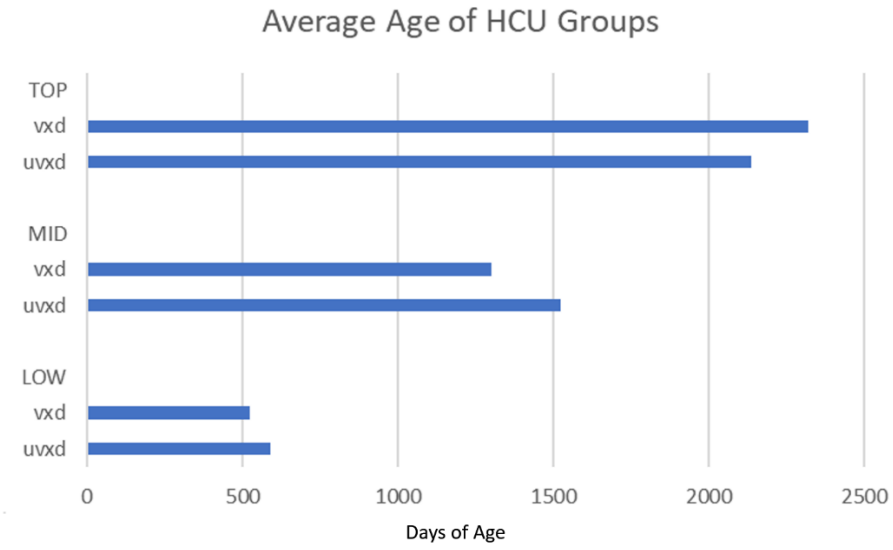

Figure 1. Average age in days of groups within HCV blocks.

Concern over confounding can be addressed by setting the baseline via the comparison of HCV itself as an outcome: the ratio (V/UV) of HCV in the three HCV blocks are as follow: High (0.71), Medium (0.842), and Low (1.016).

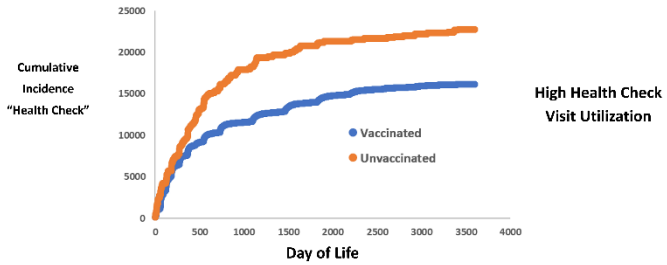

Figure 2a. RIOV-type analysis of Health Check Visit use in the High healthcare use block.

Assessment of Suspected Confounding Variation in Healthcare-Seeking Behavior

Many vaccine studies adjust for covariates, whether functional relationships of the covariate, the main effect, and the health outcomes have been determined to be confounding (in reality) or not. They often consider and interpret the results as if the covariates themselves are, in fact, confounding without providing evidence of the causality of the suspected effect. In other words, the level of evidence used to show causality of

alleged confounders falls far below that required for inferring causality for the main effect. This is a serious flaw in the paradigm of adjusting for alleged, unproven confounders; as covariates, they may, in fact, prove to be co-predictors. Further, interaction terms are universally ignored in studies that adjust for alleged confounders, and the significance of the main effect (vaccines) can be hidden in an unstudied or unreported interaction term. To check on whether HCVs were, in fact, confounding in the study of health outcomes associated with variation in vaccination status, we calculated and compared the rate of keeping scheduled HCVs between the vaccinated and unvaccinated.

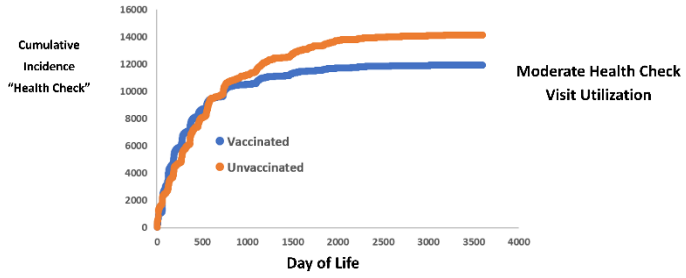

Figure 2b. RIOV-type analysis of Health Check use in the Medium healthcare use block.

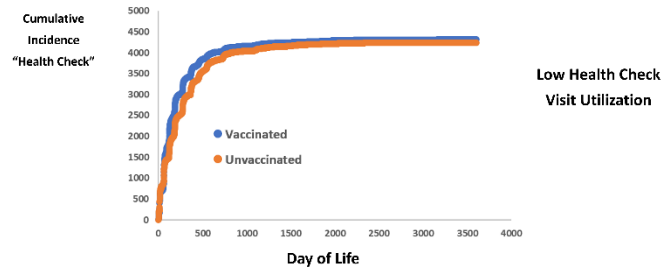

Figure 2c. RIOV-type analysis of Health Check use in the Low healthcare use block.

Highest Health Care Visit Use

In the class with the highest use of Health Care Visits, there were a total of 16,264 HCVs in the 1,105 vaccinated children. In the same class, there were 213 HCVs in the non-vaccinated group of children. That accounts for 14.71 HCVs per vaccinated patient, and 21.3 HCVs per non-vaccinated patient in the class with the highest use of Health Check days.

There was an average of 2,316 days of duration of enrollment in the practice among the vaccinated children in this class, and an average of 2,133 days of duration of enrollment in the practice among the children whose parents opted out of vaccinations offered.

There were more HCV days per total days of enrollment in the non-vaccinated children in the class (1% of days of enrollment were HCV days) compared to the vaccinated children (0.63% of DOC were HCV days).

Mid-Level Health Visit Use

In the class with the mid-level use of Health Care days, there were a total of 11,964 HCVs in the 1,018 vaccinated children. In the same class, there were 1,144 HCVs in the non-vaccinated children. That accounts

for 11.75 HCVs per vaccinated patient, and 13.95 HCV per non-vaccinated patient in the class with the mid-level use of Health Check days.

There were slightly more HC days per total day of enrollment in the non-vaccinated children in the mid-class (0.928% of days of enrollment were HC days) compared to the vaccinated children (0.905% of DOC were HC days).

Lowest Health Care Visit Use

In the class with the lowest use of Health Check days, there were a total of 4,472 HCs in the 640 vaccinated children. In the same class, there were 3,632 HCs in the non-vaccinated children.

That leads to 6.99 HCVs per vaccinated patient, and 7.74 HCVs per non-vaccinated patient in the class with the lowest use of Health Check days.

There was a slightly, but not significantly, higher percentage of HC days per total days of enrollment in the non-vaccinated children in the lower block (1.35% of days of enrollment were HC days) compared to the vaccinated children (1.33% of DOC were HC days).

All Patients

Considering all the patients in the study, the vaccinated spent 0.77% of their DOC attending HCVs, and the Unvaccinated spent 1.07% of DOC attending HCV.

The average age of those vaccinated was 751 days with an average of 8.87 HCVs per patient; the average age of non-vaccinated patients was 750 days with an average of 8.86 HCV per patient.

Similarly, the average DOC of the vaccinated was 746, and the average DOC in the non-vaccinated patients was 741.

These would rule out HCV use bias as an explanation for the increased numbers of diagnoses; HCV is not a confounder in a manner that could explain the results.

Comparison of Health Outcomes, Vaccinated vs. Unvaccinated within Blocks

Blocking necessarily reduces sample size and can reduce statistical power. Comparisons between vaccinated and non-vaccinated patients in each of the three HCV blocks led to variation in which healthcare outcomes were increased in the vaccinated population (Table 1). The health conditions where the vaccinated individuals received more health care visits than the unvaccinated in that block are the ones in which the ratio of Non-Routine Office Visits are **bolded** in the table. These are the conditions where the children whose parents chose to go along with the CDC vaccine schedule in the particular block named at the top row of the table, required a higher number of Non-Routine Office Visits. Evidently, in the bolded entries, the more heavily vaccinated individuals had health complaints more frequently than the individuals who received fewer of the shots in the CDC vaccine schedule.

It is noteworthy that certain health conditions, such as "Edema", for instance, had zero cases in the non-vaccinated patients in any Block. Other conditions, such as "Digestive Tract Issues", and the four conditions following that one, had no vaccinated individuals in the High Block.

Table 1

Ratio of the Incidence of Office Visits for Health Outcomes in by Health Care Use Blocks Comparing Vaccinated (V) to Unvaccinated (U)

Block N = total in block, n_V and n_U = subtotal for each group in the named block)	**High** N = 1,115 n_V = 1,105 & n_U = 10	**Mid** N = 1,099 n_V = 1,018 & n_U = 82	**Low** N = 1,108 n_V = 640 & n_U = 469
Routine Health Care Visits, Baseline Value for Each Block*	0.71	0.842	1.016
Condition	**Ratio of Non-Routine Office Visits, Vaccinated to Unvaccinated by Block**		
Fever	**1.37**	**1.47**	**1.77**
Gastroenteritis	**2.18**	**1.147**	**1.517**
Allergic Rhinitis	**0.769**	**1.288**	0.183
Edema	**Infinite†**	**Infinite†**	**Infinite†**
Anemia	**3.081**	**1**	**2.335**
Otitis media	**2.029**	0.493	**1.465**
Eczema	**1.197**	0.501	**2.564**
Digestive Tract Issues	**Infinite†**	0.241	0.977
Nausea/Vomiting	**Infinite†**	0.278	0.732
Allergy - Food	**Infinite†**	0.4833	0.732
Pain	**Infinite†**	0.467	0.814
Seizure	**Infinite†**	0.201	N/A
Diarrhea	**1.511**	0.461	0.879
Breathing Issues	**0.771**	0.724	**1.116**
Urticaria	0.434	Inf	0
Ear Pain	0.366	**1.02**	0.366
Asthma	**0.898**	0.322	0.977
Dermatitis	0.326	0.38	0.56
Conjunctivitis	0.552	0.511	0.792

*__Bolded entries__ are those in which the ratio of vaccinated individuals in the "Block" exceeds the baseline value for office visits of the non-routine kind, whereas the unbolded entries are ones in which the ratio is less than or equal to the baseline.

†In these instances the ratio would be infinitely great because there are no unvaccinated individuals being seen for the named condition in any non-routine office visit. The value, of course, is incalculable because a ratio cannot contain a zero as its denominator.

MATCHING STUDY

Both the RIOV and classical odds ratio analyses showed that many of the health conditions were elevated. Examples are shown in Figure 3. The least controversial of these, Fever, is a well-established side effect of vaccination. Odds ratios for office visits scheduled for each condition shown in Figures 3a to 3f are all significant ($p<0.01$).

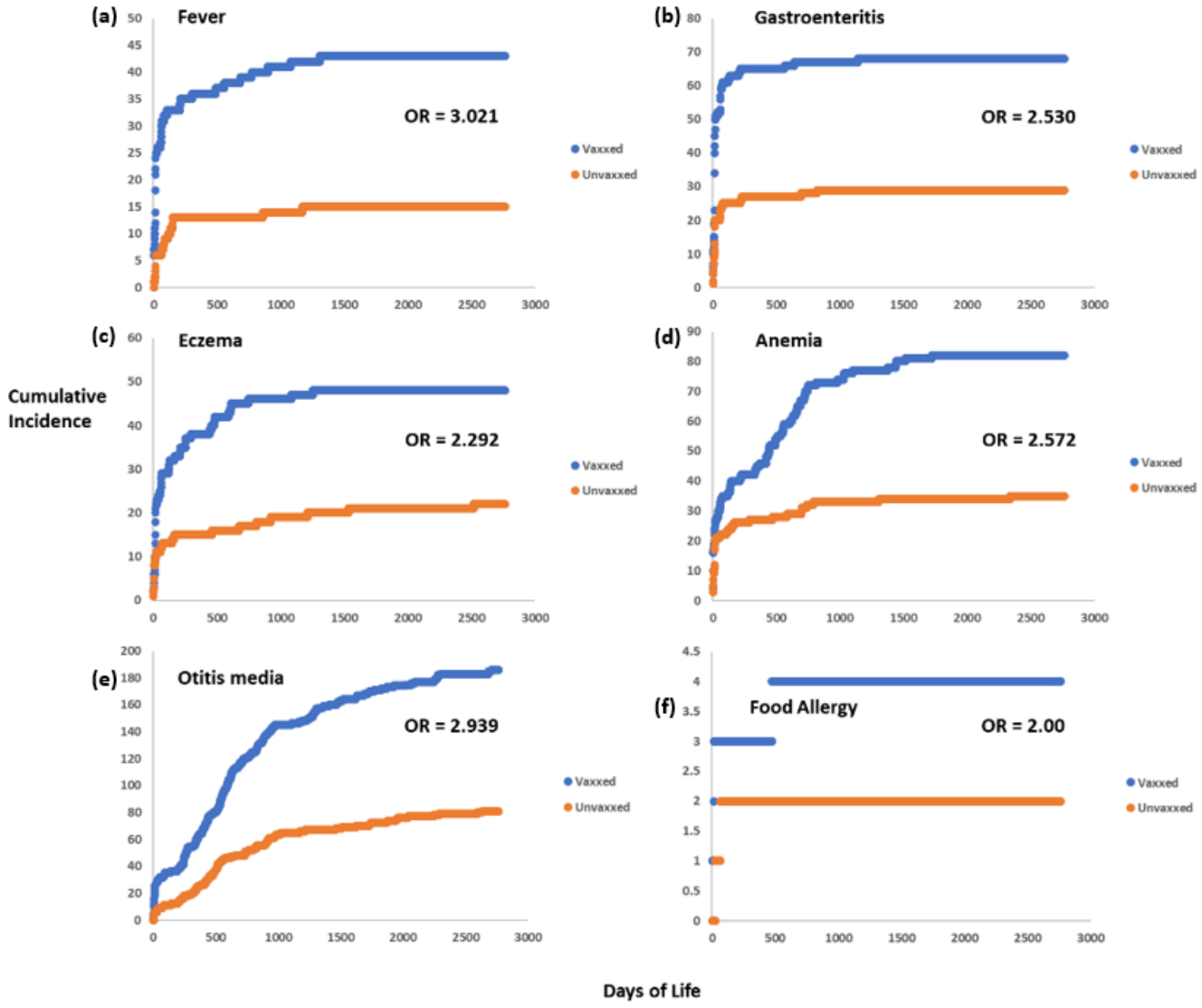

Figure 3. RIOV diagram for Fever following matching for Health Care Visits and Days of Care (age).

Odds ratios for all conditions (except for ADHD) are shown in Figure 4. For reference, the odds ratio of Health Care Visits (0.99) is shown. Some of the rarer conditions were difficult to study due to small sample sizes (e.g., no cases of autism were found among the matched sample of 561 vaccinated persons due to its overall rarity).

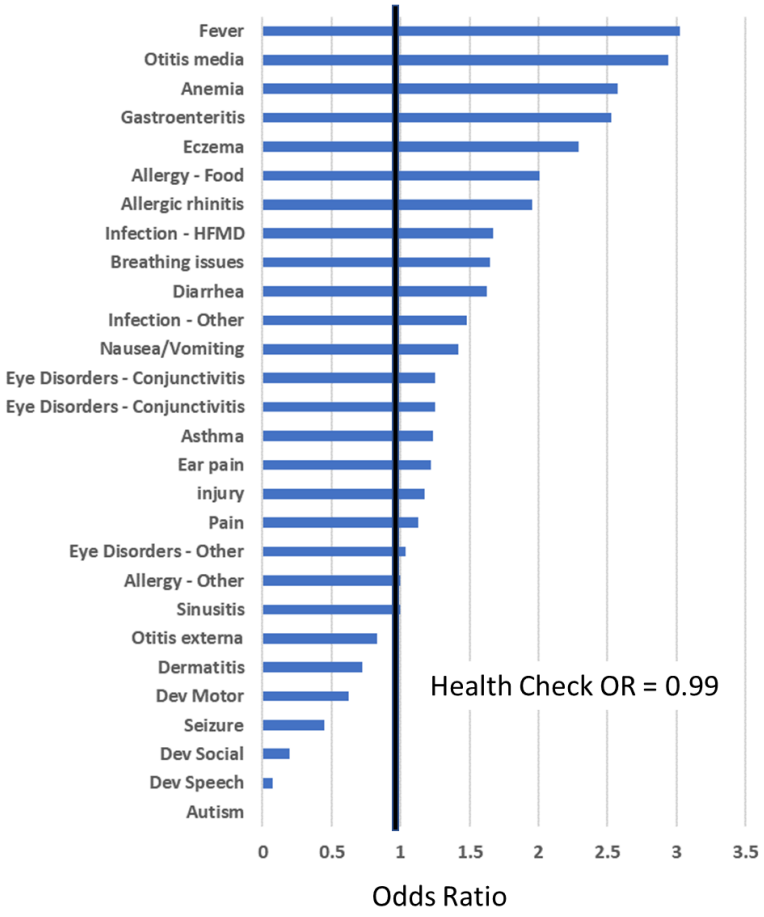

Figure 4. Odds ratio of office visits for specific health issues in the comparison of 561 unvaccinated and 561 vaccinated patients in the matched analysis.

Multivariate Study

Multiple regression analysis allows the study of relevant variables in the context of the question, "Does overall vaccine uptake correlate with number of office visits for poor health outcomes?" Thus, the analysis involved the study of the number of vaccines per year (β_1, main effect) vs. the number of non-vaccine-related office visits (Y, the dependent variable).

For this study, the specified fixed intercept model then becomes

$$Y = \beta_1 + e$$

where β_1 = number of vaccines, and β_2 = HCV.

The effect of each variable is studied by its slope and the regression coefficient, R^2.

Since the data were already arranged into High, Medium, and Low HCV, these parameters can be studied for the full data and within block in a fixed intercept model (Table 2).

Table 2

Linear Regression Model Parameter Values Within HCV Blocks

	Any Visit		Any Visit Excluding Vaccinations	
HC Use	**Slope**	R^2	**Slope**	R^2
High	7.96	0.914	6.96	0.890
Mid	6.45	0.924	5.45	0.897
Low	6.47	0.805	5.47	0.747

From this analysis, we can see that the number of office visits for any condition excluding vaccination is weaker than the relationship for any visit, but each model still has a substantial R^2 value showing a strong and robust shared variance. From this analysis, the following estimates result:

High Between 6.03 and 7.96 health care issues (HCIs) resulting per unit increase in vaccination

Mid Between 4.38 and 6.45 HCIs resulting from vaccination

Low Between 3.79 and 6.47 HCIs resulting from vaccination.

In a multiple regression context, the variation attributed to Health Care Visits and Age can be combined appropriately in the compound variable HCV/Age, and the independent variable Breastfeeding can be studied via the following model

$$Y = \beta_1 + \beta_2 + \beta_3 + e$$

where β_1 = number of vaccines, β_2 = HCV, and β_3 = breastfeeding (binary, not duration)

Predictor	Coefficient	Estimate	Standard Error	t-statistic	p-value
Constant	β_0	39.644	6.214	6.38	0
#V	β_1	-1.543	0.166	-9.306	0
HCV/Age	β_2	39075.159	840.552	46.488	0
BF	β_3	-14.702	5.085	-2.891	0.004

Summary of Overall Fit

R-Squared:	R^2 =0.45
Adjusted R-Squared:	R^2_{adj} =0.449
Residual Standard Error:	48.132 on 2759 degrees of freedom.
Overall F-statistic:	751.957 on 3 and 2759 degrees of freedom.
Overall p-value:	0

Figure 5a. Model one: Number of Vaccines, Health Care Visits, and Breastfeeding

Analysis of Variance Table

Source	df	SS	MS	F-statistic	p-value
Regression	3	5226121.08	1742040.36	751.957	0
Residual Error	2759	6391704.217	2316.674		
Total	2762	11617825.296	4206.309		

Figure 5b. Model one: Analysis of Variance table

The effect of each variable is studied by its slope and the regression coefficient, $R^{2.}$ and p-value. Adding the compound variable HCV/Age and Breastfeeding results in a far less impressive model (Figures 5a and 5b), and the specific parameter values reverse sign.

However, the model is not fully specified, given that the interactions among terms have not been studied. The lack of consideration of interaction terms in vaccine studies has been previously noted (Kulldorf, 2013). Adding the appropriate interaction terms (Figures 6a and 6b) leads to a positive and significant slope for Vaccines even after variation associated with HCV, Age, and Breastfeeding, and interactions among vaccines and HCV/Age are considered. The slopes of the other terms are also provided.

Summary of Overall Fit

R-Squared:	R^2 =0.476
Adjusted R-Squared:	R^2_{adj} =0.476
Residual Standard Error:	46.964 on 2758 degrees of freedom.
Overall F-statistic:	627.324 on 4 and 2758 degrees of freedom.
Overall p-value:	0

Figure 6a. Model two: Study of interaction between "Number of Vaccines" and "Health Care Visits Per Days of Age"

Predictor	Coefficient	Estimate	Standard Error	t-statistic	p-value
Constant	β_0	-70.672	11.125	-6.353	0
#V	β_1	4.479	0.534	8.384	0
HCV/Age	β_2	71241.964	2840.773	25.078	0
BF	β_3	-14.096	4.962	-2.841	0.005
#V * HCV/Age	$\beta_{1,2}$	-1757.01	148.561	-11.827	0

Figure 6b. Model one: Analysis of Variance table

In the parlance of vaccine epidemiologic studies, after "adjusting" for HCV/age, vaccine exposure was still significant. This result highlights the logical flaw in considering the mere suggestion of hypothetical alternative factors as definitive positive evidence of the effect of vaccines on health outcomes. Per the interaction analysis, "Number of Vaccines" increase the number of office visits required for health issues in a manner that is independent of any effect of the covariates HCV/Age and Breastfeeding and also interacts significantly with HCV/Age.

Effects of Vaccine Cessation

The comparison of the High- and Low-vaccinated patients aged 1,500 days or more shows that vaccine cessation leads to a reduction in many conditions (thus the increased relative risk in the vaccinated patients; Figure 5). The odds ratio of Health Check in this unmatched analysis (1.2) is shown to provide a baseline for comparison.

Discussion

These data provide a valuable resource for the study of the impact of variation in parents granting informed permission to pediatricians for vaccinations recommended per the CDC schedule. Nevertheless, five days after the Lyons-Weiler and Thomas study was published, the Oregon medical board suspended Dr. Thomas' license under an "emergency" action, without due process. As a condition of temporary reinstatement of his license, Dr. Thomas was prevented from doing further studies. Were it not for this consideration, Dr. Thomas would have been invited to participate in this analysis. Instead, he was specifically left out of the design of the analyses, the interpretation of the results, and the writing of the manuscript. One must ask why would anyone consider such an action to be linked with suspension of his medical license based on "clinical suspicious of malfeasance"? Where is the link to scientific studies based on presented and openly analyzed data?

These actions represent maneuvers to discredit Dr. Thomas and the original study, to discourage other physicians from participating in independent (non-government-funded) research on the health effects of vaccines on the pediatric population, and to keep the information about the impacts of variation in vaccine acceptance on the total health of the pediatric population.

Months following the suspension of Dr. Thomas' license, the journal retracted the study, after >250,000 people had read it. The original publishing journal had received one letter of complaint that alleged (without providing any data or evidence) that the results of the published study must have resulted due to differences between the vaccinated and unvaccinated populations with respect to adherence to "well-child" visits.

The facts are as follows:

(1) The unvaccinated visit: Dr. Thomas' unvaccinated pediatric patients kept their Health Check visits with a higher regularity and higher frequency than the vaccinated, overall, in HCVs thirds, and regardless of age. Variation in healthcare-seeking behavior cannot explain the increased need for office visits for health conditions outside of HCVs.
(2) The sole reader's imagined concerns were unfounded, and the Lyons-Weiler and Thomas study should not have been retracted.

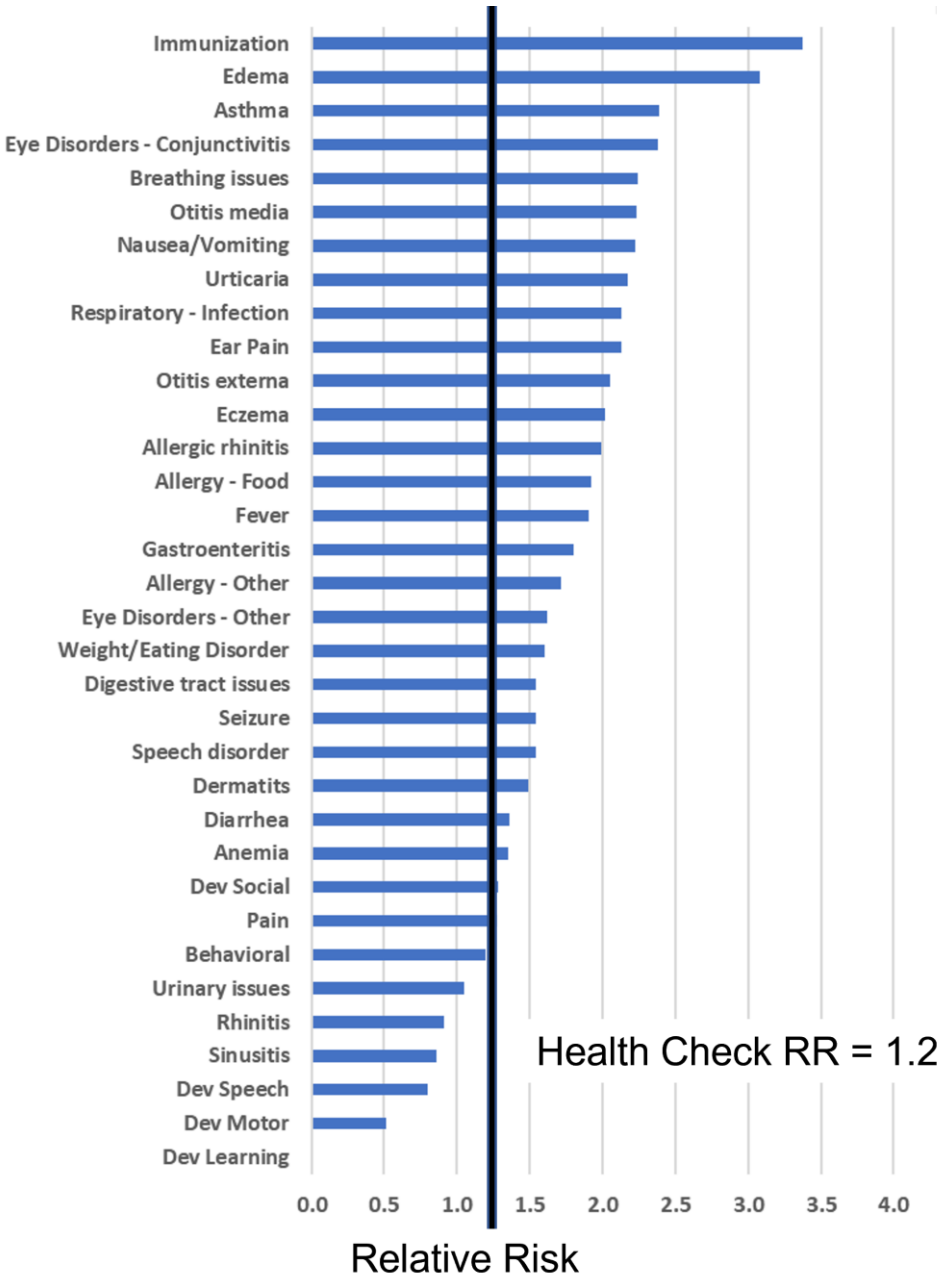

Figure 7. The age-matched effects of vaccine cessation. High Relative Risk values denote increased risk of a given health outcome in patients receiving more vaccines in the older age group (>1,500 days of age). The black bar shows the Relative Risk of HCV between these groups as a baseline.

(3) There is no way to interpret the data as showing that, overall, the unvaccinated are less healthy than the vaccinated. This addresses the medical board's request to answer this question.
(4) The analysis of vaccinated vs. unvaccinated within HCV blocks shows that vaccinated patients have a higher disease burden overall in the high HCV block for many conditions.

(5) For most of the conditions, the vaccinated have a higher disease burden even when patients are matched for age, days of care, and healthcare utilization behavioral differences.
(6) Multivariate analyses show that consideration of interaction terms is necessary for the useful retrospective study of the impacts of vaccination on human health.

The method developed by Lyons-Weiler and Thomas (RIOV; 2020) was new and was shown to have more intrinsic statistical power than odds ratios or relative risk estimates. This is because the use of rates of a given diagnosis, which is how the data are usually presented to odds and relative risk ratio analysis, are lossy transforms of the rates of office visits required to address health issues related to the diagnoses. RIOV has a higher dynamic range and represents an analytic advance toward a more sensitive measure of the degree of illness related to a given diagnosis than OR or RR compared to methods limited to the presence of absence of a diagnosis.

We have shown, using a variety of exhaustive methods, that the anonymous reader's concerns that led to the retraction of Lyons-Weiler and Thomas (2020) were unfounded. Given the insensitivity of the evidence to methodological differences, we conclude that the paper was wrongfully retracted and for other reasons than the alleged problem originating from a single reader using unscientific reasoning. At this point, unless the journal in question reinstates the study, the journal's reputation as an objective publication outlet will remain forever suspect.

The medically important findings in these data should not be ignored. These include the possibility of developmental effects of vaccine aluminum-induced anemia, gastrointestinal disorders, and increased risks of these medical conditions secondary to vaccine-induced dysfunctions of various elements of the immune system. Such mechanisms adverse effects and their probable, and in some cases certain, causes have been well demonstrated in the scientific literature as cited in multiple articles in this journal (e.g., see the immediately preceding entry by Blaylock and references there).

References

Aaby P., Mogensen S.W., Rodrigues A., Benn C.S. (2018). Evidence of increase in mortality after the introduction of diphtheria-tetanus-pertussis vaccine to children aged 6–35 months in Guinea-Bissau: A time for reflection? *Frontiers in Public Health*, 6(79). https://dx.doi.org/10.3389/fpubh.2018.00079

Dal-Ré, R., Caplan, A. L., & Marusic, A. (2019). Editors' and authors' individual conflicts of interest disclosure and journal transparency. A cross-sectional study of high-impact medical specialty journals. *BMJ Open*, *9*(7), e029796. https://doi.org/10.1136/bmjopen-2019-029796

Elisha, E., Guetzkow J., Shir-Raz, Y. & Ronel, N. (2020). Retraction of scientific papers: The case of vaccine research. *Critical Public Health*, 32(4), 533-542. https://doi.org/10.1080/09581596.2021.1878109

E. P. I. C. Magazine. (2017, December 2). Vaccines are big business. Pharma is a trillion-dollar industry with vaccines accounting for $25 billion in annual sales. The Centers for Disease Control's decision to add a vaccine to the schedule can guarantee its manufacturer millions of customers and billions in revenue with minimal advertising or marketing costs and complete immunity from lawsuits. *E.P.I.C. Empowering People, Inspiring Community*. http://epicmag.org/vaccines-big-business/

Hooker B.S. & Miller N.Z. (2020). Analysis of health outcomes in vaccinated and unvaccinated children: Developmental delays, asthma, ear infections and gastrointestinal disorders. *SAGE Open Medicine*, 8, 1-11. https://doi.org/10.1177%2F2050312120925344

Kulldorf, M. (2013). Appendix D: Study designs for the safety evaluation of different childhood immunization schedules. In Committee on the Assessment of Studies of Health Outcomes Related to the Recommended Childhood Immunization Schedule; Board on Population Health and Public Health Practice; Institute of

Medicine, *The Childhood Immunization Schedule and Safety: Stakeholder Concerns, Scientific Evidence, and Future Studies*. National Academies Press (US). https://www.ncbi.nlm.nih.gov/books/NBK206950/

Liu, J. J., Bell, C. M., Matelski, J. J., Detsky, A. S., & Cram, P. (2017). Payments by US pharmaceutical and medical device manufacturers to US medical journal editors: Retrospective observational study. *BMJ*, *359*, j4619. https://doi.org/10.1136/bmj.j4619

Lyons-Weiler, J. & Thomas, P. (2020). Relative incidence of office visits and cumulative rates of billed diagnoses along the axis of vaccination. *International Journal of Environmental Research and Public Health*, 17(22): 8674-8698. https://www.mdpi.com/1660-4601/17/22/8674 (Retraction **by the journal** published 2021, *International Journal of Environmental Research and Public Health*, 18, 7754.)

Lyons-Weiler, J. & P Thomas. 2021. Vaccine practice payment schedules create perverse incentives for unnecessary medical procedures — at what cost to patients? IJVTPR 2(1) https://doi.org/10.56098/ijvtpr.v2i1.21

Mawson A.R. & Croft, A.M. (2020). Multiple vaccinations and the enigma of vaccine injury. *Vaccines* (Basel), 8(4), 676-692. https://doi.org/10.3390%2Fvaccines8040676

Mawson A.R., Ray B.D., Bhuiyan A.R. & Jacob B. (2017). Pilot comparative study on the health of vaccinated and unvaccinated 6- to 12-year-old U.S. children. *Journal of Translational Science*, 3(3), 1-12. http://dx.doi.org/10.15761/JTS.1000186

Mogensen S.W., Andersen A., Rodrigues A., Benn C.S. & Aaby P. (2017). The introduction of diphtheria-tetanus-pertussis and oral polio vaccine among young infants in an urban African community: A natural experiment. *eBioMedicine,* 17(Mar.), 192-198. https://doi.org/10.1016%2Fj.ebiom.2017.01.041

Niforatos, J. D., Narang, J., & Trueger, N. S. (2020). Financial conflicts of interest among emergency medicine journals' editorial boards. *Annals of Emergency Medicine*, *75*(3), 418–422. https://doi.org/10.1016/j.annemergmed.2019.02.020

Shaw, C. A. (2020). Weaponizing the peer review system. *International Journal of Vaccine Theory, Practice, and Research*, *1*(1), 11–26. https://ijvtpr.com/index.php/IJVTPR/article/view/1

Wong, V. S. S., Avalos, L. N., & Callaham, M. L. (2017). *Industry payments to physician journal editors* (e3359v1). PeerJ Inc. https://doi.org/10.7287/peerj.preprints.3359v1

Editor's Comment

At the request of the authors of this paper the peer-review process, contrary to our published approach at this link under "Peer Review Process for the *IJVTPR* ", was double-blinded. Reviewers did not know who the authors were (except for the Editor in Chief) nor were disclosed reviewer identities disclosed to the authors.

Legal Disclaimer