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Friday, 16 August 2013

On 19 July 2013, this reviewer downloaded an on-line article, "**Editorial: As whooping cough returns, trust science, not opinion**", attributed to the Editorial Board of the ***St. Louis Post-Dispatch***, from, http://www.stltoday.com/news/opinion/editorial-as-whooping-cough-returns-trust-science-not-opinion/article_611abfed-4e13-574e-8776-7cbb5903909f.html

This reviewer's response to this article follows these introductory remarks and a table-of-contents page.

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This assessment is titled, **Formal Response to: "Editorial: As whooping cough returns, trust science, not opinion"**.

Introductory Remarks

First, each portion of the writer's text is quoted in a grayed "Georgia" font.

Second, the review comments follow in a "Verdana" font and are indented.

Third, when quoting from writer's text, the text is in an *italicized* "*Times New Roman*" font.

Fourth, when quoting or referencing other sources, the text is in an "Arial Narrow" font.

Finally, should anyone find any significant factual error in this review for which they have independent[a], scientifically sound, peer-reviewed-published-substantiating documents, please submit that information to this reviewer so that he can improve his understanding of factual reality and, where appropriate, revise his views and this review.

Respectfully,

<s>

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[To whom all responses should be directed]

[a] To qualify as an independent document, the study should be published by researchers who have no direct or indirect conflicts of interest from their ties to either those commercial entities who profit from the sale of any product or practice addressed in this review or those entities, academic, commercial or governmental, who directly or indirectly, actively promote any product or practice, the development of any product or practice, and/or programs using any product or practice covered in this review.

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Formal Response to:
"Editorial: As whooping cough returns, trust science, not opinion"

As a scientist, this reviewer would agree that opinion should not be trusted, but would suggest that one should verify any statement that claims to speak about or on behalf of science before trusting that statement.

As we realize, scientific opinions about matters affecting public health and other public policies are often available for hire.

This is especially true when these opinions are often backed by studies that can be, and/or have been, manipulated to find an outcome that suits those who conducted the study and/or those who directly or indirectly "paid" for it.

With this warning in mind, let us critically assess the editorial, "*Editorial: As whooping cough returns, trust science, not opinion*".

Introduction

"Make no mistake: Those who advise against vaccinations to prevent the spread of diseases and illnesses would hurt you and your children and don't care that they are creating a public health menace."

Here, the putative writers, the "*Editorial Board*", begin by stating their opinion about the motives of an undefined group with which they disagree ("*[t]hose who advise against vaccinations* …").

Then, these writers make claims, for which they provide no scientifically sound supporting citations or documentation, about the concerns ("*don't care* …") of that group.

Since "*Those who advise against vaccinations* …" include medical and research professionals who: **a)** base their advice on the sound medical science that they clearly understand and **b)** limit their statements to those children and adults to whom, based on the available science, the vaccine may cause harm or has already caused harm, the writers' statement is obviously overly broad.

In general, such broad prejudicial statements about others should be ignored.

"People who listen to bogus science and deny facts from legitimate scientific studies are pushing an agenda that a wise parent should back away from. In fact, backing away is too slow. Turn and run."

Not content to disparage this nebulous group, the writers now attack those "*who listen to bogus science and deny facts from legitimate scientific studies …*".

However, these writers are simply making unsupported generalizations using the terms "*bogus science*" and "*legitimate scientific studies*" in an attempt to lend credibility to their apparently biased opinion, which the title of their editorial tells the reader not to trust.

Diphtheria, tetanus and pertussis vaccination presented as "pertussis shots" — Claims and realities

"Missouri public health" [http://health.mo.gov/index.php] "officials should be commended for offering free pertussis shots in the wake of an increase in the bacterial disease, whooping cough. The highly contagious and dangerous disease has hit levels not seen since 1955. The highest levels in 58 years demand that kind of response."

If these unidentified "*Missouri public health officials*" were offering "*free pertussis shots*" and these "*free pertussis shots*" were effective in preventing cases of the "*bacterial disease*" called "whooping cough", then commending these officials might be appropriate.

However, the actual vaccines that these officials are offering are not "*pertussis shots*" but rather two (2) types of diphtheria, tetanus, and pertussis (DTP) vaccines that are known by their acronyms as DTaP[1] and Tdap[2].

As disclosed in each vaccine's package insert, the "pertussis" components of these vaccines are manufactured separately from the other components.

Since there are no outbreaks of either diphtheria or tetanus, why are they offering these DTP vaccines and not "free pertussis only" shots?

After all, competent public health officials do not advise us to give children a combination decongestant, expectorant and fever medicine when children only have a fever.

Further, since each component of these DPT vaccines carries with

[1] For example, in the USA, Sanofi Pasteur's Daptacel® TDaP vaccine.

[2] For example, in the USA, Sanofi Pasteur's Adacel® and GlaxoSmithKline's Boostrix® Tdap vaccines.

it documented risks of causing serious adverse reaction[3] in some children or adults, why would anyone, especially editors at a newspaper, recommend giving any such vaccine that *unnecessarily* carries with it an increased risk of a serious adverse reaction?

Turning to the stated, "*bacterial disease, whooping cough*", why do the writers fail to disclose that:

1. These vaccines provide no protection against any infecting bacteria, but rather induce those inoculated with these vaccines to produce antibodies to the bacterial toxoids[4] and toxins present in these vaccines as well as antibodies to many of the other components present in a given vaccine formula,

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[3] See, for example sections 6.1 and 6.2 of the package inserts for the Tdap vaccines:

a. Sanofi Pasteur's Adacel,
   i. Section 6.1, "Serious Adverse Events in All Safety Studies
   In all the studies, participants were monitored for serious adverse events throughout the duration of the study.
   Throughout the 6-month follow-up period in study Td506, serious adverse events were reported in 1.5% of Adacel vaccine recipients and in 1.4% of Td vaccine recipients. Two serious adverse events in adults were neuropathic events that occurred within 28 days of Adacel vaccine administration; one severe migraine with unilateral facial paralysis and one diagnosis of nerve compression in neck and left arm. Similar or lower rates of serious adverse events were reported in the other trials in participants up to 64 years of age and no additional neuropathic events were reported.".
   ii. "6.2 Data From Post-Marketing Experience
   The following adverse events of Adacel have been spontaneously reported in the US and other countries. Because these events are reported voluntarily from a population of uncertain size, it may not be possible to reliably estimate their frequency or establish a causal relationship to vaccine exposure.
   The following adverse events were included based on one or more of the following factors: severity, frequency of reporting or strength of evidence for a causal relationship to Adacel vaccine.
   - Immune system disorders Anaphylactic reaction, hypersensitivity reaction (angioedema, edema, rash, hypotension)
   - Nervous system disorders Paraesthesia, hypoesthesia, Guillain-Barré syndrome, brachial neuritis, facial palsy, convulsion, syncope, myelitis
   - Cardiac disorders Myocarditis
   - Skin and subcutaneous tissue disorders Pruritus, urticaria
   - Musculoskeletal and connective tissue disorders Myositis, muscle spasm
   - General disorders and administration site conditions Large injection site reactions (>50 mm), extensive limb swelling from the injection site beyond one or both joints, Injection site bruising, sterile abscess"

b. GlaxoSmithKline's Boostrix (emphasis added),
   i. Section 6.1, "Serious Adverse Events (SAEs): In the US and German adolescent safety studies, no serious adverse events were reported to occur within 31 days of vaccination. During the 6-month extended safety evaluation period, no serious adverse events that were of potential autoimmune origin or new onset and chronic in nature were reported to occur. In non-US adolescent studies in which serious adverse events were monitored for up to 37 days, one subject was diagnosed with insulin-dependent diabetes 20 days following administration of BOOSTRIX. No other serious adverse events of potential autoimmune origin or that were new onset and chronic in nature were reported to occur in these studies. In the US adult (19 to 64 years of age) study, serious adverse events were reported to occur during the entire study period (0-6 months) by 1.4% and 1.7% of subjects who received BOOSTRIX and the comparator Tdap vaccine, respectively. During the 6-month extended safety evaluation period, no serious adverse events of a neuroinflammatory nature or with information suggesting an autoimmune etiology were reported in subjects who received BOOSTRIX. In the US elderly (65 years of age and older) study, serious adverse events were reported to occur by 0.7% and 0.9% of subjects who received BOOSTRIX and the comparator Td vaccine, respectively, during the 31-day period after vaccination. Serious adverse events were reported to occur by 4.2% and 2.2% of subjects who received BOOSTRIX and the comparator Td vaccine, respectively, during the 6-month period after vaccination." [— but what these other serious adverse events were is not disclosed nor is their frequency stated].
   ii. "6.2 Postmarketing Experience
   In addition to reports in clinical trials, worldwide voluntary reports of adverse events received for BOOSTRIX in persons 10 years of age and older since market introduction of this vaccine are listed below. This list includes serious events or events which have causal connection to components of this or other vaccines or drugs. Because these events are reported voluntarily from a population of uncertain size, it is not possible to reliably estimate their frequency or establish a causal relationship to the vaccine.
   Blood and Lymphatic System Disorders: Lymphadenitis, lymphadenopathy.
   Cardiac Disorders: Myocarditis.
   General Disorders and Administration Site Conditions: Extensive swelling of the injected limb, injection site induration, injection site inflammation, injection site mass, injection site pruritus, injection site nodule, injection site warmth, local reaction.
   Musculoskeletal and Connective Tissue Disorders: Arthralgia, back pain, myalgia.
   Nervous System Disorders: Convulsion, encephalitis, facial palsy, paraesthesia, syncope.
   Skin and Subcutaneous Tissue Disorders: Exanthem, Henoch-Schönlein purpura, rash, urticaria."

[4] "toxoid /tox·oid/ (tok´soid) a modified or inactivated exotoxin that has lost toxicity but retains the ability to combine with, or stimulate the production of, antitoxin." — http://medical-dictionary.thefreedictionary.com/toxoid.

and the protections provided are not long lasting[5].

2. These vaccines, at best, possibly provide some protection to most, but not nearly all vaccinees, of those who are multiply vaccinated with these DTP vaccines against some of the toxins produced by one (*Bordetella pertussis [B. pertussis]*) of the several species of the bacterial organism *Bordetella* (*B. pertussis*, *B. parapertussis*, *B. bronchiseptica and B. holmesii*) and no protection against: **a)** the other species of *Bordetella* bacteria that are known to cause symptoms similar to the symptoms of the cases of "whooping cough" caused by *B. pertussis* in humans[6]; or **b)** the toxin known as adenylate cyclase toxin (ACT) that is also initially secreted by these human-infectious species of *Bordetella*.
3. Inoculation with these DPT vaccines can cause some who are vaccinated to become silent carriers for the *B. pertussis* bacteria[7] ("Pertussis Harrys") who then unknowingly spread the disease, which is recurring as whooping cough outbreaks.
4. The use of these DPT vaccines has apparently caused the various *B. pertussis* strains to mutate, leading to the development of more virulent strains that CDC researchers attribute to part of the reason for the resurgence of the disease[8].
5. The postulation in 1987[9] and its confirmation in 1994[10] that the pertussis components in the DPT vaccines are not long-term effective in stopping whooping cough outbreaks even when the causative agent was confirmed to be *B. pertussis*.
6. The initial DPT vaccination program starting when the infant is two months of age is a causal factor for *chronic* childhood medical conditions, including asthma[11], whose risk can be

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5 http://www.foxnews.com/health/2011/10/20/whooping-cough-vaccine-protection-fades-after-3-years/, which was last visited on 23 July 2013.

6 See, for example, http://www.ndhealth.gov/microlab/Uploads/2011_NDLRN_MDH0.pdf, CHALLENGE SET 2011, PARTICIPANT SUMMARY REPORT, March 2012, NORTH DAKOTA DEPT. OF HEALTH, Submitter #: 2209; http://www.ncbi.nlm.nih.gov/pmc/articles/PMC229785/, Stefanelli P, Mastrantonio P, Hausman SZ, Giuliano M, Burns DL. Molecular characterization of two Bordetella bronchiseptica strains isolated from children with coughs. *J Clin Microbiol*. 1997 Jun; 35(6): 1550–1555; and Cherry JD, Seaton BL. Patterns of Bordetella parapertussis Respiratory Illnesses: 2008–2010. *Clin Infect Dis*. 2012; 54(4): 534-537.

7 Field LH, Parker CD. Pertussis Outbreak in Austin and Travis County, Texas, 1975. *J Clin Microbiol*, 1977 Aug; 6(2): 154-160.

8 Mooi FR, Inge H.M. van Loo IHM, van Gent M, He Q, Bart MJ, Heuvelman KJ, de Greeff SC, Diavatopoulos D, Teunis P, Nagelkerke N, Mertsola J. *Bordetella pertussis* Strains with Increased Toxin Production Associated with Pertussis Resurgence. *Emerg. Infect. Dis*. 2009 Aug; 15(8): 1206-1213. http://wwwnc.cdc.gov/eid/article/15/8/pdfs/08-1511.pdf.

9 Bass JW, Stephenson SR. The return of pertussis. Pediatric Infect Dis J 1987 Feb; 6(2): 141-144. http://journals.lww.com/pidj/Citation/1987/02000/The_return_of_pertussis.1.aspx.

10 Bass JW, Wittler RR. Return of epidemic pertussis in the United States. *Pediatric Infect Dis J* 1994; 13(5): 343-344. http://journals.lww.com/pidj/Citation/1994/05000/Return_of_epidemic_pertussis_in_the_United_States.2.aspx.

11 http://www.ecomed.org.uk/wp-content/uploads/2011/09/2-halvorsen.pdf, last visited on 23 July 2013.

significantly reduced by delaying the initial inoculation by more than two (2) months[12].

For a more detailed presentation of these issues, the writers and the reader can consult this reviewer's 2012 on-line article, "Draft Review of 'Anti-Vaccine Movement Causes the Worst Whooping Cough Epidemic in 70 Years'"[13].

Based on the science, it is obvious that the DPT vaccines are not effective in preventing those who have been vaccinated from subsequently coming down with a case of whooping cough or becoming a carrier.

Further, the current vaccination program appears to unnecessarily increase infant risk for developing asthma and, *based on that finding and the excess infant deaths and serious infant disabilities occurring shortly after a DPT inoculation*, is probably not even cost-effective.

In addition, the cited published studies explain the reality that most of the cases of "whooping cough" in children older than two months of age are occurring in the vaccinated population and not in the never-vaccinated population.

Thus, if the public were being told about the preceding scientific realities rather than being fed the "opinions" of those who tout the 'wonders" of vaccines, the public would most surely want to avoid risking the health and lives of their children for a prophylactic vaccine that does not work as advertised.

Hopefully, after studying the cited references, the writers and any reader, who does trust in the unbiased science, will reject the "opinion" that the "pertussis"-containing vaccines protect those inoculated with these vaccines from getting clinical cases of whooping cough.

"The Centers for Disease Control and Prevention reports that there were 41,000 cases of whooping cough last year, compared with 18,719 in 2011. The numbers also have increased locally, with 259 cases in St. Louis County (up from 239 in 2011), and 60 in St. Charles County (up from 26 in 2011).

This is not an epidemic, but it is significant enough to worry public health officials. They are encouraging caregivers who may never have been vaccinated or who may have been vaccinated more than 10 years ago to get the shots. This includes doctors, nurses and others who might infect vulnerable populations."

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12 McDonald KL, Huq SI, Lix LM, Becker AB, Kozyrskyj AL. Delay in diphtheria, pertussis, tetanus vaccination is associated with a reduced risk of childhood asthma. *J Allergy Clinical Immunol* 2008; 121: 626-631. http://www.sciencedirect.com/science/article/pii/S0091674907023792.

13 http://dr-king.com/docs/120806_PGKDrftRevu_Anti_vaccineMovementCausesTheWorstWhoopingCoughEpidemicIn70Yrs_fnlr2b.pdf.

Vaccination challenge and rechallenge – Multiple assaults on the immune system – or an alternative approach

Given the facts that:

1. The DTP vaccines, in general, and the Tdap vaccination programs, in specific, do not provide protection against an infection by *B. pertussis* bacteria and are not truly effective in preventing clinical cases of "whooping cough" in almost all of those inoculated with them;
2. The "whooping cough" disease protection, if any, that is provided by inoculation with a Tdap vaccine does not last;
3. The vaccination programs do create silent *B. pertussis* carriers who actually spread *B. pertussis* bacteria;
4. Each inoculation carries with it an unknown risk of "causing" a post-inoculation serious adverse reaction in those who are vaccinated with such vaccines;
5. In those previously vaccinated with a DTP vaccine, the Tdap inoculation carries with it an increased of a serious adverse event especially in those who have previously had an adverse reaction to the DTP vaccinations they received; and
6. Clinical medical condition cases diagnosed as "whooping cough" can be caused by other organisms (e.g., all human-infectious species of the bacterium *Bordetella* [e.g., *B. pertussis*, *B. parapertussis*, *B. holmesii*, and *B. bronchiseptica*], human-infectious species of the bacterium *Legionella* [most commonly *Legionella pneumophila*], and human Respiratory Syncytial Virus [hRSV]),

it would seem that what is needed is an effective alternate treatment protocol for "whooping cough" that:

a. Does not carry with it any treatment risk of serious adverse reactions, including death;
b. Does not create disease carriers;
c. Does not pressure *B. pertussis* to mutate into a strain that produces more pertussis toxin;
d. Significantly lessens the severity of the disease and shortens the duration of the infection in infants; and
e. Leads to broad long-duration protection from re-infection in those who recover from contracting the disease (for human-

infective *B. species*, the duration of such natural protection following whooping cough has been estimated to be about 50 years),

such as that provided by the use of appropriately high-dose vitamin C therapy that was successfully used prior to the advent of the "effective pertussis" vaccines in the late 1930s or antibiotics in the mid-1940s[14].

Of course, *just as the current vaccination programs have not*, this alternate treatment approach would not stop cases of "whooping cough" in children.

However, it would stop: **i)** the serious adverse events that some experience after vaccination, **ii)** the creation of pertussis carriers, and **iii)** the need for multiple treatments (vaccinations) in the healthy population, while providing long-term, perhaps lifetime, natural protection from re-infection by *B. pertussis* or any other *B. species* in children and adults.

Clearly the DTP vaccines, which, based on the near zero and low levels of notified cases for diphtheria and tetanus, appear to be a success for these diseases but, based on the thousands to tens of thousands of confirmed cases annually in the USA, the "pertussis" vaccine is a disease-preventive-vaccine failure, which should be abandoned in favor of an effective curative approach restricted to those who contract a clinical case of whooping cough such as those curative approaches that were effectively used in the 1930s.

Pivoting from whooping cough and science to other apparently opinion-based matters

"But anti-vaccine fear is still abroad in the land. The scare about childhood vaccines being linked to autism was based on bad science to start with. A 1998 study published in the medical journal Lancet, and later retracted, was based on fabricated research by Andrew Wakefield, the lead author. He was stripped of his medical license in Great Britain in 2010.

But the myth became enshrined. Among the many overreactions was a petition for Congress to pay parents for injuries to their children through a Vaccine Injury Compensation Program. Courts found no proven link between vaccines and autism, because science has proven there isn't one.

[14] Ormerod MJ, UnKauf BM, White FD. A Further Report on the Ascorbic Acid Treatment of Whooping Cough. ***Can Med Assoc J***. 1937; **37**: 268-272. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC536087/pdf/canmedaj00183-0060.pdf

Another effect was that parents began refusing immunizations for their children. Diseases that had been all but dormant for decades, such as measles, mumps and whooping cough, began to rise."

Here, the writers of this editorial change the subject from the title issue "*whooping cough returns*" to a scientific reality about "*vaccines being linked to autism*", which was first published in 1976 in a German article, which was not claimed to be false after it was published, discussing a linkage between smallpox inoculation and the development of autism[15] in which the translated Abstract concludes with "vaccination is recognized as having a starter function for the onset of autism".

Thus, since 1976, 22 years before the "*1998 study published in the medical journal Lancet*", independent science has accepted the reality that, *as with many other chronic childhood medical conditions*, vaccine inoculation was linked to the start of the onset of what would now be referred to as regressive autistic disorder as well as to the initiating factor for other childhood neurodevelopmental disorders, developmental disorders, behavioral problems, syndromes and other chronic childhood medical conditions.

Having established that the fundamental premise of this section of the narrative is false, this reviewer sees no need to address the other distortions in this narrative in detail and would suggest that those who seek more information about the relevant scientific facts consult the applicable sections in the many previous reviews of similar opinion pieces that have been posted by this reviewer in the "Publications (by year)" subsection of the "Documents" web page on this reviewer's Internet web site, http://www.dr-king.com, which address these issues.

"It comes down to this: Who would you rather get medical advice from — Jenny McCarthy, former nude model turned childhood development expert, or the Journal of Pediatrics?

Ms. McCarthy is convinced that her son's autism is linked to childhood vaccinations. But in April, pediatric researchers published a study that looked at nearly 1,000 children and concluded that exposure to vaccines during the first two years of life was not associated with an increased risk of developing autism."

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[15] Eggers C. [Autistic syndrome (Kanner) and vaccination against smallpox (author's transl)]. ***Klin Padiatr***. 1976 Mar; **188**(2): 172-180.
"Abstract
3-4 weeks following an otherwise uncomplicated first vaccination against smallpox a boy, then aged 15 months and last seen at the age of 5 1/2 years, gradually developed a complete Kanner syndrome. The question whether vaccination and early infantile autism might be connected is being discussed. A causal relationship is considered extremely unlikely. But vaccination is recognized as having a starter function for the onset of autism".

Since the issue these editorial writers raised is supposedly one of science and not opinion, it is inappropriate to ask the reader to make a false choice between a person who can be asked for advice and a journal that can only be consulted to see what information someone has chosen to publish in that journal.

Since published studies only provide information, one can only get "*medical advice*" from Ms. McCarthy, who, unfortunately, cannot legally give "*medical advice*".

The issue the writers are seeking to raise concerns "*autism*" and, though they fail to cite it, a specific article published on-line on 1 April 2013 by the *Journal of Pediatrics*, "Increasing Exposure to Antibody-Stimulating Proteins and Polysaccharides in Vaccines Is Not Associated with Risk of Autism".

If the writers were asking a scientifically valid question, perhaps they would have asked, Where "*would you rather get medical*" information about autism "*from —*" a book titled, Healing and Preventing Autism: A Complete Guide, authored by "*Jenny McCarthy*" and Dr. Jerry Kartzinel", *or the*" 1 April, 2013 article published on-line by the "*Journal of Pediatrics*" that only looked within a vaccinated population with similar but different levels of exposures to vaccine-related "Antibody-Stimulating Proteins and Polysaccharides"?

As a scientist, this reviewer recognizes that the referenced article is "tobacco science".

This is the case because this article failed to compare the risk of autism in this vaccinated population to a matched group of never-vaccinated children, as it would have had to do to make any relative risk assessment for "variously vaccinated children" as compared to a matched group of "never-vaccinated children".

Contrary to the writers' statement, the cited study's abstract's actual conclusion was, "In this study of MCO members, increasing exposure to antibody-stimulating proteins and polysaccharides in vaccines during the first 2 years of life was not related to the risk of developing an ASD".

Clearly, this conclusion does not address the risk of developing "autism" in fully vaccinated children in the USA as compared to the risk of developing "autism" in matched never-vaccinated children in the USA – a study that would be required to conclude that vaccination status has either:

a. "a quantified effect" or

b. "no effect"

on the risk of a child's developing "autism".

Therefore, this reviewer would be compelled to select the book because it, at least, purports to address "healing and autism", while the article that the writers alluded to only addresses the "risk of autism" for various groups in a vaccinated population.

Moreover, the writers', "*Ms. McCarthy is convinced that her son's autism is linked to childhood vaccinations*" clearly misrepresents the facts.

Based on her book with Dr. Kartzinel, Healing and Preventing Autism: A Complete Guide, Ms. McCarthy thinks "*that her son's autism*" was caused by the effects of one or more of the vaccine inoculations that her son received.

Total Vaccination Dosings and the Risk of "Autism"

Of course, the anecdotal surveys of groups of never-vaccinated children had relative risks of "autism" of less than one in 5,000 in the mid-2000s at a time when the CDC's anecdotal survey rate for "autism" in mostly vaccinated children was about one in 150.

Using the anecdotal never-vaccinated survey reports and the CDC's estimated level for "autism" in the mid-2000s, the relative "autism" level in the mostly vaccinated children is more than 30 times higher than the estimated level of "autism" in never-vaccinated children in the USA (a group of Pennsylvania Amish and "children" in a Chicago, Illinois medical practice).

Based on the data in a more recent Danish 2010 study, where Thimerosal-preserved vaccines have <u>not</u> been routinely used since 1992, which showed one child with "autism" (ASD/PDD) in every 1272 children[16], when the CDC's USA uncorrected estimate was one child in about 110, it would appear that the "highly vaccinated children" in the USA[17] have an uncorrected relative risk for "autism" that is 11-plus times higher than the verified population risk of "autism" in the "less

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16 Maimburg RD, Bech BH, Væth M, Møller-Madsen B, Olsen J. Neonatal Jaundice, Autism, and Other Disorders of Psychological Development. *Pediatrics* 2010; 126; 872-878; originally published online Oct 11, 2010; DOI: 10.1542/peds.2010-0052. The online version of this article is available at: http://www.pediatrics.org/cgi/content/full/126/5/872.

17 http://www.renewamerica.com/columns/janak/080605, last visited on 30 July 2013,

"• Hepatitis B #1 — Birth (may be delayed for up to 2 months if mother is HBsAg(-), Hepatitis B #2–1 to 4 months, Hepatitis B #3–6 to 18 months
• Diphtheria, Tetanus, acellular Pertussis (DTaP) #1–2 months. • DTaP #2–4 months, DTaP #3–6 months, DTaP #4–15 to 18 months, DTaP #5–4 to 6 years
• Tetanus Booster — 11 to 12 years
• H. influenzae type b (Hib) #1–2 months, Hib #2–4 months, Hib #3–6 months, Hib #4–12 to 15 months
• Inactivated Polio #1–2 months, Inactivated Polio #2–4 months, Inactivated Polio #3–6 to 18 months, Inactivated Polio #4–4 to 6 years
• Measles , mumps, and rubella (MMR) #1–12 to 15 months, MMR #2–4 to 6 years
• Varicella Zoster Virus Vaccine (chickenpox) [#1]— 12 to 18 months, and #2 – 4 to 6 years
• Pneumococcal conjugate vaccine #1–2 months, Pneumococcal conjugate vaccine #2–4 months, Pneumoccocal conjugate vaccine #3–6 months, Pneumococcal conjugate vaccine #4–12-15 months
• Hepatitis A #1–2 years or older (in selected areas/situations), Hepatitis A #2–6-12 months after Hepatitis A #1 (in selected areas/situations)

vaccinated" children in Denmark[18].

Thus, the level of vaccination clearly appears to be a risk factor for a diagnosis of "autism" and, as a group, the never-vaccinated children clearly appear to have the lowest risk.

The Thimerosal-preserved Vaccines Issue

"Fueling concern over a link between autism and vaccination was that many childhood vaccines contained an ethyl-mercury preservative, thimerosal. Mercury at high doses can cause harm, but the low levels of ethyl-mercury did not. Despite that scientific finding, the ingredient was taken out of vaccines in the early 2000s in an effort to allay parents' concerns."

Here, the writers begin with a vague statement,

"*Fueling concern over a link between autism and vaccination was that many childhood vaccines contained an ethyl-mercury preservative, thimerosal*",

that conceals the nature of Thimerosal, a trade name for sodium ethylmercurithiosalicylate.

Factually, Thimerosal is highly toxic, and a human teratogen, mutagen, carcinogen, reproductive poison, and immune-system disruptor at levels below 1 µg/gram of wet tissue (<1 ppm), whose tissue-retained metabolism products have been shown to be bioaccumulative poisons with a long half-life.

Moreover, since the 1930s, Thimerosal has been used and is still being used as a preservative in certain vaccines, *without the requisite proofs of safety required from the vaccine makers by the US Food and*

• Influenza — Annually for children older than 6 months with certain risk factors. May also be given to all others wishing immunity. Children under 9 receiving influenza immunization for the first time require 2 doses, 4 weeks apart.
• Meningococcal vaccine — 2 years or older in high risk groups including college students living in dormitories and military recruits.
• Other vaccines may be prescribed by your pediatrician based on risk factors."

18 http://www.renewamerica.com/columns/janak/080605, last visited on 30 July 2013,
"In Denmark the children only receive approximately 21 vaccinations by the time they are two years old.

Summary chart Abbreviations

The Danish Childhood Vaccination Schedule						
	DTaP[1]	Hib[1]	IPV[1]	PCV7[2]	MMR[3]	dTaP
3 months	Yes	Yes	Yes	Yes		
5 months	Yes	Yes	Yes	Yes		
12 months	Yes	Yes	Yes	Yes		
15 months					Yes	
4 years					Yes	
5 years			Yes[4]			Yes[4]
12 years					Yes[5]	

The Danish Childhood Vaccination Schedule as on 1 April 2008

1 DTaP and IPV are given with Hib in one injection.
2 During the introduction period, PCV7 will be offered to children born after 30 April 2006 who, by October 2007 would be 4-17 month of age.
3 MMR vaccination as a pre-travel vaccine: MMR vaccination can be performed down to the age of 9 months in cases of children visiting measles-endemic countries and areas where measles outbreaks are known to occur. The two dose vaccination schedule at 15 months and 4 years should however, be repeated in cases of children under 12 months of age. Those aged between 12 months and 15 months need only a second MMR dose at 4 years.
4 dTaP and IPV are given in one injection.
5 For those born between 1st April 1996 and 1st April 2004 the second MMR dose isrecommended at 12 years of age in a catch-up programme that will last until 2016."

Drug Administration since 1973, at nominal levels that most often range from 50 to 100 µg/mL of vaccine (0.005 to 0.01 %).

Thus, preservative is a usage for Thimerosal; but Thimerosal is not "*an ethyl-mercury preservative*".

Turning to the writers' second statement,

"*Mercury at high doses can cause harm, but the low levels of ethyl-mercury did not*",

this reviewer observes that this statement:

a. is also vague,

b. does not claim that the doses of Thimerosal the children receive have been proven to be safe, and

c. *without providing any supportive scientifically sound and appropriate peer-reviewed published toxicological citation*, implicitly asserts that the doses of Thimerosal in vaccines that developing children receive "*did not*" cause harm.

As to the issue of toxicity, in 1998, the US FDA banned the use of Thimerosal as an over-the-counter antiseptic, where the nominal level of Thimerosal (also called Merthiolate) in such products was 1000 µg/mL (0.1%), because these products were: **a)** too toxic to human tissues and **b)** not effective as antiseptics.

Thus, the level of Thimerosal in vaccines clearly does not provide the more than 100-fold safety margin that is typically expected for highly toxic chemicals used in prophylactic drugs given to developing children.

Moreover, since only toxicity studies can determine the safe level for a drug and, in the USA, the component of a drug is a drug, *as far as this reviewer can ascertain*, there have been no scientifically sound and appropriate studies published in a peer-reviewed journal that have established the safe level for repeated exposures in developing children beginning in utero and repeatedly continuing after birth for an extended period of time.

Turning to the writers' final assertion,

"*the ingredient was taken out of vaccines in the early 2000s in an effort to allay parents' concerns.*"

this reviewer finds that the writers are simply not telling the truth.

Factually, in the USA, those vaccines that were recommended to be given to all children in the 1990s that were Thimerosal-preserved were slowly phased out in the 2000s with all such existing vaccines being allowed to be used until the last lots expired in 2005.

However, in 1997, at a time when all influenza vaccines were Thimerosal-preserved, the US Centers for Disease Control and Prevention (CDC) began recommending that pregnant and breastfeeding women get a flu shot[19].

Clearly, this recommendation greatly increased the risk of prenatal Thimerosal exposure to the children developing in the womb and added to the risk of postnatal exposure in those developing children who were breastfeeding.

Except in a few instances, the childhood Thimerosal-preserved vaccines were replaced by reduced-Thimerosal vaccines in the mid-2000s and then with no-Thimerosal vaccines in the late 2000s and early 2010s.

However, starting in April of 2002, the CDC began making a recommendation that "flu shots" be given annually to all children 6 to 23 months of age[20] at a time when all flu shot doses were Thimerosal-preserved.

Thus, except for those who avoided flu shots initially or, *when some no-Thimerosal inactivated-influenza vaccines became generally available*, only allowed no Thimerosal flu shots to be given to themselves or to their children or wards, the maximum level of Thimerosal exposure that a developing child or adult who follows the CDC's current influenza vaccination recommendations may receive is actually greater today than it was when the concern was raised in the late 1990s[21].

Moreover, even today, more than half of the doses of influenza vaccines that may be given to children and to pregnant and lactating women are Thimerosal-preserved doses.

In addition, Sanofi Pasteur's multi-dose Menomune® meningococcal meningitis vaccine formulation and an FDA-approved tetanus toxoid (TT) vaccine are other Thimerosal-preserved vaccines that are still listed by the FDA[22] as being available in the USA.

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19 Prevention and Control of Influenza: Recommendations of the Advisory Committee on Immunization Practices (ACIP). Morbidity and Mortality Weekly Report (MMWR) 1997 Apr 25; 46(RR-9):1-25 (emphasis added):
"Summary
These recommendations update information concerning the vaccine and antiviral agents available for controlling influenza during the 1997-98 influenza season (superseding MMWR 1996;45{No. RR-5}:1-24). The principal changes include information about a) the influenza virus strains included in the trivalent vaccine for 1997-98, b) the vaccination of pregnant and breastfeeding women, and c) side effects and adverse reactions."

20 Bridges CB, Fukuda K, Uyeki TM, et al. Prevention and Control of Influenza Recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 2002 Apr 12; 51(RR03): 1-31.

21 http://dr-king.com/docs/090813_fnldrft_TheNoThimerosalPreservedVaccineLie_r6b.pdf.

22 http://www.fda.gov/BiologicsBloodVaccines/SafetyAvailability/VaccineSafety/ucm096228.htm#t3, last updated June 20, 2012; last visited on 1 August 2013.

Furthermore, the FDA has not revoked the licenses for the other older Thimerosal-containing vaccine formulas, which allows these older formulas to still be sold in many other countries.

Since the facts clearly contradict the writers' assertions about the removal of Thimerosal from "*vaccines in the early 2000s*", the reader should understand two realities:

1. Vaccines are a causal factor in the epidemics of chronic childhood medical conditions, including "autism" in the USA.
2. Thimerosal-preserved vaccines are one of the components in certain vaccines that are contributing to these epidemics of chronic childhood medical conditions.

Finally, the writers' opinion-based remarks should be ignored.

"Autism": Incidence/Prevalence and Causes Issues?

"Still, there has been an increase in autism and so far, the reasons have not yet been discovered. The CDC estimates that 1 in 88 children have an autism spectrum disorder, and that males are four times as likely as females to have one."

First, this reviewer agrees with the writers' generalization, "*males are four times as likely as females to*" have a diagnosis of an autism spectrum disorder (ASD).

However, as this reviewer's prior responses have established, the writers' assertion, "*there has been an increase in autism and so far, the reasons have not yet been discovered*", is less than accurate because at least two, if not three, of the reasons for the increase in children diagnosed with "autism" ("an ASD") have been established.

The two established reasons are:

1. The increased number of exposures to disease, disease-related, and other-antigenic components in vaccines, which collectively act as immune-system dysregulators that imbalance the human immune systems and induce abnormal immune-system responses, including, for example, in a study of premature infants, varying levels of up-regulation in the production of C-reactive protein[23] where, "Abnormal CRP

[23] Pourcyrous M, Korones SB, Arheart KL, Bada HS. Primary Immunization of Premature Infants with Gestational Age <35 Weeks: Cardiorespiratory Complications and C-Reactive Protein Responses Associated with Administration of Single and Multiple Separate Vaccines Simultaneously. *J. Pediatrics* 2007 Aug; 151: 167-172.
"

values were associated with administration of multiple vaccines, (OR, 15.77; 95% CI 5.10-48.77)".

2. Increased maximum exposure to Thimerosal from inactivated-influenza vaccine doses preserved with and/or containing Thimerosal that now starts in utero and is recommended to continue annually for the rest of each child's life without any CDC suggestion to avoid giving Thimerosal-containing vaccines to:
   a. pregnant women,
   b. breastfeeding women, and
   c. developing children

   to protect those most susceptible to mercury poisoning by bolus doses of organic mercury from Thimerosal in Thimerosal-preserved flu shots, its metabolic intermediates (ethyl mercury [Et-Hg] species and methyl mercury [Me-Hg] species), and its end-point, bioaccumulative metabolite, tissue-retained inorganic mercury (Hg2+) species[24], which have been established to have a half-life in the human brain of about 18 to 20 years[25]. [**Note:** For a more detailed discussion of these mercury-intoxication realities, readers can consult "A Review of 'Scientific Information Regarding the Use of Thimerosal As a Preservative in Vaccines'"[26].]

In addition, the writer's, "*CDC estimates that 1 in 88 children have an autism spectrum disorder*" is an outdated estimate (from the 2007-2008 timeframe) because the CDC's March 20, 2013 estimate (from a 2011-2012 study) for "children aged 6-17 years" diagnosed with an ASD was "2 percent"[27] (1 in 50).

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[24] Rodriques JL, Serpeloni JM, Batista BL, Souza S, Barbosa Jr F. Identification and distribution of mercury species in rat tissues following administration of Thimerosal or methyl mercury. *Arch Toxicol* 2010; 84: 891-896.

[25] Sugita M. The biological half-time of heavy metals. The existence of a third, "slowest" component. *Int Arch Occup Environ Health* 1978; 41(1): 25-40.

[26] http://dr-king.com/docs/110915_PGKReviewOfUSSubmissionToUNEP_b.pdf, which was submitted to the United Nations Environmental Programme (UNEP) in mid-September of 2011 and the subsequent relevant postings by this reviewer on his Internet web site, http://dr-king.com.

[27] http://www.cdc.gov/media/releases/2013/a0320_autism_disorder.html, "CDC and HRSA issue report on changes in prevalence of parent-reported Autism Spectrum Disorder in school-aged children", issued on March 20, 2013; last visited on 3 August 2013 (emphasis added):

"The report was co-authored by HRSA and data collection was conducted by the CDC. The data come from the National Survey of Children's Health, a nationally representative phone survey of households with children. This survey is conducted every four years.

Main findings of the report:

- The prevalence of parent-reported ASD among children aged 6-17 years was 2 percent **[1 in 50]** in 2011-2012 compared to 1.2 percent **[1 in 83]** in 2007.
- The change in prevalence estimates was greatest for boys and for adolescents aged 14 to 17 years.
- Children who were first diagnosed in or after 2008 were more likely to have milder ASD than those diagnosed in or before 2007.
- Much of the increase in the prevalence estimates from 2007 to 2011-2012 for school-aged children was the result of diagnoses of children with previously unrecognized ASD.

The report is available at www.cdc.gov/nchs."

"This number compares to the 1980s, when autism was reported as 1 in 10,000 children, and the 1990s, when it was diagnosed as 1 in 2,500 children. The Autism Science Foundation cautions that comparing autism rates over the last 30 years is difficult because diagnostic criteria have changed.

Indisputable is the fact that more children are being diagnosed as having an autism spectrum disorder than in the past. It's a mistake to look to phony science to explain the reasons, just because the cause has thus far not been found. The best guess at the moment is that genetics and environmental causes are at fault."

First, with respect to the writers' initial paragraph, there have been no scientifically sound, independent studies published in a peer-reviewed journal that have proven that changes in the "*diagnostic criteria*" *caused* the change in the diagnostic rates for "autism".

Further, between 2000 and May of 2013, the diagnostic criteria for "autism" had no major change, but the diagnostic estimates in the USA continued to increase until, in 2013, the CDC's estimate for "autism" was 1 in 50 children.

Of course, not content to keep the "autism" criteria constant, the establishment recently issued a revised "Diagnostic Statistical Manual of Mental Disorders" (DSM-5).

DSM-5, which was published on May 18, 2013, superseding the 2000 DSM-IV-TR, made significant changes that have been projected to have the effect of reducing the rate of diagnosis of "autism" by some significant percentage.

Were the healthcare establishment truly interested in ascertaining the true rate of "autism",

1. The diagnostic criteria for "autism", as it was defined from 2000 into 2013, would have remained unchanged, and
2. Rather than using a mixture of single-source and dual-source survey methodology in selected states or selected groups of individuals, the establishment would have opted to use dual-source surveys in every part of every state and capture-recapture statistical correction techniques to appropriately correct the raw survey data for the undercounting inherent in any survey system and produced underascertainment-corrected incidence/prevalence data for the incidence "autism" (any ASD) in any locale and the prevalence of "autism" in the USA.

Turning to the second paragraph, this reviewer agrees with the writers',

"*Indisputable is the fact that more children are being diagnosed as having an autism spectrum disorder than in the past*".

This reviewer also agrees with the initial part of the writers' second statement,

"*It's a mistake to look to phony science to explain the reasons*",

but observes that the "*phony science*" is embodied in those statistics-based population study articles published by government agencies, vaccine makers, and those in academia who benefit from the status quo that have been shown to distort the facts and, in some instances, to make knowingly false claims[28].

Typically, these "tobacco science" articles are easy to identify as the complete set of anonymized data from which the study set was derived and the ancillary files needed to accurately assess the validity of the published findings are either "lost" (e.g., the CDC's 2003 Verstraeten study[29]) or access to this information is routinely denied to those independent researchers requesting it (e.g., Fombonne's Canadian English-speaking schools study[30,31]).

However, the writers' assertion that "*... the cause has thus far not been found*" is not only at odds with the factual information presented and/or cited by this reviewer but also logically at odds with the writers' closing statement (emphasis added)

"*The best guess at the moment is that genetics and environmental causes are at fault*",

which speaks to "*causes*" and not a single "*cause*".

When it comes to "*genetics*", a 2010 study in Polish children[32] has clearly established that, *with respect to Thimerosal exposure*, genetics plays the role of producing variable susceptibility to mercury intoxi-

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28 http://dr-king.com/docs/20120331_FalsusInUnoFalsusInOmnibusAThimerosalpreservedVaccineConundrum_b.pdf.

29 Verstraeten T, Davis RL, DeStefano F, Lieu TA, Rhodes PH, Black SB, Shinefield H, Chen RT for the Vaccine Safety Datalink Team. Safety of Thimerosal-Containing Vaccines: A Two-Phased Study of Computerized Health Maintenance Organization Databases. *Pediatrics* 2003; 112; 1039-1048. The on-line version can be found at: http://www.pediatrics.org/cgi/content/full/112/5/1039.

30 Fombonne E, Zakarian R, Bennett A, Meng L, McLean-Heywood D. "Pervasive Developmental Disorders in Montreal, Quebec, Canada: Prevalence and Links With Immunizations. *Pediatrics*, 2006 Jul: 118(1): e139-e150 (doi:10.1542/peds.2005-2993).

31 http://dr-king.com/docs/060827_PGKsCmmnts_CanadianEpidemioStudy_Pediatrics-Full-b.pdf

32 Majewska MD, Urbanowicz E, Rok-Bujko P, Namysłowska I, Mierzejewski P. Age-dependent lower or higher levels of hair mercury in autistic children than in healthy controls. *Acta Neurobiol Exp* 2010, 70: 196–208 (emphasis added).
"An association between autism and early life exposure to mercury is a hotly debated issue. In this study, 91 autistic Polish children, male and female, 3-4 and 7-9 years old, were compared to 75 age- and sex-matched healthy children with respect to: demographic, perinatal, clinical and developmental measures, parental age, birth order, morphometric measures, vaccination history, and hair mercury content. In demographic and perinatal measures there were no consistent differences between the autistic and control groups. Autistic children had a significantly greater prevalence of adverse reactions after vaccinations and abnormal development than controls. Between 45 and 80% of autistic children experienced developmental regress. Autistic children significantly differed from healthy peers in the concentrations of mercury in hair: younger autistics had lower levels, while older – higher levels than their respective controls. The results suggest that autistic children differ from healthy children in metabolism of mercury, which seems to change with age."

cation because the study compared outcomes at two time points in a group of "autistic children" to those observed in a very highly matched group of "healthy children" where all were exposed to the "same" level of Thimerosal-preserved vaccines that were administered using the "same" inoculation schedule.

Correspondingly, "genetic susceptibility"/"genetic diversity" seems to explain the wide range of outcomes observed when large groups of children of a given age are vaccinated under the same vaccination regimen.

Turning to the writers' "*environmental causes*", this reviewer agrees provided vaccine inoculations are considered as "*environmental causes*" along with exposures to: **a)** the Thimerosal in Thimerosal-containing vaccines, **b)** other forms of mercury, and **c)** other chemicals, which have been implicated as causal factors for "autism" and other adverse neurodevelopmental outcomes and disorders.

Returning to the use of the measles, mumps, and rubella (MMR) vaccines and accepting that the 1980s reporting level for "autism" was on the order of 1 in 10,000 in the developed countries, it would seem that the 1 in 1,272 incidence/prevalence for "autism" in Denmark cited earlier (see footnote "**16**") indicates that the combination of the MMR with the other vaccines administered in the mid-2000s Danish vaccination program contributed to the significant elevation in the incidence/prevalence of "autism" that was reported for Danish children in 2010.

Furthermore, recent rulings in the vaccine injury cases in the USA and Italy have found that the MMR vaccine was a causal factor in the vaccinated individuals' subsequent diagnosis of "autism" that was caused by the encephalopathic brain injuries and gut insults precipitated by the child's MMR inoculation[33].

Finally, until independent scientifically sound and appropriate studies are conducted using "safe vaccines"[34] where, *in a double-blind randomized study involving not less than 5,000 children in each arm of the study*, matched children are randomly given the recommended childhood vaccines or equal doses of a sterile pH-balanced isotonic saline solution and all vaccination is then stopped and the detailed medical histories of each child are followed up for not less than 10 years beyond the time of their last inoculation, this reviewer must, and

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33 http://www.whiteoutpress.com/timeless/courts-quietly-confirm-mmr-vaccine-causes-autism, posted on 27 July 2013; last visited on 4 August 2013.

34 http://dr-king.com/docs/20130501_Vaccines_The_Safest_of_Medicines_or_the_Biggest_Liequstn_e_b_r1.pdf.

the public should, rely on the reported adverse health outcomes of the "anecdotal" surveys of never-vaccinated children as compared to the reported rates of adverse health outcomes for a general population (where more than 90% of the children are vaccinated according to the recommended schedule) for all chronic medical conditions, including, but not limited to, "autism", ADHD, asthma/COPD, diabetes, idiopathic dilated cardiomyopathy, encephalitis and encephalopathy, epilepsy, gastrointestinal diseases and disorders, Guillian Barré syndrome, multiple sclerosis, chronic skin conditions, obesity, and vasculitis.

"So, parents beware — Jenny McCarthy and her son deserve your sympathy. Be concerned for them. Watch her on "The View." Send her a card.

Meanwhile, get your kids to the doctor."

What Should Parents Really Do?

Here, this reviewer must respectfully disagree with the writers.

"*Jenny McCarthy and her son deserve*" our empathy – they do not need, nor have they asked for, our sympathy.

Based on the information presented in this review, parents first need to study the independent scientific literature on the benefits and risks associated with each vaccination component recommended at a given time[35] as well as the information concerning the developmental status of their children and their children's immune system[36], and their family's medical history.

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35 Vaccine Safety Manual For Concerned Families and Health Practitioners, 2nd Edition: Guide to Immunization Risks and Protection by Neil Z. Miller is one such inexpensive reference source (less than $ 15 from Amazon.com). However, there are other books and reference compilations (e.g., Dr. Sherri Tenpenny's http://vaccineresearchlibrary.com/) that may provide the information that a parent is seeking

36 While this reviewer cannot recommend a single compendia source here, this reviewer does recommend that the parent read http://drsuzanne.net/wp-content/uploads/2012/07/Common-vaccine-ingredient-implicated-in-NEJM-article-as-causative-in-serious-typ.pdf and, if he or she finds the discussion provided to be persuasive, the child should be breast fed and the parent(s) should avoid those vaccines that contain bovine serum albumin (BSA), including, but not limited to,

"MMRV (ProQuad) – measles, mumps, rubella, chicken pox
MMR (MMR-II)
Hep A (vaqta)
Pneumococcal (Pneumovax) – pneumococcal pneumonia
Rabies (Rab vert) – rabies
Td (Decavac) – Tetanus, diptheria
Japanese Encephalitis (Ixiaro)
Tdap (Boostrix) – Tetanus, diptheria, pertussis
Varicella (Varivax) – chicken pox
Zoster (Zostavax) – shingles
DTaP-IPV/Hib (Pentacel)
DTaP-HepB-IPV (Pediarix) – listed as having "bovine protein""

and the pertinent articles in http://www.vaccinationcouncil.org/category/d/.

Then, based on his or her studies, each parent needs to:

- Make an informed decision concerning the vaccine or vaccines he or she wants each child to receive and the timing of each vaccination[37],
- Write out his, her or their decisions and, preferably, have them notarized

before taking his, her or their child or children to a healthcare provider who will be seeking to vaccinate them.

Reviewer's Concluding Remarks

As is often the case, this reviewer finds that an editorial urging the parents to "*trust science, not opinion*" is simply an opinion-based editorial that, when it comes to sound science, fails to present or cite any robust peer-reviewed published studies that supports its views but rather simply parrots pro-vaccination slogans and propaganda.

Hopefully, after reading this review and checking the cited references and the pertinent independent scientific literature, the reader and the editors will, at least, understand the lack of scientifically sound and appropriate peer-reviewed studies for the various pro-vaccination statements that this editorial has made where the anonymized data and ancillary information are not only available for review, but at least one independent review has confirmed the findings of those studies.

Acknowledgements

For contributing valuable insights and providing their personal experience-based knowledge in various areas, this reviewer thanks Mayer Eisenstein, MD, JD, MPH, Gary S. Goldman, PhD, Boyd E. Haley, PhD, Melissa and Doug Troutman, Eileen Dannemann, Brian Hooker,

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Of course, this reviewer would also recommend that the manufacturers of these vaccines should reformulate them to remove the BSA and any other non-disease-related component that causes antibodies specific to that component to form in the human body when a vaccine formulation containing it is injected into the body.

Because the human immune system does not start to mature until the child is one-plus developmental years of age, this reviewer cannot recommend any prophylactic vaccine that must be given before a full-term child is 15 months of age or a premie's immune system is developmental at least one year of age. Ideally, because humans are mammals and their children are meant to be breastfed for about two years, this reviewer recommends that newborns should be exclusively breastfed for at least 12 months and, ideally, until the well-fed and well-hydrated mother's milk supply begins to significantly shrink (typically at two-plus to five years after the child's birth).

[37] Because the laws governing vaccine exemptions vary by State, the parents should also find out the specifics of the laws governing parental vaccination choice in the State in which they reside and, in conjunction with their religious or philosophical beliefs, adjust their decisions according to the lawful options provided by the State. In some instances, this may mean homeschooling your children or, in the worst case, relocating to a State that allows the flexibility in vaccination that is compatible with the parents informed choices for vaccines and vaccination timings.

PhD, Janet K. Kern, PhD, Catherine J. Frompovich, Dr. Mark R. Geier and Mr. David A. Geier.

In addition, this reviewer thanks Catherine J. Frompovich, Melissa R. Troutman, Gary S. Goldman, and Neil Z. Miller for their support, suggestions, corrections and alternative wordings, which helped this reviewer to finalize this review.

Reply Information for the Editorial Board

Anyone wishing to contact the Editorial Board which published this editorial can send an e-mail to:

1. Gilbert Bailon, Editor in Chief at gbailon@post-dispatch.com, and/or
2. Tony Messenger, Editorial Page Editor at tmessenger@post-dispatch.com.

About the Reviewer, Paul G. King, PhD

In addition to the information that is available on his Internet web site, http://www.dr-king.com/, Dr. King is the Science Advisor to the Coalition for Mercury-Free Drugs (CoMeD, Inc., which is a 501(3)(c) not-for-profit corporation with a web site at http://www.mercury-freedrugs.org/) as well as the Science Advisor to the National Coalition of Organized Women (NCOW).

As a scientist and student of the federal regulations and statutes that govern drugs, including vaccines, Dr. King has led CoMeD, on two separate occasions, in the drafting and submission of a "Citizen Petition" seeking to have the federal government comply with the law, and, based on the improper denial of the Citizen Petition submitted, a federal lawsuit seeking to have the Federal District Court for the District of Columbia compel the Secretary of the Department of Health and Human Services (DHHS) and the Commissioner of the FDA to comply with the statutes, laws (regulations) and policies that regulate the lawful conduct of the Secretary of the DHHS, the FDA commissioner and CDC and FDA official's.

Furthermore, Dr. King has, on several occasions, drafted legislation for submission to the Congress of the USA as well as to the legislatures of various States, submitted cogent comments in opposition to proposed changes to federal and state regulations that are not in the public interest or appear to be at odds with the law, reviewed

numerous documents, and written articles on a multiplicity of vaccine-related and other issues.

Moreover, Dr. King has provided diverse groups with his analysis of various Congressional bills, resolutions and treaty documents as well as federal and state judicial proceedings.

In addition, he has been an author of papers bearing on issues related to the toxicity of Thimerosal and other compounds and, if any, their connection to a range of chronic neurodevelopmental, other developmental and behavioral abnormalities that appear to be well-above (> 1 in 10 children; asthma and obesity), above (> 1 in 100 children; the autism spectrum disorders), at (> 1 in 1000 children; non-genetic childhood type 1 diabetes), or approaching (peanut allergy) epidemic childhood levels in the USA.

Most recently, Dr. King was the co-author of a paper in the journal ***Vaccine*** with Gary S. Goldman, PhD, which reviewed the United States universal varicella vaccination program.

This paper established that the current CDC-recommended two-dose vaccination program was neither truly effective in preventing all of those who are twice vaccinated from getting chickenpox nor, since it greatly increases the public's risk of having clinical cases of shingles, cost effective for universal use[38].

[38] Goldman GS, King PG. Review of the United States universal varicella vaccination program: Herpes zoster incidence rates, cost effectiveness, and vaccine efficacy based primarily on the Antelope Valley Varicella Active Surveillance Project data. Vaccine 2013 March 25; 31(13): 1680-1684 (open access) [http://www.sciencedirect.com/science/journal/0264410X/31/13, article "6"].