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## Vaccination Issues: A "Conscious Contrarian" Speaks

By Joel Alcantara

This article will address issues raised by Morgan, Colley and Haas<sup>1</sup> in an ongoing dialogue on the issues of vaccines begun after my original article was published in *Dynamic Chiropractic*.<sup>2</sup> However, before addressing their comments on vaccinations, I would like to address their comments on chiropractic.

Morgan et al.<sup>1</sup> (I will use study group leaders' names only from this point.) commented: "We agree with Dr. Alcantara that cervical manipulation is unacceptable as a preventive measure, but, hopefully, he realizes that many of our chiropractic colleagues do not support his views."

I did **not** comment that cervical manipulation is unacceptable as a preventive measure. For the benefit of the readership, my comments were:

...while the risk of injury from cervical spinal manipulation is low, this risk is unacceptable when cervical manipulation is routinely used as a preventative measure on 'asymptomatic' patients or for which manipulation is contraindicated. In addition, what constitutes 'asymptomatic' may also be controversial. For me, adjusting a patient's spine is based on subluxation findings.

What Morgan failed to understand from my above comments was cervical manipulation used as a preventive measure on "asymptomatic" patients or for which manipulation is *contraindicated*. I further stated that what constitutes "asymptomatic" may be controversial, as indications for chiropractic management are not solely dependent on symptomatic/asymptomatic criteria. Chiropractic management may also be indicated for patients in the subclinical stage of disease. Morgan's comments that "cervical manipulation is unacceptable as a preventive measure" may stem from their lack of appreciation of the concept of *prevention*.

From a public health perspective, there are three types of prevention:

- **primary** prevention, intended to reduce new occurrences;
- **secondary** prevention, intended to reduce duration and severity of the disease;
- **tertiary** prevention, intended to reduce complications and disabilities.

With respect to chiropractic care, depending on the practitioner and patient presentation, adjusting a patient's spine may run from primary to tertiary prevention.

Morgan took issue with my criteria as a doctor of chiropractic to adjust a patient's spine based on subluxation findings. Perhaps herein lies the reason of our differing attitudes on chiropractic and the use of vaccines. A debate at this point on the vertebral subluxation complex would digress from the issue of vaccines. However, Morgan has made comments "criticizing the abysmal status of defining "subluxation" and whether such an entity." His group uses commentaries on the topic, which they claim supports their views (in particular, Dr. Nelson's supposed "persuasive argument demonstrating the circular reasoning and lack of credibility for the whole concept"). What may be a persuasive, acceptable and reasonable argument for Morgan does not necessarily agree with me or other chiropractors with respect to defining "subluxations."

A recent survey of chiropractors by Hawk.<sup>3</sup> demonstrated that among their responders, the majority view chiropractic as a complete system of health care. Chiropractic is a separate and distinct form of health care from medicine and not to be relegated as a therapeutic modality. On the concept of subluxation, a survey of Australian chiropractors found no consensus for the preferred term to describe the entity that they adjust, but that a majority (67 percent) preferred to use the term subluxation.<sup>4</sup> No doubt this debate on subluxation will continue within our profession.

In addressing my comments on the use of vaccines as prophylactic or therapeutic, Morgan commented: "Such distinctions, while important to the individual, are irrelevant to the general discussion of vaccine effectiveness and safety." Such comments could not be further from the truth, and perhaps truly illuminate why we have such differing views and attitudes about vaccines. It may interest Morgan to know that any intervention, chiropractic or otherwise, must always be cognizant and respectful of the rights of the individual. That is why we have the patient's Self-Determination Act.<sup>5</sup> From a public health perspective, I point to Dorothy Nyswander's comment: "Start where the people are." Herein lies the relevance of any intervention for the health of the individual.

Morgan cited the study by Mitchell<sup>6</sup> to support his group's view on vaccine risks. In particular, they commented that there is a "clear conclusion that vaccinated children experienced an incidence of SIDS lower than unvaccinated children." When making conclusions from any study, it's important that one reads carefully the literature cited. Such a bold, arrogant and definitive conclusion by Morgan, especially when derived from a single study, is a "red flag," and appraisal of the paper should be made with caution. Sure enough, Morgan derived the wrong conclusion from the study cited. For the benefit of the three doctors, I reproduce what the authors of the SIDS/vaccination study plainly and openly commented in their concluding paragraph, "We cannot be certain that immunization actually protects against SIDS, as it is possible that there is residual confounding which has not been accounted for."

In addition, the SIDS/vaccination study made no comments on the analysis for interaction. Interaction must be ruled out prior to an investigation of confounding, especially when all possible risk factors and indicators have not yet been identified for SIDS. If interaction is present, an analysis for confounding is mute.

Morgan referred me to five references that point to effective vaccines against cholera. I referenced four of the five citations with the fifth being unavailable for my access. Sack's Peru-15 cholera vaccine<sup>7</sup> was studied for safety, immunogenicity and excretion in two groups of 12 healthy volunteers. Kilhamn examined the capacity of an oral inactivated B-subunit-whole-cell cholera vaccine to induce immune responses in 15 patients colectomized due to ulcerative colitis.<sup>8</sup> Tacket's study involved 25 healthy adult volunteers receiving a single dose of 10<sup>8</sup> colony-forming units of El Tor vaccine.<sup>9</sup> Berquist vaccinated 45 volunteers with cholera toxin B subunit.<sup>10</sup>

In using the above references to counter my comments about the lack of an effective cholera vaccine, Morgan demonstrated failure to make a subtle, yet important distinction between effectiveness and efficacy. For their benefit, the differences from an epidemiological point of view as follows: In experimental studies, effectiveness refers to the intended effect of a treatment when employed in a "real world" setting, while efficacy refers to the potential effect of a treatment under optimal conditions. The above studies refer to efficacy trials of the cholera vaccine in a very small number of study subjects. Morgan must realize that many more clinical trials involving larger population groups must be performed prior to approval of these test vaccines for use in the general population. Based on the abstract, the study by Wiedermann involved 2545 Austrian travelers between six months and 81.5 years of age received a single dose of CVD103HgR and were asked to complete a questionnaire for documentation of adverse events during a seven-day period

post-immunization.<sup>11</sup> Events were recorded regardless of whether concomitant vaccinations or other factors caused them; thus, a causative relationship was not necessarily present.

Overall, these studies are far from generalizing to the effectiveness of the vaccines to different populations in real world settings. It should interest Morgan that according to the FDA, new oral cholera vaccines are being developed to provide more reliable protection, but none of these vaccines have attained the combination of high efficacy, long duration of protection, simplicity of administration, and low cost necessary to make mass vaccination feasible in cholera-affected countries.<sup>12</sup>

With respect to the topic of the measles vaccine, Morgan referred to an outbreak of measles in unvaccinated Christian Science college students.<sup>13</sup> I refer Morgan to previous comments made by me on this topic.

In reference to the six deaths in preschool-age children in Philadelphia in 1990 that were unvaccinated for measles,<sup>14</sup> Morgan failed to divulge to the readers that three of the six infants that died also had underlying illnesses. I refer Morgan to the study authors' comments of the tragic fatality in these children:

The cause of the high fatality rate in these communities is not clear; however, lack of appropriate medical care and underlying disease may have contributed.

Morgan's reference of Abramson's paper<sup>15</sup> describing 15 unvaccinated children hospitalized for measles with severe complications must also be examined. Morgan failed to provide the readers that:

"Eight of the 15 patients were girls; 11 patients were malnourished (body weight below the fifth percentile for age)."

Morgan would almost have you believe that "simple immunization" would solve all the morbidity and mortality in children. They fail to consider such aspects as basic chiropractic or medical care or lack thereof, the presence of underlying disease, or the basic needs of food and water. From an epidemiological point of view, rarely can one explain morbidity and mortality in terms of a single necessary, sufficient and specific cause, especially where there exists multiple-causative factors. For example, the measles virus is necessary, but not a sufficient condition for disease occurrence, let alone death. Additional factors, which may be broadly termed as causing susceptibility, are important. This is probably why Morgan questioned the appropriateness of my referencing Norton's causes of declining life expectancy in Russia. I provide my original writing for the benefit of the readers and to demonstrate the context in which it was written:

Colley cited the high prevalence of infectious diseases in the Russian Federation. His group accounts for this observation due to poor vaccination coverage. Certainly there have been dramatic outbreaks in infectious diseases in the Russian Federation, but to solely account for this due to poor vaccination coverage is overly simplistic and somewhat naive. Epidemiological consideration as to the rise of infectious diseases must take into account what are called potentiating factors called determinants of health. These are factors such as economic and social instability of a country, the rise in alcohol and tobacco consumption by the populous, poor nutrition, stress and depression, and a severely impaired health care system. Such factors played a major role in the overall decline of the health of the Russian populace and set the stage for the outbreak of infectious diseases.

From the above discussions, it has become apparent that Morgan's use of the literature to support their arguments lacks critical appraisal. They have made bold, arrogant and conclusive rhetorical remarks to support their pro-vaccination stance, with references that have been shown to be misinterpreted or selectively misrepresented. I highly recommend that at least one of the three doctors attempt critical appraisal of their references, so as not to bring into question their critical thinking abilities or their ulterior motive in this debate. Morgan's accusation of my practicing "selective evidence" during this ongoing debate points in the direction of an *ad hominem* attack.

Morgan's continued rhetoric about chiropractors' supposed reflexive opposition to immunization and the insinuation that "we believe what we believe because we believe it," demonstrates their lack of respect and consideration for the many doctors of chiropractic, parents, and guardians who have kept informed on the issues of vaccination and made their own decisions. Recent concerns of vaccine safety over the rotavirus vaccine and the hepatitis B vaccine as published in *Dynamic Chiropractic* are but two examples of the need for continued concerns.<sup>16,17</sup>

As for Morgan's comment that "Chiropractic's early attitude towards immunization was initiated by an unfortunate misperception" demonstrates their ignorance on the history on the development of vaccines and, more sadly, their ignorance of the discoverer of chiropractic, D.D. Palmer, a very well-read man for his time. In the late 1800s and early 1900s, several tragic outcomes resulted from the use of vaccines. Fears of adverse reactions and vaccine safety were very legitimate concerns in those times as they are today. I claim that this viewpoint indicates that D.D. Palmer was a *conscious contrarian*! In future articles, I will write more on this topic so that continued rhetoric like that of Morgan is placed in a more proper perspective.

From this and other numerous instances, Morgan has supported the universal immunization program. They tout how such a program eradicated smallpox worldwide and polio from most of the world. They continually demonstrate their lack of knowledge of the changing epidemiology in the United States (versus the world). Today, significant morbidity and mortality first-world countries can be attributed to chronic diseases (i.e., heart disease, cancer, stroke, accidental injuries and musculoskeletal conditions). Epidemiological studies have identified the risk factors and indicators as due to human behavior. Lifestyle modification as a means of prevention has been found to be efficacious and effective.

With respect to the very young, leading causes of death among infants in the United States are congenital anomalies, SIDS, respiratory distress syndrome and disorders related to short gestation. In children ages one to 14, leading causes of death are injuries; cancer; congenital anomalies; homicide; heart disease; pneumonia/influenza; suicide; meningitis; chronic lung disease; and HIV infection.<sup>18</sup>

With respect to infectious diseases such as pneumonia/influenza and meningitis, how many of these are preventable by addressing the multifactorial causes of disease (i.e., socioeconomic factors, lack of chiropractic care, etc.) rather than vaccination alone? As I have stated in previous articles, the application of the vaccination program must be tempered with the changing epidemiology. As I also pointed out, we must examine the long-term consequences of vaccines (i.e., autoimmune diseases). Future articles will address these considerations and how they may impact the vaccination issue.

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*Joel Alcantara, BSc,DC Assistant Professor, Life Chiropractic College West San Lorenzo, California*



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