Commentary

Anti-Vaccination Attitudes within the Chiropractic Profession: Implications for Public Health Ethics

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Abstract

Even though vaccination is generally seen as one of the great successes of modern public health, pockets of resistance to vaccination exist. One such pocket of resistance is within the chiropractic profession. Reasons for this may relate to the philosophical basis for the profession and the antipathy the medical profession has traditionally shown chiropractic. This paper examines the nature of chiropractic opposition to immunization and places it squarely in the context of bioethics and public health, with a professional emphasis on personal autonomy over community good.

INTRODUCTION

There is little question that vaccination has been one of the greatest successes of modern public health.\(^1\) And it is equally without question that the benefits of vaccination outweigh its risks. Given this, it is surprising to find that there remain many people who reject vaccination for their children. One survey,\(^2\) selected because the potential audience was comprised of those likely to reject vaccination, found that reasons for rejection included perceived dangers of vaccination and doubts about the reliability of vaccine information; that is, mistrust of vaccine makers and their relation to “corporate medicine.” Across the United States, opposition to childhood vaccination is seen in certain religious organizations, amongst certain political groups, and within some of the complementary and alternative medicine (CAM) professions. One pocket of opposition among mainstream CAM professions is that from within the chiropractic profession. This commentary will examine the nature of this opposition and place it into the dual context of bioethics and public health.
DISCUSSION

Background

Chiropractic is the third largest primary healthcare profession within the United States. There are over 65,000 practitioners within the United States, as well as upwards of another 10,000 or so across the globe (but mainly centered in Canada, Australia, and Great Britain), with perhaps as many as 12,000 students enrolled in chiropractic educational programs, mostly within the United States.

The profession began with the discovery in 1895 by Daniel David Palmer, a magnetic healer and grocer located then in Iowa, that he was able to restore the hearing of deaf janitor Harvey Lillard. Palmer had found a lump over Mr. Lillard’s neck at the level of the fourth cervical vertebra, and reasoned that if this was involved in his deafness, removing it should correct the hearing loss. This was indeed what transpired. Palmer subsequently set forth the basic proposition that disease (or, as he called it, dis-ease) was due mainly to neurologic factors, notably the compression of spinal nerves by misaligned or subluxated vertebrae. He then went several steps further, and related the presence of subluxation to his magnetic healer concepts of vitalism; in his case, he believed that the spinal adjustment improved the flow of a life energy he called Innate Intelligence. This was a necessary component for the presence of good health. He later claimed that innate intelligence was a part of what he termed Universal Intelligence (which others saw as the personification of God), and thus a religious overlay to chiropractic became prominent in its early history. This background is critically important in understanding the nature of current chiropractic opposition to vaccination.

Palmer’s son Bartlett Joshua (BJ) was known as the “developer of chiropractic.” He felt that chiropractic was not compatible with medicine, claimed it did not cure or heal, and stated that what it did was remove nerve interference so that the function of Innate Intelligence could be allowed to express itself freely. This was directly counter to the germ theory of disease. Without knowing it, or desiring to do so, BJ was asking a question that philosophers today still cannot answer: is disease caused and cured from within or without the body? And further, BJ felt that drugs were a poison that prevented the body from being able to naturally heal itself. This philosophy has influenced generations of chiropractors and, to many, this approach is one that is admirable and which places chiropractic as something counter to, rather than collaborative with, medicine. As a result, chiropractic suffered from years of medical persecution, formally ending only with the resolution of the Wilk v. AMA trial though likely not ending on a less formal basis. To this day, neither of the 2 main professional organizations in chiropractic (American Chiropractic Association, International Chiropractic Association) has issued a wholesale approval of vaccination. The policy statement from the American Chiropractic Association, the more progressive of the organizations, states the following:

“Resolved, that the American Chiropractic Association (ACA) recognize and advise the public that: Since the scientific community acknowledges that the use of vaccines is not without risk, the American Chiropractic Association supports each individual’s right to freedom of choice in his/her own health care based on an informed awareness of the benefits and possible adverse effects of vaccination. The ACA is supportive of a conscience clause or waiver in compulsory vaccination laws thereby maintaining an individual’s right to freedom of choice in health care matters and providing an alternative elective course of action regarding vaccination. (Ratified by the House of Delegates, July 1993, Revised and Ratified June 1998).”
This is not an endorsement of vaccination; rather, it reflects the virtue of autonomy. I also must note the development of an online website for vaccine information that was accomplished under the auspices of the Chiropractic Health Care Section of the American Public Health Association. This information website provides those who access it with up-to-date information on both the pros and cons of vaccine.

**Chiropractic Attitudes: The Research**

Given the fact that the accrediting body for chiropractic education, the Council on Chiropractic Education, has mandated that public health training be part of chiropractic education, what do surveys suggest about chiropractors’ attitudes toward immunization? Colley and Hass surveyed a random sample comprising 1% of US chiropractors to ask this question, and though they had a low response rate, they found that nearly 33% of those who did respond felt that there was no proof that immunization prevents disease, has not reduced disease prevalence, causes more disease than it prevents and that it would be safer to actually contract a disease than be immunized. Hawk and colleagues' study compared chiropractic faculty and students to chiropractic practitioners and found that 91% of faculty, 80% of students and just 62% of practitioners felt that chiropractors should provide both pro and con information about immunization to patients, with smaller percentages among all groups feeling that chiropractors should obtain information on patient immunization status.

Busse et al looked at Canadian chiropractic students in particular. This study was confined to students at the Canadian Memorial Chiropractic College. Just over half of the students surveyed agreed with vaccination (53.3%), with the highest level of those agreeing being in the first year of their studies (60.7%). By the time they reached the 4th year, only 39.5% agreed with vaccination. The level of those actively against vaccination grew through the course of the curriculum, from 4.5% in the first year, to nearly 30% by the 4th year. Keep in mind that this was a cross-sectional, not longitudinal, study. One additional finding was that those students who relied upon formal information sources about vaccination tended to be more supportive toward immunization, while those who relied upon informal sources (i.e., anti-vaccination speakers) were more distrustful. A companion commentary by Pless noted how this anti-vaccine attitude makes it harder for medicine to collaborate with chiropractic. Page and colleagues then looked at how chiropractors brought up the topic of immunization to their patients. This study used a set of interviews to examine how the issue was explored between physician and patient. Communication was generally initiated after media reports on the issue, or as a result of waiting room material; however, for some chiropractors, this was an opportunity to provide anti-immunization information and material. Much of the waiting room material had an anti-immunization slant. The authors then asked whether chiropractors felt prepared to discuss immunization with their patients. Less than half (45%) of the chiropractors surveyed felt that their training in chiropractic college prepared them to adequately counsel people on immunization, though 64% felt that post-graduate training they received improved their feeling toward preparation. The information sources used was predictive of negative attitudes toward immunization.

In another study, Medd and Russell conducted a secondary analysis of the Canadian data to examine personal and professional behavior by chiropractors toward vaccination. While nearly 90% of those involved had themselves been immunized, only 35.7% would accept immunization for themselves in the future; while 66% had immunized their children, only 21% would refer patients for possible immunization. Those with children who were immunized were far more likely to refer patients for immunization than those who were not (OR= 6.2). And Russell and colleagues’ work had a number of
highly interesting findings. In examining behaviors of chiropractors, they found that chiropractors did commonly advise their patient about freedom of choice regarding immunization and that they often directed patients toward sources of information; however, a large portion of those studied provided information on risk or advised against immunization compared to those who provided information on benefits. Only 41.7% of those surveyed felt immunizations were safe, that 60% felt immunization should never be given to children under the age of 1, and that 30% felt they should never be provided to the elderly. One key observation was that a substantial proportion of chiropractors were unsure or agreed with a number of common misconceptions about vaccination, but most then provided information about risks to their patients. It is important to note that this study was drawn from a population of chiropractors located in Alberta, Canada, and may not represent American attitudes. In a follow-up study, Russell, Verhoef and Injeyan\textsuperscript{15} found that 60% of Alberta chiropractors would have interest in participating in community immunization awareness programs. Interestingly, with regard to the influenza vaccine, those people who see chiropractors were no less likely to be vaccinated than those who never used any CAM therapies.\textsuperscript{16} Taken as a whole this raises questions about chiropractic training toward the precepts of public health. Most chiropractic colleges offer a stand-alone course in public health. At Palmer College of Chiropractic, where I teach, the course is located in the fourth trimester of training and meets 3 hours per week for 15 weeks. The catalog description for this course states “This course addresses the health issues facing today’s communities, from the foundations of community health to the health of the nation, healthcare delivery and environmental health and safety.”\textsuperscript{17} Despite receiving training public health, student attitudes toward immunization appear to change as they move through their chiropractic education.\textsuperscript{8} And all of this with the caveat that training in both public health and evidence-based practice is mandated as part of the accreditation process. Further, a paper written by a number of leading chiropractic scientists\textsuperscript{18} in a special issue of the profession’s leading scientific journal about the current state of chiropractic and public health opens by noting the very basis for anti-vaccination opposition: “The fundamental principles of chiropractic care focus on health and the body’s innate ability to heal itself.” Why does this opposition happen, and what are the reasons offered for the opposition toward vaccination? What are the ethical implications?

Busse and colleagues offers some answers, in 2 papers.\textsuperscript{19,20} Recurring themes that appear in these arguments include the following:

- Immunizations are not effective
  - Cyclical patterns of diseases
  - Reduction in disease incidence is attributable to improved standards and living and environment
  - Disease outbreaks still occur in fully vaccinated communities
- Vaccines can be harmful
- There is disagreement about, and even opposition to, immunizations among medical experts
- Immunization policy is governed by the medical-pharmaceutical complex and motivated by greed
- Any compulsory medical treatment is unacceptable
- Vaccinations are unnecessary
- Acceptance of vaccination is to repudiate chiropractic philosophy

Having noted these issues, Busse and colleagues then demonstrate how each is applied to arguments offered in chiropractic trade publications.\textsuperscript{20} They then go on to deconstruct each of the arguments offered just above. What must be understood is the context in which these arguments are being offered- that refers to the statement above that opens the series of articles about public health written
by leading chiropractic scientists and academics: the clash of the older vitalistic philosophy of
chiropractic and the more modern scientific advances of medicine. For political chiropractic, this poses a
problem. While it is apparent that the American Chiropractic Association has opted to offer an approach
to vaccination that is based upon an appeal to autonomy (5), this is one of the few times where an
argument is specifically placed in an ethical context offered up to counter mandatory vaccination. Other
arguments use science not to provide a parent with the necessary information to make an informed
decision about vaccination, but rather as support for an implicit worldview that exists within the
chiropractic profession: “the power that made the body can heal the body.” There remains a small
percentage of chiropractors, known as principled straight chiropractors who do not believe in diagnosis
(because that is a part of medicine), and who state that they are not offering treatment; their
raison d’être is solely to locate the chiropractic subluxation and remove it, to allow the best expression of
Innate Intelligence. Thus, we have a clash between an empirical form of chiropractic and one that is
faith-based and vitalistic, played out among our faculty, and influencing our practitioners, who then
interact with patients, potentially offering them flawed information.

Ethics

Such discussions may at times fail to consider the ethics involved in this opposition. This may reflect
arguments based on a limited reading of the literature, and may reflect diametrically opposed visions of
chiropractic. What then ensues are attempts by practitioners to provide ammunition for a conscientious
or religious exemption to vaccine. There appears to be little consideration given to examining the
question of vaccination from either a utilitarian or a Kantian perspective or even to examine the
communitarian argument that vaccination is a public good. The argument offered is based on personal
autonomy; this is my child, and no one can tell me what I have to do to protect my child’s health.
Tension is created between personal autonomy and social good, and often the former “wins.” The
parents involved here, and the doctors leading them, are not fairly providing them with an assessment
of risk versus benefit or with all the pertinent information. To a great extent, neither does the media,
not when a celebrity such as Jenny McCarthy can publically express her belief that her child’s autism is a
direct result of thimerosol in his vaccine, when the evidence suggests thimerosol has no relationship to
autism. An emotional appeal is made and parents respond. Ethics is superseded. Evidence does not
matter. This is complicated when past administrations, and recent presidential candidates of the United
States exhibit anti-scientific attitudes as a political tactic.

An editorial in Vaccine offers a rationale for compulsory vaccination. The state has an interest in the
protection of its subjects. It wishes to ensure that a child’s safety is protected, and that a child is not put
to risk through parental neglect or ignorance. This may be paternalistic at times, such as in the creation
of seatbelt laws. But it may also be part of a consideration that balances community good against
individual autonomy. There is an ethical issue contained within the concept of so-called herd immunity;
that is, it is possible for a child to be protected from disease not because his parents accepted a small
risk in having him vaccinated, but because other parents have done so- this is a “free ride,” wherein the
child gets all the benefit without any of the risk. In terms of the ethical precept of justice, this is surely
unfair. Additionally, failure to vaccinate can impact the so-called herd immunity that develops when a
certain percentage of the population is vaccinated.

As noted above, oftentimes chiropractic physicians argue this issue based solely on a plea based on
autonomy. They do not do so based on religious exemption, or even on a philosophical basis, though
that might offer the most effective way to argue. Many states allow such exemptions, though this is not
true across the globe. Countries such as Germany and France do not allow an opt-out of compulsory vaccination - they are arguing strongly in utilitarian terms. In the US, powers were granted to the states in the 1905 Jacobson case, which noted that there is no absolute right to be freed from restraint at all times. This was an acknowledgement that the states could use their power to protect the health of all, by imposing on individual interest within reasonable boundary. Today, all 50 states have laws linking vaccination to school attendance. There are allowable medical exemptions, and some religious and philosophical ones. In this, we see the classic clash of the bioethical precept of autonomy versus the public health precept of community good. This issue is probed in 3 papers by Salmon and colleagues. In one of the papers they offer guiding principles for crafting nonmedical vaccination exemption clauses; this at least suggests that the impact of such policies on a community be examined. I have not seen such consideration within any chiropractic argument. With the advent of these exemptions, the growth of childhood preventable disease is again rising. The philosophical reasons offered by some members of the chiropractic profession are actually in service of an intra-professional divide and a result of an attempt to create an identification of chiropractic outside that of medical health care, not because of a reasoned philosophical discussion based on ethical principles related to public health ethics. Yet the ramifications of that divide and its implications actually help to create an environment where the profession contributes to the growth of childhood illness.

Smith and Davis offer a possible way forward. They argue convincingly that a concerted chiropractic effort to achieve universal immunization compliance among users of chiropractic would have widespread public health benefits. They note the challenges to doing so, and in a “thought experiment” in which they did a sensitivity analysis of their survey data, they found that for people with certain comorbidities (such as hypertension or emphysema), such a program would lead to more chiropractic users receiving flu vaccine (OR=8.0), pneumococcal vaccine (OR=9) or both (OR=19).

Taking all this into account, I argue that efforts need to be taken to create better vertical integration of information about public health in the chiropractic curriculum. Vaccines, like any medical intervention, are not risk free, but are certainly generally safe for use. And I acknowledge that the pharmaceutical industry relies on developing new drugs, new vaccines and new interventions which may be brought to market too quickly. Patients and physicians are right to consider both the risks and benefits of the use of a given vaccine. But often, discussions revolving around vaccination are not based on a detailed reading of actual literature in which the risks and benefits are properly assessed. Instead, the discussions are based on philosophical issues alone. While vaccinations are covered in the public health courses offered by chiropractic institutions, this is almost always in the context of that single class. What is being taught in early trimesters may not be reinforced in later ones, and it appears that students are exposed to an anti-medical position by some members in the chiropractic educational community.

It is important to note that vaccination is outside the chiropractic scope of practice. Chiropractors cannot offer vaccinations to their patients. However, as primary healthcare practitioners, patients seek advice from chiropractors for all sorts of reasons, and chiropractors may not shy away from providing information to patients when asked. The best way to address questions from patients is to be knowledgeable about both the risks and benefits of vaccination and the ethics involved in accepting or rejecting their use. Hawk et al have offered a number of papers in which they demonstrate a strong, evidence-based approach to placing vaccination into the context of health promotion, and these can provide a guide to chiropractors wishing to use the best current evidence.
This clash of worldviews, both within the profession and between the chiropractic profession and the medical profession, serves no one well, does not add to the community good and privileges autonomy over any communitarian benefit.

**CONCLUSION**

Anti-vaccination attitudes till abound within the chiropractic profession. Despite a growing body of evidence about the safety and efficacy of vaccination, many chiropractors do not believe in vaccination, will not recommend it to their patients, and place emphasis on risk rather than benefit. This is positioned within a context privileging individual autonomy, which by many is seen as core ethical value. But this puts the chiropractic profession outside the greater healthcare community and may contribute to its continued marginalization and small market impact. The public health community looks at populations, rather than individuals and uses a separate but no less critical ethical platform, that of community good. Chiropractic is a public health profession. As such, it should work to provide patients the best and most current evidence, free from bias and belief, so that the individual may choose based on having full and accurate information. That would serve the public good.

**References**


4. Wilk v. American Medical Association, 895 F.2d 352 (7th Cir. 1990)


16. Davis MA, Smith M, Weeks WB. Influenza vaccination among chiropractic patients and other users of complementary and alternative medicine: are chiropractic patients really different? *Preventive Med* 2012;54:5-8


