EMERGING DISEASES

Protecting Your Family from Pandemics, Viral Threats, and Rogue Vaccines

A WND SPECIAL REPORT BY

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INTRODUCTION

Americans today face many potential threats to their security and well-being, from economic problems to out-of-control government to terrorism. One particular type of emerging threat that could affect every man, woman and child in America, but about which reliable and practical information is hard to come by, is the growing number of emerging diseases now facing Americans. In this e-book, we will take a good look at them – what they are, where they’re coming from, how they spread, what the risks are to you, and most important, what you can do to protect yourself and your loved ones.

The first “emerging disease” threat most people think of, which recently gave America a huge scare, is Ebola – so we’ll start there. Soon after that died down, there was the outbreak of measles traced to Disneyland, which spread to many states, sickening fewer than two hundred persons nationwide and killing no one. This was treated as a grave public health emergency, and became the pretext for introducing legislation in many states to eliminate most exemptions to mandated vaccines. Thus, in the following pages we’ll explore the role of near-universal vaccination in guarding against reemergence of childhood diseases.
Finally, we’ll also examine diseases few have heard of, such as chikungunga and Chagas, plus known scourges like tuberculosis that seldom emerge into national media consciousness – but all are here, now, in America. It’s important to know about them, because a little sound knowledge goes a long way in protecting yourself and your family.

**EBOLA**

Ebola virus had mostly vanished from the news until an American who contracted the disease in Sierra Leone was flown to NIH on March 12, 2015. As of March 14, ten Americans were being flown home from Sierra Leone for isolation and monitoring. Numbers of patients being tracked are reported at www.ebolaoutbreakmap.com.

The disease never will be gone because it is a zoonotic disease that lives in various wild animals. Additionally, at least a limited degree of airborne transmission, vociferously denied by the Centers for Disease Control and Prevention (CDC), has been shown to be possible. Researchers have found Ebola virus on the outside of face masks worn by persons caring for patients, according to a February 19, 2015, article in the Washington Post. Current knowledge about transmission is nowhere near complete, say international experts.

As of February 20, 2015, Ebola had infected more than 23,000 people and killed more than 9,400 in the worst outbreak on record, but the worst-case predictions for Africa have not been borne out. In early March 2015, the last Ebola patient in Liberia, the epicenter of the epidemic, left a treatment center. But in the week of February 6, there was an upward bump in the weekly total of new cases in Guinea, Sierra Leone, and Liberia from 99 to 124. Only 21 percent of new cases in Sierra Leone were from known contacts, meaning health officials have no idea how the majority of new patients are being infected and where the virus might be lurking. The coming wet season (June to November) will make efforts to contain the disease more difficult, according to the World Health Organiza-
tion (WHO). A three-day **lockdown in Sierra Leone**, during which health officials went door to door seeking cases, turned up hundreds of suspected cases.

According to ebolaoutbreakmap.com, the Philippines Department of Health was looking for new quarantine facilities; as of late February 2015, it had not stopped imposing a twenty-one-day quarantine on travelers from Ebola-affected areas.

In the United States, travelers arriving by air from countries with reported cases of Ebola must be screened. The level of surveillance depends on the perceived degree of risk and continues for twenty-one days. Hospitals are unlikely to make the same error as Texas Health Presbyterian in Dallas did with Thomas Duncan. Those with travel or exposure history will be promptly isolated, so your chances of sitting next to a person with Ebola in an American emergency room are remote. The health department will be notified, and **protocols are in place** to transfer patients with likely Ebola to a center that is prepared to receive them and treat them appropriately.

If the optimistic view is vindicated, the outcome of the current Ebola epidemic may be similar to that of past outbreaks. The disease will vanish into the bush only to reemerge unpredictably some years later, perhaps in a remote location. It will likely show up in the same manner as it did in West Africa this time, when a boy killed an infected bat. In Africa, bats and other wild animals are hunted for food and are an essential source of protein for many people.

If a hastily developed vaccine had been rapidly deployed, it likely would have gotten credit for controlling the epidemic.

The limited outbreak in the United States revealed a number of vulnerabilities in the system. As complacency returns and vigilance diminishes, vulnerabilities will remain. For example, there are only **three aircraft**, owned by Phoenix Air Group, for safely transporting Ebola patients – one at a time, with a twenty-four-hour decontamination procedure between flights. It maintains a negative pressure inside the biological containment unit to prevent any air from leaking out. Air from inside the unit is pumped out of the aircraft.

“The world has been asleep for 50 years regarding infectious diseases and *Ebola is the wake-up call,*” observed Ebola expert Dr. Leslie Lobel of Israel’s Ben-Gurion University. “Today, most of the world seems to understand the need to screen passengers in airports using infrared cameras for elevated temperature as a simple precaution – the U.S. is lagging behind.”

**Additional needs** include better availability of rapid diagnostic tests such as quantitative polymerase chain reaction (qPCR), and the use of promising therapeutic approaches such as plasmapheresis, now hampered by inability to get rapid approval, writes Bill Gates in an essay published online by the *New England Journal of Medicine* on March 18, 2015.

**CHIKUNGUNYA**

Chikungunya is a mosquito-borne viral disease that is greatly increasing worldwide. Until the end of 2013, there were virtually no cases in the Americas that had not been imported from Africa. Chikungunya surfaced in the Caribbean in December 2013, and six months later there were more than one hundred thousand confirmed and suspected cases from seventeen countries in the Caribbean and South America. By the end of February 2015, there were more than 1.2 million cases.

There were only 28 cases in the United States in 2013, which increased to 2,013 in 2014, and 11 cases were acquired by local transmission in Florida. The remainder were in persons who had traveled to endemic areas, particularly to Haiti, where the disease is raging.

The name of the disease translates as “bent over,” because that’s how people tend to walk, owing to excruciating muscle and joint pains. Most people recover, but some are left with a syndrome that looks very much like rheumatoid arthritis. Treatment of the arthritis with prednisone as if it were rheumatoid arthritis may cause prob-
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problems by reducing immunity to the virus.

The vectors of the disease are *Aedes albopictus* and also *Aedes aegypti*, both of which are quite common in the United States. The disease is transmitted from human to mosquito to human. It does induce immunity so that an outbreak will eventually die out. The key public health measure is to keep mosquitoes away from infected people and undertake mosquito control measures in affected areas.

A version of a standard live attenuated measles vaccine is being tested to see if it works against chikungunya.

DENGUE FEVER

Dengue fever, translated “break bone fever,” is another mosquito-borne viral disease, with the same two mosquito vectors as chikungunya. Outbreaks are frequent in the tropics. This is more serious than chikungunya because a certain proportion of the cases develop a hemorrhagic fever, which can be fatal. This makes treatment of the joint pains with nonsteroidal anti-inflammatory agents problematic because these may cause gastritis and bleeding.

Again, the most important public health measure is mosquito control. There is no vaccine and no specific treatment.

Although it is frequently stated that vaccines (most importantly, smallpox vaccine) were the greatest public health measure ever, at least if you neglect sanitation and clean water, this honor probably belongs to DDT (dichlorodiphenyltrichloroethane), which is credited with saving half a billion human lives. DDT helped to wipe out malaria and other arthropod-borne diseases in much of the world.

While DDT was overused in agriculture, it is extremely safe and effective. Exaggerated, even fraudulent environmental concerns spearheaded by nonscientists like Rachel Carson led to its ban by the US Environmental Protection Agency in 1974, a decision made by one man, William Ruckelshaus, in defiance of a truckload of scientific evidence attesting to its safety. Other pesticides are far
more expensive and far more toxic. Millions of Africans, especially babies, are dying of malaria. Their lives likely could be saved by indoor spraying with DDT. Some African nations are doing this with good effect, but they must fight determined opposition from worldwide environmental activists. Foremost journals such as Science, the publication of the American Association for the Advancement of Science (AAAS), do not even mention this modality in lengthy features on malaria.

With dengue and other tropical diseases moving north, carried by an influx of infected persons and the insect vectors, perhaps the United States will someday reconsider the ban on our most effective weapon.

CHAGAS DISEASE

Chagas is another tropical disease that has been largely unknown in the United States although quite prevalent south of the border. This is carried by the kissing bug, also called the reduviid bug or triatomine bug. The pathogen is Trypanosoma cruzi, a protozoan parasite that has other animal hosts such as pack rats. As Chagas is a zoonotic disease, it will be impossible to completely eliminate it. Although we have the vectors in the United States, some think the reason we have not seen indigenous transmission is the different habits of the local kissing bugs. Transmission may depend on whether the bug defecates into the wound it creates by biting, or whether the person rubs the feces into the wound. The parasite may cause unilateral swelling and redness around the eye, eyelids, or lips where it penetrates the skin.

The optimal public health response would be to keep infected persons from entering the country. Although donated blood is now being screened for Chagas disease, entrants to the United States, particularly illegal ones, are not. There is no vaccine, and treatment is not very satisfactory. The end stage, which may occur years later, may involve severe dilation of the esophagus and heart failure.
People who have pack rats around their house can expect to have reduviid bugs also. But efforts to get rid of the pack rats could have the undesired effect of making their parasites scurry to look for human hosts instead.

In Oaxaca, Mexico, the use of DDT to control malaria also resulted in the virtual elimination of household reduviid bugs and a decrease in the transmission of Chagas disease.

**Tuberculosis**

Tuberculosis (TB), or “consumption” as it was called in the past, is highly contagious. You can catch it on the bus. It killed millions before it was essentially eradicated in the United States. In the 1920s, TB was the eighth leading cause of death in children one to four years old. It was drastically reduced in the United States by the 1960s with improved sanitation, medical care, effective antibiotics, and public health tracking. However, in the rest of the world, TB is still a widespread and deadly disease. In 2012, 15 percent of the reported 8.6 million cases resulted in death. TB is second only to AIDS as the greatest killer worldwide attributable to a single infectious agent, and the combination of AIDS and TB is lethal, with each accelerating the progression of the other.

The tuberculosis bacillus is adept at developing resistance to drugs, so that a multidrug regimen continued over a long period of time is essential. In many areas of the world, this expensive regimen is difficult or impossible to obtain. In the United States, considerable public health resources must be devoted to following patients with active tuberculosis to be sure that they take their medications for an adequate period of time and are rendered noninfectious.

Unfortunately, there is now a multidrug-resistant form (MDR-TB) that does not respond well to treatment even with a complicated and expensive drug protocol that must be taken over a two-year period. These drugs can cause severe adverse reactions. There is also a form of TB that doesn’t respond even to these
second-line drugs and is often fatal. This extensively drug resistant TB (XDR-TB) accounts for about 10 percent of cases in some countries, particularly Central and South America and India.

In 2013, according to CDC figures, 64 percent of TB cases and 91 percent of all MDR-TB cases in the United States occurred among people born in other countries. MDR-TB is spreading rapidly in places such as India and Pakistan. Illegal aliens from these countries are among those crossing our southern border. Of course, illegal immigrants do not receive health screening such as tuberculin skin tests (PPD) or chest x-rays required to immigrate legally.

There is a vaccine for tuberculosis, BCG (Bacillus Calmette–Guérin) vaccine, which is used in the rest of the world but generally not in the United States. Its efficacy is limited. One reason for not using it here is it causes the recipient to have a permanently positive PPD, thus eliminating the usefulness of a very common and inexpensive screening test. Controlling tuberculosis requires the identification of all active cases, with adequate isolation until the patients are rendered noninfectious with an effective antibiotic regimen, if this is possible.

**SMALLPOX**

One of the most lethal diseases in the history of the world is smallpox. There are some variants such as monkeypox that can occur in primates, but smallpox itself is a human disease without an animal reservoir. In the twentieth century alone, smallpox was responsible for 300 million deaths worldwide.

With a vigorous public health campaign including quarantining infectious individuals and nearly universal vaccination, this disease was declared eradicated, and vaccination ceased in 1968. Samples of the virus were kept in freezers in Moscow and Atlanta. There have been some concerns raised about the security of this virus at the CDC.

Despite its supposed extinction outside highly secure laboratories, smallpox is included here because it is one of the best potential
bioterrorist weapons. It is extremely contagious and is lethal in a high percentage of cases. An effective vaccine exists so that the aggressor can protect its own troops and population. We know that smallpox has been weaponized in vast quantities by the former Soviet Union among other nations, and smallpox was loaded into warheads to be carried on intercontinental ballistic missiles. It is doubtful that every last vestige of that stockpile has been destroyed. It is one of what Lowell Wood, developer of the proposed “Brilliant Pebbles” antimissile defense system, called “the really big threats.” Several scenarios have been proposed, both in fiction and nonfiction, for introducing smallpox through deliberately infected persons (“martyrs”), who could infect many others before the disease was even recognized.

Most living physicians have never seen a case of smallpox, so it is likely that the diagnosis would be missed for some time. Today’s physicians may mistake it for chickenpox.

It has been said that the children’s rhyme “Ring around the Rosie” tells how to diagnose smallpox.

Smallpox generally begins with a chill and a fever that reaches 102 degrees Fahrenheit and persists for two days. Fever in chickenpox (varicella) tends to be slight and lasts only twenty-four hours. Back pain and vomiting are usual early in smallpox, but absent or rare in chickenpox. The rash of smallpox begins on uncovered parts of the body, especially the face and involves the palms and the soles. Chickenpox, on the other hand, begins on the covered parts such as the torso. References say that the pocks in smallpox have a prominent red base, hence the “ring around the rosie,” while in varicella this red base is slight, if at all present. In smallpox, there is generally one crop of lesions that are all in the same stage from a spot to a raised lesion to a blister to a pustule, each lasting several days. Chickenpox may have several crops of lesions in various stages.

The odor of rotting flesh is said to be prominent in smallpox victims. My mother, a survivor of the 1928 outbreak of smallpox in St. Joseph, Missouri, mentioned the odor first when asked how she
would recognize a case of smallpox. It was said to be distinctive and unforgettable, and may occur quite early, perhaps even before the rash (Doctors for Disaster Preparedness Newsletter, November 2006).

The United States supposedly has adequate stockpiles of smallpox vaccine that could be used in the case of an epidemic. If quantities prove insufficient or the vaccine, after long storage, no longer retains its potency, it might be necessary to recall the earliest method of inoculation or variolation, in which some pus from a lesion of a smallpox (variola) victim was injected into the skin of the person to be inoculated. This induced a disease that was thought to be milder and less likely to be fatal than if contracted by inhalation or other more massive exposure to the virus.

WHOOPI NG COUGH (PERTUSSIS)
Periodically there are outbreaks of pertussis. In the past, this was a particularly dreaded disease that caused many thousands of fatalities in babies. It also causes debilitating and distressing symptoms of spasmodic coughing and “whooping” that persist for weeks (the “hundred-day cough”). Even in fully vaccinated adults, it is a not uncommon cause of a persistent cough. With the very high rate of immunization in children, it is probably adults, whose immunity has waned, who are largely responsible for transmitting the illness. In a recent outbreak in my county in Arizona, the public health department reported that approximately half of the cases were in fully vaccinated persons, although these people were said to have a milder case than they would have had if unvaccinated.

Treatment with the antibiotic erythromycin has been recommended, but its efficacy is questioned. The public health department’s emphasis is on prevention through vaccination.

The pertussis vaccine is given to children in combination with tetanus and diphtheria toxoid. In all of these diseases, the symptoms are caused not by the infectious organism itself, but by the toxin that it produces.
One of the books that sparked the anti-vaccine movement was *DPT: A Shot in the Dark* by Harris L. Coulter and Barbara Loe Fisher, whose son suffered a case of encephalitis after this vaccine, with severe permanent brain damage. The whole-cell pertussis vaccine in use at that time (DTwcP) is a very dirty vaccine, containing all kinds of bacterial components. The United States lagged Japan by ten years in access to the much safer acellular pertussis vaccine (DTaP). This, however, is probably somewhat less effective. Some adults having expressed an interest in getting a booster shot, the FDA has now made this available.

**Treatment with ascorbic acid** (vitamin C), described in the *Canadian Medical Society Journal* in 1937, has been largely forgotten. Treatment of nine children with 125 mg to 500 mg vitamin C per day appeared to markedly shorten the duration of paroxysms from weeks to days. In the test tube, ascorbic acid has been shown to neutralize certain toxins. I am not aware of any controlled study, with some children being treated, and others not. It would be difficult to justify withholding a harmless treatment that seemed to bring relief to see whether untreated children suffered longer.

**MEASLES**

Measles, which in pre-vaccine days was a rite of passage experienced by most children, is extremely contagious. One might be able to acquire it by breathing the air in a room where a measles patient had been up to two hours earlier. It is caused by an enveloped RNA virus.

Measles was declared eliminated from the United States in 2000, but sporadic cases occur, with the annual number of cases ranging from a low of 37 in 2004 to a high of 644 in 2014, owing to exposure to persons from an area of the world that was having an outbreak, including, but not limited to, England, France, Germany, India, and the Philippines. Patients are considered to be contagious from four days before to four days after the rash appears.

Measles typically begins with a prodrome of fever (as high as
105 degrees Fahrenheit) and malaise, cough, coryza (a stuffy, runny nose), and conjunctivitis – the “three Cs.” Koplik spots, which are small, white spots (often on a reddened background), may be seen on the inside of the cheeks early in the course of measles, two to three days before the typical rash. These spots if present clinch the diagnosis of measles. They are not always present and may fade when the rash develops. Since they may occur before maximum infectivity, isolation of the patient when they are first seen may help in containing spread of disease. The incubation period ranges from seven to twenty-one days. The rash usually appears about fourteen days after a person is exposed. It usually begins as flat red spots that appear on the face at the hairline and spread downward to the neck, torso, arms, legs, and feet. Small raised bumps may also appear on top of the flat red spots. The spots may become joined together as they spread from the head to the rest of the body.

Measles is still an important cause of mortality worldwide. From 2000 to 2008, global mortality attributed to measles declined by 78 percent, from an estimated 733,000 deaths in 2000 to 164,000 in 2008. While much of the decline is attributed to vaccination, a 95 percent decline in measles mortality occurred in the United States between 1915 and 1958, although no vaccine was available before 1963. Mortality in the United States is currently one or two per one thousand cases of measles. The pre-vaccine US population mortality from measles was about two in 1 million persons. The number of post-vaccine measles deaths in the United States in the mid-1970s was about the same as pre-vaccine in the early 1960s.

In poor countries, children are much more likely to die. Vitamin A deficiency may be one reason. In severe cases, the CDC recommends giving infants under six months 50,000 IU vitamin A immediately on diagnosis, repeated the next day. From six to eleven months old, the dose is 100,000 IU, and for older children, 200,000–400,000 IU.

Measles also has a significant complication rate. Many children get an ear infection, and this can result in permanent hearing loss.
Pneumonia may occur, requiring hospitalization. The most dreaded complication, encephalitis (swelling of the brain), occurs in one child out of every one thousand who get measles. It can cause convulsions and can leave the child deaf or with intellectual disability.

THE 2014–2015 MEASLES OUTBREAK AND MANDATORY VACCINATION
The measles-mumps-rubella (MMR) vaccine is part of the CDC “recommended” schedule of childhood vaccines, which now includes about thirty injections from birth to six years, plus annual influenza vaccine, covering fourteen diseases. Most states require vaccines against measles, mumps, rubella, polio, diphtheria, pertussis, and tetanus to attend school or day care, unless an exemption is granted. In addition to medical exemptions, which are increasingly hard to get, some states provide for religious or philosophical exemptions.

The 2015 measles outbreak is being used as a rationale for a movement to deny most non-medical exemptions. The parents of unvaccinated children are being blamed for the outbreak, which allegedly began at Disneyland and spread to a number of states. Maybe parents can decide to let their own children take the risk of measles, but, the argument goes, they should not be allowed to put others at risk, particularly the vulnerable children who have an immune deficiency or for some other reason cannot be effectively protected.

Some physicians are even excluding vaccine exemptors from their practice, saying that they are protecting the others in their waiting room – as if you could acquire a disease simply by being unvaccinated. Is the push to remove exemptions now an example of never letting a crisis go to waste, even if you have to create the crisis? Or is this outbreak a wake-up call about what Paul Offit, M.D., calls “the anti-vaccination epidemic” and the prelude to “an alarming comeback” of whooping cough, mumps, and measles? Here are some facts pertaining to the measles outbreak:

- The predominant strain, genotype B3, appears to be the same one that has sickened thousands in the Philippines.
• Los Angeles International Airport (LAX) has a large number of nonstop flights from Manila, and is near a hugely popular amusement park. This is much more likely to account for the origin of the outbreak than young California parents who decided against MMR.

• Measles cases include fully and partially vaccinated individuals as well as unvaccinated ones.

Forcing almost all children to be vaccinated would not necessarily prevent outbreaks. At least one US outbreak was traced to a fully vaccinated twenty-two-year-old theater employee who contracted measles but was not isolated because it was thought that vaccinated people weren’t contagious (Science, April 14, 2014). China, which has a 99 percent vaccine compliance rate, has had more than 700 measles outbreaks from 2009 to 2012.

ARE THERE GOOD REASONS TO DECLINE A VACCINE?
Vaccine critics (“anti-vaxxers”) are often pilloried as being “anti-science.” “The science” is supposed to show that the risks of the disease greatly outweigh the risks of the vaccine. Such a statement is mathematically absurd. One cannot say that A > B without knowing the value of both A and B. Moreover, the risk to your child of a measles complication is the risk of the complication given that he gets measles times the risk of getting measles. With only 600 cases in a nation of 350,000,000, the latter risk is exceedingly small. The fear is that this risk will dramatically shoot up if we fall below some theoretical threshold of “herd immunity” (I prefer to call it “population immunity” when speaking of human beings as opposed to cattle).

It is said that we need to have 90 to 95 percent vaccinated to achieve population immunity for measles. In fact, more than 90 percent of American children do get MMR, but in some areas the rate may fall to around half. Is it fair, then, for parents to exempt their children from the risk and be “free riders” on those who do
vaccinate? Note there is no disagreement about the existence of some risk – just read the package insert.

In general, this is a philosophical question, but the answer depends to some extent on the severity of the vaccine adverse effect (death, lifelong disability, chronic disease, etc.) as well as its probability. How big a risk can society demand that your child take to avoid the chance that he will get measles and transmit it to another child who suffers a complication?

The risk of vaccine complications is not precisely known, for several reasons:

- Rare side effects, say < 1 in 10,000, will not be detected in safety studies.
- The safety of combination vaccines or simultaneous administration of several vaccines is not specifically tested.
- After-market surveillance largely depends on voluntary reporting to the Vaccine Adverse Event Reporting System (VAERS). Your physician may not know how to file a report (you can do it yourself, however), or he may think that “the vaccine doesn’t do this,” and your child’s event is a coincidence.
- There are probably factors that make some children much more susceptible than the average.
- There may be vested interests in concealing the extent of dangers.

IS THERE AN MMR-AUTISM LINK?
The possible MMR-autism connection is the most feared complication. Numerous parents have reported that their normally developing child stopped making eye contact or communicating soon after receiving MMR, and was found to suffer from regressive autism.

The attempted refutation of this concern generally starts by excoriating the first person to report the possibility. Andrew Wakefield, a British pediatric gastroenterologist, published an alleg-
edly fraudulent study, with eleven coauthors (ten of whom have recanted), in the *Lancet*, a highly respected British medical journal, in 1998. Wakefield was stripped of his medical license in Britain because of this paper.

Widely circulated cut-and-paste smears are repeated by many well-respected people who apparently never read the actual article, much less Wakefield’s book about the saga, *Callous Disregard*. The vast majority of physicians may be subconsciously following advice that Wakefield gives in talks: If you observe something like this and feel inclined to report it, *don’t*. Your professional career could be ruined, as his was.

The *Lancet* article is not a study of MMR vaccine. It is a series of case reports of some dozen children who were referred to the Royal Free Hospital because they were autistic and had very distressing bowel symptoms. The article concluded that a number of autistic children have a form of inflammatory bowel disease, which others indeed have confirmed. Treating the symptoms appropriately can greatly improve the child’s comfort even if it does nothing for his autism. The article mentioned parents’ observations that their child’s behavior had changed quite suddenly and dramatically soon after receiving the MMR vaccine. Wakefield et al. presented this as a question that deserved future study and made the recommendation that parents might consider using the monovalent measles vaccine instead of MMR.

The parents never retracted their reports. Drug companies soon withdrew monovalent measles vaccine, so as not to harm the MMR program. It is now not available in the United States (Merck’s MMR-II is the only FDA-licensed product), but single measles vaccine is still available in several Third-World countries.

Had this article contained only the reports, it would have been forgotten long ago.

Instead of simply performing and publishing studies that sought and failed to replicate Wakefield’s findings, which is the proper method of science, Wakefield’s adversaries launched a ruthless cam-
There are epidemiologic studies employing complex statistical methods, which are frequently cited as “overwhelming” evidence that debunks the MMR-autism link. The largest is a study of all children born in Denmark from 1991 to 1998 (Madsen KM, Hviid A, Vestergaard M, et al. A population-based study of measles, mumps, and rubella vaccination and autism. *N Engl J Med* 2002; 347(19):1477-1482). The statistical methodology is problematic, and later prevalence data suggest a temporal association between the introduction of MMR and a rising autism rate in Denmark, write Goldman and Yazbak, who also state that clinical and laboratory studies demonstrate the biological plausibility of an MMR-autism link. Nevertheless, the Institute of Medicine brought research in this area to an early end.

The prestigious Cochrane Review claiming safety of MMR was published in 2005 against a backdrop of litigation. The British government appears to have substantial financial interests in those litigation claims failing. Clifford G. Miller, Esq., writes:

> There is evidence the British government was involved directly in a media and political campaign to discredit the expert medical evidence underlying those claims. There is also suggestive evidence that the British government may have used undue influence to stop statutory funding of the claims.

> The conclusions of the Cochrane MMR review are not supported by, and contradict, the evidence presented in the review. Having found inadequate evidence of safety in the papers studied, the review’s conclusion that the millions of doses of MMR vaccine administered worldwide are safe is not science based. It is based on the circular assertion without cited evidence that the vaccine is safe because millions of doses are administered.

> The review also shows that studies into the extent of the adverse effects are too limited to say how extensive these adverse effects may be, and consequently to say whether the vaccine is safe. The review provides no comparative evaluation of MMR vaccine safety and effectiveness against other measures, such as
single vaccines, placebo, no vaccine, or modern treatment options. It provides no evidence to refute the Wakefield hypothesis of an association between MMR vaccine, regressive autism following previously normal development, and a novel form of inflammatory bowel disease.

Despite “main results” stating that “exposure to MMR was unlikely to be associated with Crohn’s disease, ulcerative colitis, autism or aseptic meningitis…,” the “author’s conclusions” read: “The design and reporting of safety outcomes in MMR vaccine studies, both pre- and post-marketing, are largely inadequate.” A 2012 update had similar results and conclusion.

In 1999, the *Lancet* published a study that purportedly debunks Wakefield (Taylor B. “Autism and measles, mumps, and rubella vaccine: no epidemiological evidence for a causal association.” *Lancet* 1999; 353: 2026-2029). Limitations of the study included the small number of cases, incomplete ascertainment, inability to verify some of the diagnoses, and clinical notes of “variable quality.” Taylor concluded: “There was no temporal association between onset of autism within 1 or 2 years after vaccination with MMR…. Developmental regression was not clustered in the months after vaccination…. No significant temporal clustering for age at onset of parental concern was seen for cases of core autism or atypical autism with the exception of a single interval within 6 months of MMR vaccination” [emphasis added]. Taylor attributes the exception to an “artifact” related to difficulty in precisely dating onset of symptoms.

The study was financed by the Medicines Control Agency and the Public Health Laboratory Service, which is somewhat equivalent to the FDA and the CDC, observes F. E. Yazbak, M.D. “Any incrimination of the MMR vaccine therefore would have been unlikely, regardless of the findings.”

Taylor states: “There is uncertainty about whether the prevalence of autism is increasing,” and then adds: “Our study is consistent with an increase in the incidence of autism in recent birth cohorts.”
Yazbak points out that he then inserts Figure 1, showing the sudden and acute rise in the number of cases of core autism starting in 1991.

In a letter to the editor on Jul 8, 2000, Dr. James Roger wrote that the currently published data, including that from Taylor’s study, are consistent with an appreciable number of autism cases being triggered by MMR vaccination. Yazbak reviews other studies and notes: “The UK Government has been spending considerably more money on a propaganda campaign to defend the MMR vaccine than it has on autism research. In January 2002 funds were promised for autism research as long as it did not involve the MMR vaccine. To date, not a single study has been launched.” Second-hand smoke has a higher priority than the devastating autism epidemic.

In several cases in U.S. vaccine court and in Italy, damages have been awarded for brain injury resulting in autism spectrum disorder, attributed to MMR vaccine.

An increase in prevalence of a seriously disabling condition from fewer than 1 in 10,000 pre-1970s to more than 1 in 100 now cannot be explained by a change in diagnostic criteria or by genetic factors. In addition, late-onset autism (after age 2) was virtually unheard of prior to the 1970s, but such cases now outnumber early-onset cases five to one, according to the late Bernard Rimland, PhD, founder of the Autism Society.

MECHANISMS OF VACCINE DAMAGE

There are several potential ways in which vaccines can cause adverse effects:

- Infection
- Atypical disease
- Toxic components
- Allergy
- Autoimmunity
• Interactions with other vaccines

• Long-term loss of population immunity

MMR, like many others, is a “live” vaccine. It contains attenuated viruses that can reproduce in appropriate cells and cause a milder infection, thereby inducing cross-reacting antibodies, which also protect against the native or wild disease-causing viruses.

Measles virus genomic RNA has been found in cerebrospinal fluid and also in biopsies of ileal lymphoid nodular hyperplasia in children with regressive autism and bowel disease, who had no exposure to measles other than MMR vaccine. Damage could be caused by direct viral invasion, immunologic response, and/or a toxic gut-brain interaction.

Measles virus itself can cause encephalitis, but so can the weaker but similar vaccine strain, although less often.

There are reported cases demonstrating that people given live virus measles vaccine can be infected with vaccine strain measles virus and shed vaccine strain measles virus. Health officials do not conduct routine active surveillance of people getting live MMR vaccine to monitor for vaccine strain measles virus infection, shedding, and the potential for transmission.

Immunization can alter the presentation of the disease the vaccine is meant to prevent, making it difficult to diagnose. Atypical measles (AMS), with high fever, pneumonia, abdominal pain, and a variable rash, was described when persons who received the early killed (inactivated) measles vaccine were exposed to measles. The disease was severe and sometimes deadly. Its manifestations were considered a hypersensitivity reaction by the CDC, which states that they only occurred after the killed vaccine, although several investigators have reported AMS-like illness in children who had been vaccinated only with live measles vaccine.

Other live virus vaccines have problems that mandatory vaccine advocates do not deny. The vaccinia virus in smallpox vaccine
can be fatal in people who receive it, and in people to whom they transmit the infection. The oral polio (Sabin) vaccine was withdrawn because some adults who were exposed to children who received it got paralytic polio. The nasal FluMist influenza vaccine comes with precautions about infection of others. One type of live rotavirus vaccine was withdrawn because of an increased risk of intussusception, a form of bowel obstruction, which frequently requires surgery.

Besides the intended virus, both live and killed vaccines may contain other viruses, which may be undetected. Vaccines are produced in living tissues, and all living things contain a large number of viruses, mostly benign and unnoticed. The most notorious is SV-40, a simian (monkey) virus that contaminated early polio vaccines, both Salk (killed) and Sabin (live) vaccines. The vaccines were not withdrawn when the virus was discovered so as not to disrupt the mass vaccination campaign. SV-40 can be carcinogenic and might be responsible for some cancers in vaccine recipients showing up decades later, as discussed in the book The Virus and the Vaccine: Contaminated Vaccine, Deadly Cancers, and Government Neglect, by Debbie Bookchin and Jim Schumacher.

Thimerosal, which is degraded to ethylmercury in the body, has been a prime suspect for causing vaccine-related harm, including neurodevelopmental disorders such as autism. It was withdrawn from topical use in the 1980s (the topical antiseptic Merthiolate, which was once thimerosal, is now mercury-free benzalkonium chloride). Starting in 1999, the CDC and the American Academy of Pediatrics (AAP) recommended removing it from childhood vaccines as “purely precautionary” measures. It is still used as a disinfectant/preservative in influenza vaccine. It was never present in MMR.

Unquestionably, mercury is a neurotoxin, which can accumulate in body tissues, so that the cumulative dose from multiple vaccines is relevant. The mercury content of pediatric vaccines administered during the first six months of life exceeds the EPA reference dose (RfD) for methyl mercury of 0.1 micrograms per kilogram body weight per day (µg/kg/day). Apparently, nobody added up the dose
as more and more vaccines were added. Moreover, some children have a defect in their ability to metabolize and eliminate mercury. This defect is much more common in boys—and boys also have a much higher prevalence of autism.

Mercury poisoning has been documented in a patient who received high-dose thimerosal-containing hepatitis B immune globulin (HBIG) as prophylaxis.

The long-time and continuing use of thimerosal worldwide in many medical preparations is puzzling, given its poor anti-bacterial effects and long list of serious adverse effects. But is its use in vaccines a cause of autism?

Among more than 165 studies that have shown harm from thimerosal are about sixteen showing an association with subsequent diagnosis of a neurodevelopment disorder. Nevertheless, CDC still insists that there is no relationship between thimerosal-containing vaccines and autism rates in children. This statement is based on six specific published epidemiological studies coauthored and sponsored by the CDC. The methodology of these studies has been severely criticized. As Dr. F. E. Yazbak has noted, there have been no studies of safety or efficacy of thimerosal in vaccines. He points out that CDC-funded studies claimed to debunk a vaccine-autism link were done in Denmark, where the childhood vaccination schedule was different in the United States, where fewer vaccines were given, and where thimerosal had been banned for a decade.

It is plausible that MMR and thimerosal or other heavy metals received in other vaccines could interact to trigger autism through an autoimmune mechanism. Such a mechanism has not been ruled out in clinical studies.

While thimerosal was being eliminated, the amount of aluminum in some vaccines was being increased. This can be toxic in itself, but the desired purpose—to increase the immunogenic effect of the vaccine—also has the potential to induce serious complications such as autoimmunity and long-term brain inflammation. It conceivably is related to the increasing allergic problems we are seeing in children.
Vaccines themselves may paradoxically be creating an emerging disease problem: the occurrence of measles and other childhood diseases in infants and older persons who are much more likely to suffer complications. This is because of the loss of robust, lifelong natural immunity, replacing it with short-term vaccine-induced immunity. This also means that mothers have less protection to pass along to their newborns, so that babies are much more vulnerable during the time before they can be immunized.

Dr. Donald Miller warns of another drawback of vaccines: the loss of the role of childhood diseases in strengthening both sides of the natural immune system (the cellular Th1 cells and the humoral Th2 cells). Vaccines stimulate only the Th2 side, potentially leaving the person more prone to autoimmune diseases and cancer.

**NOVEL VIRAL DISEASES**

Every year, Americans are warned about the great influenza pandemic, and that it could happen again, say from an imported swine or bird virus to which people have no immunity. People are warned to get their annual flu shot, although if it is a new virus, it won’t be included in the vaccine.

The **2009 H1N1 outbreak** was the pretext for granting more power to the World Health Organization, and a push to expand government emergency powers in the United States.

Surely a catastrophe as great as the **1918 influenza pandemic** (see Barry, J. *The Great Influenza: The Epic Story of the Deadliest Plague in History*. New York: Viking, 2004) is possible, and certain lessons should be remembered:

- The Great War (World War I) caused massive population movements, including troops, under conditions of severe crowding and hardship.
- The government lied to the people and impeded public health measures so as not to interfere with President Wilson’s war effort.
EMERGING DISEASES

- There was no good treatment, and many probably died because of existing treatment, especially with aspirin to suppress fever.
- Corrupt politicians, including those in the public health establishment, ignored or overruled physicians.

The recent outbreak of enterovirus D68, which hospitalized hundreds or thousands of children, many in intensive care units, with severe respiratory problems and some with polio-like paralysis, had some political features in common with 1918. Although the government has been reticent to discuss the source of the outbreak, it coincided with the mass movement of tens of thousands of children from an endemic area, and their dispersal across the country. If that were identified as the source of the outbreak, it likely would interfere with the Obama Administration’s immigration agenda.

CONCLUSIONS
The dreaded infectious diseases of the past may be forgotten, but they are not gone, and diseases that are new, at least to the United States, are emerging.

The threat is increased by extensive air travel and by uncontrolled illegal immigration without extensive testing or the period of quarantine required at the time of Ellis Island. We have also lost or severely restricted our most important vector control agent, DDT.

We are putting most of our effort into vaccines. Even our best vaccines are a trade-off of risks and benefits, and offer protection of limited duration. Not all diseases are vaccine preventable. We have been working to develop a malaria vaccine, for example, for decades. Even if a vaccine is developed, there is the possibility of genetic drift in the organisms – as happens constantly with influenza. In the case of biological warfare agents, the organism could be bioengineered for resistance.

There is ultimately no substitute for the traditional public health
methods of identification, isolation, and contact tracing. Unfortunately, much of our public health establishment has been diverted into protecting us against sugary soft drinks, rather than infectious disease threats. And public trust is being eroded by politicization of the issues and conflicts of interest.

THINGS YOU CAN DO

• Acquire and keep on your shelf some older medical textbooks. You might be the first to recognize a condition that your physician has never seen or even heard of.

• Find a physician you trust who is open to innovation and to individualized assessment of risks and benefits of vaccines. A physician needs to be working for you, not for an Obamacare “accountable care organization” (ACO), a managed care organization, or a big institution such as a hospital.

• Reconsider the wisdom of entrusting your children to daycare centers or to public schools where they may be exposed to a wide range of illnesses as well as poor education and attacks on parental values. Health reasons are but one of many reasons to investigate home schooling. If religious and philosophical exemptions from mandatory vaccines are not allowed, home schooling may be the only out; California is considering forcing vaccines even on home-schooled children.

• Protect your own health. Eat a wholesome, nutritious diet, home cooked as much as possible.

• Keep a supply of vitamin supplements, including vitamin C, vitamin D, and vitamin A.

• Review suggestions concerning Ebola, which apply just as well to other infections.
ABOUT THE AUTHOR

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