

WHAT CORONA VIRUS COVID-19 IS TELLING US:
A HOLISTIC VETERINARY AND ONE HEALTH VIEW

By Michael W. Fox, BVetMed, PhD, DSc, MRCVS

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SYNOPSIS

This emerging disease and others that are likely to become pandemics in the future, calling for ever more vaccines and medications so long as preventive medicine remains human-centered and does not fight, under the banner of One Health, wildlife poaching, trafficking, habitat encroachment and our ever-increasing human numbers and consumption of animals wild and domesticated. At best, all the suffering, death, grieving and economic impact of this latest COVID-19 pandemic will change how we chose to live: Most especially our collective exploitation and consumption of animals that bring on such pandemics and other zoonotic diseases along with accelerating climate change and loss of biodiversity.

Our fear-based attitude toward viruses and bacteria is based on our not appreciating how these and other micro-organisms function and help sustain this living world. Parts of them are in our DNA and vital cellular content and without them in our guts we would die in a few days. They also can play an environmentally beneficial role in regulating population density, in optimizing ecological biodiversity and reducing dysbiosis.

When epidemics and pandemics break out there is always some ecological component and carrier agent coupled with the lack of immunity, for various reasons, of those humans or other species who succumb to infection, Those species and individuals who do not succumb and may show no symptoms can transmit infection to others. Some are killed by the primary infective agent, die from a secondary, often bacterial infection or become easy prey for a predator. Survivors may become infertile or abort if pregnant.

According to the U.S. Centers for Disease Control and Prevention this new Corona virus has been named “SARS-CoV-2” and the disease it causes has been named “coronavirus disease 2019” (abbreviated “COVID-19”) The SARS-CoV-2 virus is a betacoronavirus, like MERS-CoV and SARS-CoV, all three of these viruses having their origins in bats. The sequences from U.S. patients are similar to the one that China initially posted, suggesting a likely single, recent emergence of this virus from an animal reservoir. Live-caught bats for sale for human consumption in one of China’s open animal markets are the most likely source.

However, other species may be involved such as highly trafficked pangolins whose meat and scales are prized animal products used in traditional, animistic folk medicine by millions of Chinese consumers, along with the various parts of other wild animals, from rhino horn to tiger bones.

Some investigators and holistic, One Health researchers have theorized this virus is a bioengineered strain that either escaped from a laboratory or was deliberately released into the city population of Wuhan. Deliberate releases have been conducted for military biowarfare

exercises, as with the thought-to-be harmless bacterium *Serratia marcescens* in the U.S. This bacterium subsequently colonized several hospitals, infecting and killing people.

Bats, a sentinel species of ecosystem health and guardian of tropical forests, are the main carriers of these kinds of viruses including Ebola to which they themselves are immune. So are most of the indigenous species who have co-evolved and co-inhabited their domains for generations of selection and survival. When people and their farmed animals encroach these last domains of the wild, they succumb to these so-called zoonotic diseases: And, when they capture and take away infective bats and other species into their own crowded and often unsanitary communities. The classic consequence of such human encroachment is Sleeping Sickness in Africa which affected millions of people and their livestock when they invaded the domain of disease-resistant wildlife who were disease reservoirs. But there was no global spread because a fly was needed to transmit this disease and tsetse flies do not engage in international travel or trade. With COVID-19 there is no such intermediary host-vector, direct human-to-human transmission being confirmed.

There will always be new emerging diseases like COVID-19 and potential pandemics calling for more government funds and mass vaccinations (very profitable for investors and manufacturers) to “protect” the public so long as wildlife poaching, international wildlife trade and illegal trafficking continue, along with ever increasing human population growth and inevitable encroachments. In many countries indigenous peoples’ immune systems are challenged by lack of sanitation, contaminated drinking water, chronic malnutrition, tuberculosis, AIDS and malaria, making them highly susceptible to infection from wildlife and to have adverse reactions when given vaccinations.

Receiving influenza vaccinations may increase risk of coronavirus infection. .A study by Greg W. Wolff published in the peer-reviewed journal *Vaccine*, ([Vaccine Volume 38, Issue 2](#), 10 January 2020, Pages 350-354 titled [Influenza vaccination and respiratory virus interference among Department of Defense personnel during the 2017-2018 influenza season](#), reveals that influenza vaccination may increase the risk of infection from other respiratory viruses -- a phenomenon known as virus interference. While influenza vaccination offers protection against influenza, *natural influenza infection* may reduce the risk of non-influenza respiratory viruses by providing temporary, non-specific immunity against these viruses. On the other hand, recently published studies have described the phenomenon of vaccine-associated virus interference; that is, vaccinated individuals may be at increased risk for other respiratory viruses because they do not receive the non-specific immunity associated with natural infection. Examining non-influenza viruses specifically, the odds of both coronavirus and human metapneumovirus in vaccinated individuals were significantly higher when compared to unvaccinated individuals. Conversely, all other non-influenza respiratory viruses had decreased odds in the vaccinated population, including significantly decreased odds ratios in vaccinated people with parainfluenza, RSV, and non-influenza virus coinfections

Since COVID-19 primarily attacks the lungs, millions of people, rich and poor, will be at risk in urban communities with high levels of fine particle air pollution. Some particles serve as carriers for other chemicals that are also toxic, and the combination may worsen the impact. According to the U.S. Environmental Protection Agency this pollution causes early death (both short-term

and long-term exposure); cardiovascular harm (e.g., heart attacks, strokes, heart disease, congestive heart failure); respiratory harm (e.g., worsened asthma, worsened COPD, inflammation); may cause cancer and reproductive and developmental harm and cause inflammatory and degenerative changes in brain, pancreatic and other organ functions.—U.S. Environmental Protection Agency, Integrated Science Assessment for Particulate Matter, December 2009. EPA 600/R-08/139F. The Trump administration’s rollback of clean air regulations and poor air quality in most countries make preventing a COVID 19 epidemic from becoming a pandemic especially challenging.

David Rivard, a member of ISON (INTERPOL’s Special Operations Network on Trafficking, and Airline Ambassadors Counter-Trafficking Director) sent me this statement: “Generally, it would be that many people think of different types of trafficking (threats) as nouns. Human Trafficking, Drug Trafficking, Animal Trafficking etc. But the prime criminals are the *networks* of transnational criminal operations (and even global criminal syndicates). Local smugglers of people, drugs and wildlife do not make much more than subsistence money and many times they are even forced to smuggle. The real profiteers are the transnational criminal syndicates..... They establish “off shore” banking accounts, commonly known as tax havens. They influence politicians and national laws to keep their industry alive, and establish local cultures of criminality where they operate through extortion, kidnapping, forced labor (human trafficking) and murder.... They strip their local areas of all that is of value with an impunity that is evidenced by the bold atrocities they commit. This “Off Shored” money never makes it back into the national treasuries. Federal governments must then suffer the consequences of not having enough money to pay for even basic infrastructures, and most the infrastructure money is supplied by the U.S. taxpayer through our USAID Program, where it usually goes to law enforcement, and even these monies must go through a national gauntlet of political corruption and local law enforcement criminal capture”.

While this reality may make one despair, all countries should be severely sanctioned economically for engaging in wildlife trafficking and for having open markets selling wild-caught animals. And there must be a redoubling of wild habitat protection from human encroachment with population control through voluntary and ready access to family planning, smaller families and communities needing fewer livestock to sustain their needs.

Pandemics of Swine and Avian influenza generally originate from open markets and slaughtering in rural and peri-urban poor communities where centralized processing and cold storage facilities are not available and from workers exposed to infected animals inside factory farms. The overall burden of influenza in the U.S. for the 2017-2018 season was an estimated 45 million influenza illnesses, 21 million influenza-associated medical visits, 810,000 influenza-related hospitalizations, and 61,000 influenza associated deaths, COVID-19 may be more highly transmissible than most influenza viruses, higher rates of morbidity and mortality yet to be determined. Individuals with compromised immune systems along with communities immunocompromised in many ways. These include microparticle air pollution; smog blocking ultraviolet and other beneficial solar radiation; 5G telecommunication non-ionizing radiation (electrosmog) which is immunosuppressive; low selenium and other endemic nutritional

deficiencies; environmental water and food (especially sea foods, wild and farmed) contaminants such as mercury, fluorides, aluminum, and agricultural chemical fertilizers and pesticides.

Richer communities and countries like the U.S. where pork and poultry products are dietary staples pay the environmental and public health costs of these zoonotic diseases, antibiotic-resistant strains of *E. coli*, *Salmonella* and other bacteria being an escalating problem with inhumane factory farming production systems at home and World Bank- supported operations abroad that rely on multiple veterinary vaccinations and feeding animals antibiotics and other drugs to boost productivity and control diseases under the inhumane, stressful and disease-promoting conditions under which they are raised. (Nitrate pollution of drinking water from animal wastes/manure fertilizer is a related, escalating public health issue). According to the Centers for Disease Control and Prevention report *Antibiotic Resistance: Threats in the United States 2019*. more than 2.8 million antibiotic-resistant infections occur in the U.S. each year, and more than 35,000 people die as a result. New research from the Centers for Disease Control and Prevention (CDC), found that Hepatitis E is an “emerging foodborne pathogen,” that is transmitted to humans through raw or undercooked pork. The CDC states: Zoonotic diseases are very common, both in the United States and around the world. Scientists estimate that more than 6 out of every 10 known infectious diseases in people can be spread from animals, and 3 out of every 4 new or emerging infectious diseases in people come from animals.

The 1918-1919 “Spanish flu” pandemic which killed at least 50 million people world-wide was an H1N1 strain with genes of avian origin. The Swine influenza pandemic of 2009, originating in Mexico and killing close to a quarter million people world-wide was a new strain of H1N1, resulted from a previous triple reassortment of bird, swine, and human flu viruses further combined with a Eurasian pig flu virus, leading to the term "swine flu". This is now a regular human flu virus and continues to circulate seasonally worldwide. Avian influenza A (H5N1) viruses are endemic in poultry in parts of the world and are infecting people sporadically, often with deadly results. In February 1957, a new influenza A (H2N2) virus emerged in East Asia, triggering a pandemic (“Asian Flu”). The estimated number of deaths was 1.1 million worldwide and 116,000 in the United States. This virus was a reassortant (mixed species) strain, originating from strains of avian and human influenza viruses. In the 1960s the human H2N2 strain underwent a series of minor genetic modifications, a process known as antigenic drift. These slight modifications produced periodic epidemics. After 10 years of evolution, the Asian flu virus disappeared, having been replaced through antigenic shift by a new influenza A subtype, H3N2 which gave rise to the Hong Kong flu pandemic of 1968 that killed an estimated 1 million people world-wide. COVID-19 may cause higher mortalities first time around given a larger world population and worse particulate air pollution and electro-smog and similarly circulate in the human population in the years to come along with other emerging diseases if preventive measures are ignored and reliance on post-pandemic vaccines rushed to market continues.

The coronavirus responsible for SARS (Sudden Onset Respiratory Syndrome), according to the WHO, has reappeared four times – three times from laboratory accidents (Singapore and Chinese Taipei), Researchers from the University of Hong Kong examined 25 animals representing eight species in a live animal market in southern China and found the virus in all six masked palm civets they sampled, as well as in a badger and a raccoon dog. A study from Guangdong

province in southern China - where the SARS outbreak first emerged in November 2002 indicated that more than 30 percent of the early SARS cases there were food handlers. This SARS epidemic infected more than 8,000 people in 26 countries and killed at least 689, the vast majority in China and Hong Kong. Chinese authorities subsequently ordered the deaths of some 10,000 civet cats by drowning and electrocution in Jan 2004 when they were identified as the primary source of SARS. The precursor virus is present in wild *Rhinolophus* bats. Civet cats and other small mammals sold as delicacies in wet markets provided a reservoir and amplifier for the virus and the opportunity for adaptation to humans.

There are degrees of inhumanity and cruel treatment of animals for which we unwittingly pay the price. Civet cats are held in small cages in Ethiopia and have their anal glands routinely scraped out to “harvest” musk for the perfume industry while in Indonesia these caged animals are force-fed coffee beans that are collected in their feces and sold as gourmet “fermented” beans called Kopluwak. Such practices reflect the depravity that surfaces where there is no empathy and the lure of money. This is exemplified especially by China’s bear-bile farms where bears, constantly confined in cramped cages, have abdominal cannulas collecting their bile for sale as medicine. One of the alleged cures from traditional Chinese medicine that the government recommends for treating severe and critical cases of COVID-19 is an injection of Tan Re Qing, which contains bear bile, [National Geographic](#) reported.

International trade in animals, dead and alive, for human consumption should be curtailed as a public health service and for national security and within-nations should be terminated to help reduce a major industry’s contribution to the Climate and Extinction crises (as well as rural poverty), and decline in public health. The number of live pigs, goats, cows and sheep transported worldwide in 2017 was 30% higher than in 2007, according to the UN’s Food and Agriculture Organization. It is not racist to say this coronavirus came from China and the last influenza pandemic from Mexico. But it is speciesist to claim that animals were created for our own use and that we can kill and consume them and otherwise exploit them as our needs and wants dictate.

EATING LESS OR NO ANIMAL PRODUCTS FOR THE GREATER GOOD

Hopefully this global health crisis is catalyzing international collaboration in prevention and treatment. We may yet see the emergence of a United Environmental Nations that unshackles public health from politics, nationalism, isolationism and prioritizing the economy over the health and security of the people and links public health with environmental and animal health. Above all, humans should keep out of wildlife habitat where such diseases emerge and to which we have no immunity; and for consumers in industrial countries to support producers of organically certified foods to sustain a healthful vegetarian/vegan diet with minimal or zero consumption of eggs, dairy, meat including sea foods. Over-fishing for human consumption and to feed farmed animals is one factor in the demise of the oceans. As a One-Health advocating veterinarian I appeal to all consumers and governments to consider the impossibility of preventing such pandemics and other animal-food-borne epidemics and regional outbreaks of disease. It is impossible because of the enormous scale of factory farm animal production systems---billions of poultry and pigs world-wide that are the primary source of various strains

of influenza virus and antibiotic-resistant strains of bacteria. This problem is so serious in poultry that their carcasses are washed in bleach, the U.K. refusing to accept America's chlorine-treated chicken under current trade negotiations (along with America's hormone-treated beef).

The U.S. has tried to sterilize such produce using radioactive isotopes but this move was temporarily blocked by health-food and safety experts because such radiation produces radiolytic-breakdown products, the safety of which to consumers has been questioned. Such concerns were validated by the death of cats in Australia after being fed imported canned cat food that was, under import-regulations, subjected to irradiation. For details visit <https://truthaboutpetfood.com/was-irradiated-pet-food-the-cause-of-cat-deaths-in-australia/>

Regardless, meat and poultry producers who use ionized radiation to kill pathogens in product now have expanded options, thanks to two rules published by the U.S. Food and Drug Administration. <https://www.foodsafetynews.com/2012/12/fda-expands-irradiation-uses-for-meat-and-poultry/>

The British Veterinary Association's initiative promoting the benefits of sustainable consumption of farmed animal produce to help reduce climate change is also applicable to reducing zoonotic diseases embraces the concept of "less and better" farmed animal produce for animal welfare, One Health and sustainability reasons. "Eating "less and better" sees some citizens reduce consumption of animal derived products, whilst maintaining proportional spend on high animal health and welfare products." ([BVA Position on UK sustainable animal agriculture - British Veterinary ...https://www.bva.co.uk/...policies/Policies/Farm_animals/BVA-Position-on-UK-Sustain.](https://www.bva.co.uk/...policies/Policies/Farm_animals/BVA-Position-on-UK-Sustain.))

Continuing to consume animals as a basic food-source, market ever more vaccines and having ever more children, the rich and poor alike will be subject to the indiscriminate justice of natural law until we all abide in greater harmony with other species as well as with each other. We will then need fewer guns, chemicals and other and bioweapons when our appetites and numbers are under more effective self-control. Alternatively, with deteriorating natural controls of health-sustaining biodiversity, plagues and pestilences of Biblical proportions will be the legacy of collective failure in planetary stewardship that surviving generations will inherit.

According to a release to veterinarians from the AVMA which I received on Feb 20th 2020, " at this time, experts have not expressed concern about transmission to or from animals. Multiple international health organizations have indicated that pets and other domestic animals are not considered at risk for contracting COVID-19 or transmitting the virus that causes the disease".

But I would caution that COVID-19 could mutate, and like the Swine flu infecting people that was passed on to their cats, be passed on to domestic animals. There were news reports Feb 26/2020 of a Pomeranian dog in Hong Kong testing positive for Covid-19 and additional tests to determine whether this is due to environmental contamination.

The city of Shenzhen in southern China has proposed allowing consumption of only nine different meats, and the list excludes dogs, cats, snakes, turtles and frogs. Chinese and other Asian animal meat markets selling infective bats and other wildlife surrounded by other animal species, including cats and dogs sold for food, alive and dead. and bats entering pig farms set up

close to their dwindling habitat in search of food, are a sad reflection of our collective disregard for life, human and non-human, unless we want to eat it or exterminate it as a threat.

END NOTE: China has officially and permanently banned the trade and consumption of wildlife amid speculation that a novel coronavirus spread from bats to an intermediary species and then to people at a meat market. China's wildlife-farming industry is valued at an estimated \$74 billion, and the wild-meat industry's estimated value is \$7.1 billion, making enforcement of any ban "untenable," says wildlife-policy researcher Zhao-Min Zhou. **Full Story:** [Business Insider](#) (2/25), [Reuters](#) (2/24) Such a permanent ban is therefore unlikely to be either effectively enforced or proclaimed for long considering the money power and influence of international cartels involved in wildlife and other illegal trafficking activities. The Trump administration's response calling in part for accelerated vaccine production after initially calling the Corona disease outbreak 'a hoax' will certainly profit the government -subsidized and legally protected (from adverse-reaction law suits) vaccine industry which is the antithesis of true preventive medicine from a One Health perspective.

POSTSCRIPTS

This virus, now causing a global pandemic and named COVID-19 should be renamed COVID-Li-W in honor of the young Chinese doctor Li Wenliang. He was the first to raise concerns about this new virus warning colleagues on [WeChat](#). about a possible outbreak of an illness that resembled [severe acute respiratory syndrome](#) (SARS), later acknowledged as [COVID-19](#). but subsequently died after being infected by this highly contagious organism. His death was no doubt due in part to the stress of his being apprehended by the police and silenced by the government for spreading “false rumors.”

Chinese [ophthalmologist](#) at [Wuhan Central Hospital](#) who on 30 December 2019 warned fellow colleagues about a possible outbreak of an illness that resembled [severe acute respiratory syndrome](#) (SARS), later acknowledged as [COVID-19](#), on [WeChat](#). On 3 January 2020, Wuhan police summoned and admonished him for "making false comments on the Internet". Li, a family man, returned to work, later contracted the virus from an infected patient and died from the disease on 7 February 2020, at age 33. President Donald Trump described the disease as the Democrats' "[new hoax](#)" at a political rally on Feb. 28, 2020 in South Carolina.

The ancient aphorism that in crisis there is opportunity, aside from the hucksters hoarding and reselling disinfectants and “cures” at inflated prices and private-sector profits from test kits to sanitizers, remedial drugs and vaccinations to protect all down the line. There is the opportunity for humankind to change and live more mindfully since so many diseases that infect us come from animals whom we should leave alone and respect and protect in the wild; and from domestic animals, pigs and chickens in particular raised under crowded, unhealthy and inhumane conditions and who repeatedly infect the world with influenza and other viruses and often fatal bacterial infections.

Feline Coronavirus (FCoV) is a common viral, but highly contagious intestinal (enteric) infection in cats. It can be asymptomatic, but may cause a few problems, like diarrhea in most infected cats. In some cats,

however, the intestinal form of FCoV mutates and turns into feline infectious peritonitis (FIP), a disease that is generally fatal. Two forms of FIP may occur, effusive (wet) and non-effusive (dry). Feline Coronavirus (FCoV) is not the same Coronavirus identified first in Wuhan (2019 Novel Coronavirus). The Feline Coronavirus (FCoV) is not a threat to humans, it can only affect cats.

*The author writes the nationally syndicated newspaper column *Animal Doctor* and is a member of the British Veterinary Association, the American Holistic Veterinary Medical Association and an Honor Roll member of the American Veterinary Medical Association. Website www.drfoxonehealth.com