One Health: Why is easy, how is hard

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The future of one health started in 384 BCE by Aristotle with his writings covering both human and animal anatomy. We Fast forward to Rudolph Virchow in 1590 who coined the term zoonosis. More recently James Steel in 1947 founded the veterinary public health division at CDC. This was followed by Calvin Schwab in 1964 who coined the term one medicine.

So, 2,405 years later we have not yet accepted the interactions between humans and animals and their environment. One health seems to be a good idea, a way to better use skills and infrastructure, and a more economical way of operationalizing at the interface of humans and animals. Humans are a reactionary species. Only after an event occurs do we tend to respond appropriately. And even with that we have short memories.

We have had influenza outbreaks, the most notable of which was in 1918 called the Spanish flu. But it took almost 100 years before President George Bush read the book by James Barry on the great influenza and asked if this could happen today. Around that time in 2004 the world was experiencing outbreaks of avian influenza which also spilled over to humans and appeared to have a high mortality rate. As a result, the federal government began preparations for and responses to that avian influenza outbreak and a potential pandemic. That effort lasted a few short years until an influenza pandemic was overtaking the world. That influenza was an H1N1 virus which is also a virus that can be found in swine.

The influenza pandemic of 2009 turned out to be a very mild influenza and unfortunately led the world to believe that influenza pandemics would be mild. But while the world was concerned about influenza viruses there were the emergence of new viruses that affect both animals and people. There was the Middle Eastern Respiratory Syndrome or MERS coronavirus and there was the Severe Acute Respiratory Syndrome or SARS that came from a civet cat and affected people. While in Malaysia a virus seemed to spill over from bats to pigs to people in a town called NIPAH. A disease we now know as NIPAH virus.

One would have hoped that all these serious spillover disease events would have made it obvious that working together works. So, it leaves us with the question why it is so hard to work together. Applying the principles of one health, that is, using a multi sectoral approach we must look to the study of human psychology to determine why it's so difficult to work together.

Whatever you may think of Nicola Machiavelli he has written an explanation of why one health may be so difficult to implement:

“It must be considered that there is nothing more difficult to carry out, nor more doubtful of success, nor more dangerous to handle then to initiate a new order of things for the reformer has enemies in all those who profit by the old order and only lukewarm defenders in all those who would profit by the new order. This lukewarm this arises partially from the incredulity of mankind who does not truly believe in anything new until they actually have experienced it”

So there needs to be a generational change before one health will truly be and acceptable method of conducting public health. But even with the generational change it has been said that you can take the caveman out of the cave, but you can't take the caveman out of the person. The human conditions of competition, compromise and partnership as motivators are strong in humans. We still have our fight or flight instincts, and we still have emotional reactivity to new situations and the way of thinking about things.

It may also take, as we proverbial say, an act of Congress before people will change. Fortunately, there are several acts of Congress that are currently being considered that will legislate collaboration and cooperation in a one health environment. These bills being considered also have appropriations associated with them. In the past there have been significant funding disparities between human health and animal health and as a result it was difficult to collaborate when such a huge deficit existed on the animal health side.

In conclusion, don’t give up. Continue to operate in a One Health format. Apply for grants in a multidisciplinary way. Be the change you want to see and overcome the disbelievers with optimism and positivity.