

SME_and_PR Material for TETRADYN and CADS Use

Massive Vaccinations Planned for fall 2009 esp. for schoolchildren

Topic:

Are these vaccine programs the right idea for this type of pandemic, at this time in the game? What are the alternatives, and/or what should be done along with such a program? How do we best address the fall flu season with both regular and new viruses abounding?

Article:

The federal government has announced (July 9, 2009 - <http://www.reuters.com/article/europeCrisis/idUSN09437556>) that there will be a major drive for large-scale vaccination this fall to combat the pandemic-level H1N2 "swine flu" influenza. A variety of unofficial reports have also indicated that there will be a major push for vaccinations of school-age children. In any case, schools and community centers are likely to be involved as key vaccination points along with the more traditional mechanisms using hospitals and clinics, and certainly schools are likely to be among the sites most vulnerable to high-count influenza cases.

The planned vaccine has been described as a two-step process involving coordination for repeat visits in order to complete the immunization process effectively; it is also different from the standard seasonal flu vaccine which will still be administered on a regular basis. As quoted in the above-referenced Reuters report, DHHS Secretary Kathleen Sibelius said in remarks prepared for the July 9 Swine flu Summit in Washington, DC: "Depending on the severity of the outbreak, community mitigation could involve more systematic means of social distancing, including limits on large gatherings and, if necessary and appropriate, temporary school or workplace closures."

H1N1 has been under-rated and under-stated, in an almost yin-yang swing of the pendulum within the media, particularly on TV and cable news programs. The media first made a huge deal about the very first outbreaks, beginning in late April. There was simply over-kill and over-saturation. Some of the reactions by school boards did not help the situation, particularly in Texas and Virginia, with closings that had little connection with identified H1N1 and also noticeable economic impact upon parents and the communities.

The media frenzy on all points and accounts contributed to large numbers of people reacting with a "boy crying wolf" attitude. "Oh, it was a big fuss over nothing, you see, and things were not so bad after all." Subsequently, as H1N1 made its way quickly around most of the planet and into most countries and as huge numbers of people were not dying left and right, the media downplayed the epidemic-turned-pandemic and went on to bigger and brighter attention-getters for their TV and web news. "Swine flu"

became suddenly passé, something not any worse than the average seasonal flu, not many people were dying, it seemed to be only those with compromised health conditions and/or inadequate medical attention.

As a result, there are now masses of people thinking, “Oh, it's nothing more than the usual flu or a common cold. I don't need to worry about it as if it is going to be the Pandemic of 1918 or the Black Death.” There are even books out on the stands with titles like, “The Bird Flu Hoax” and certainly the web is saturated with claims about over-reaction, panic-generation, and of course, conspiracy theories of all flavors. This situation is now providing a disposition that can be dangerous, with the onset of the regular autumn flu season, particularly as new statistics and some solid medical knowledge is shedding light on the pathology of H1N1 and its implications for a large segment of the population at risk.

The emerging studies showing deep respiratory effects of H1N1 are very significant. These indicate that H1N1 can, in simple terms, reach in deeper to more sensitive parts of the patient's respiratory system and create conditions and symptoms that can be very life-threatening for not only persons with other, prior respiratory problems but also persons who may be young, strong, active, and in general good health. Such is what we have seen in some of the H1N1 fatalities already.

In New Scientist (3.July.2009) (<http://www.newscientist.com/article/dn17414-revealed-how-pandemic-swine-flu-kills.html?DCMP=OTC-rss&nsref=online-news>) we read:

“Two separate teams -- one led by Ron Fouchier at Erasmus University in Rotterdam, the Netherlands, and the other by Terrence Tumpey at the Centers for Disease Control (CDC) in Atlanta, -- both report that the pandemic virus binds deeper than ordinary flu in the respiratory tract of ferrets, the animal most like humans when it comes to flu.

A virus of the same H1N1 family as the pandemic flu has been circulating as ordinary seasonal flu since 1977. Both groups found that the seasonal virus binds almost exclusively to cells in the ferrets' noses. But, the pandemic H1N1 binds deeper, in the lung's trachea, bronchi and bronchioles. The pandemic virus also replicated more, and caused more damage, though none of the ferrets were severely ill.”

This is almost “par for the course” – mutations occur, an unfortunate but simple matter of fact in the microbial world and in the reality and complication of our biological makeup.

However, any number of mutations can change H1N1 into being more lethal and for larger subsets of the human population. For instance, quite likely, and of grave concern to those of us in the field - there is H5N1 ("Bird Flu"). This virus is not a fast transmitter, & thus, to date, not worldwide, but it is clearly present and dormant only in pockets around the world, and of course, more transmissible among avian species. The fact that H1N1 is virtually everywhere means that where there is H5N1, there is also H1N1.

While H5N1 is today not good at transmitting from human to human, period, much less fast between humans, H1N1 is exactly so. Mingle them in proximity within one infected human organism and you are likely to see mutations whereby some new genetic material,

some new viral strain, has the lethality of H5N1 & the transmissibility (especially human-to-human) of H1N1.

Now in this case you will have a very dangerous pandemic on your hands. One that will tax all health systems & therapeutics.

Given this information and what we can predict, it is clear that a program of public awareness and education is extremely important. People should not be terrified, nor frightened, but they must be intelligently afraid of what can do more harm to them than they are, on average, thinking today. Massive vaccine campaigns, moreover, can be helpful only if two conditions are met. First, massive numbers of people need to receive the vaccine and in a timely fashion. In the case of H1N1 this problem is compounded by the fact that administration of the vaccine, at present, will require two visits by the patient. However, there is a second critical condition, and this is one that raises further concerns about the effectiveness of any massive vaccine campaign for 2009. The vaccine must be, simply, the right one. It must be based upon the right genetic sequence, the right H1N1 variant. What we see, however, are indications of mutation and potentially in different directions, with different new gene sequences. H1N1 is relatively unstable, from many indicators. Furthermore, there is the risk of mutation as a result of combined presence in the same organism (human, pig, bird) with H5N1 (“bird flu”) viral strains, as mentioned earlier.

If there is too much reliance upon the massive vaccine program and if too many people go about thinking that they are protected simply because they received the vaccine or because “enough other people out there” have been vaccinated, then there are severe risks of large numbers of people being vulnerable through a combination of oversight and also a modified strain for which the vaccine thus administered is not effective, or not efficiently potent. My main concern is that large numbers of people will not pay attention to the critical self-hygiene, home-hygiene, and public-hygiene methods and disciplines that are the most effective means of preventing infection, and that once large numbers of people are sick with the flu, many will not be taking the proper measures for self-care and also medical treatment.

My recommendation is that the federal and state governments take immediate action to enable programs – like CUBIT (Coordinated Biothreat Intervention and Treatment), for instance, and CRAIDO (Community Rapid Response Diagnostics for Infectious Disease Outbreaks) - to move forward as rapidly and quickly as possible. These are projects developed by and with consortiums of experts in multiple institutions across the country. They are tools available today that can bring point-blank information and knowledge to people - in their homes, schools, workplaces, churches, clubs, transit stations, and other locations of commonplace activity – for helping them to know what to do, what to avoid, what to not avoid, and how to handle both the risks and the gravity of situations that can and no doubt will occur in some households and communities.

Vaccine programs alone are not the answer. There is no simple magic pill (or shot). I do believe we face medical, epidemiological, economic, and social unrest this fall over this

flu bug. However, I do believe that we have resources available that can be an immense help to people and communities. These are not yet being used because we need the combined action and unity of the public sector and the private (financial) sector to make resources like CUBIT and CRAIDO available and in the hands of physicians, nurses, epidemiologists, and the general public.

Now is the time. Tomorrow is getting to be too late.

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