8/11/20 Webinar – Q&A Session with Jim Newman

1. **Q: Is there any testing agency certifying the products to kill COVID-19?**
    a. To the best of my knowledge, at this time only EPA is doing some of that. You can check their website for answers, but there often is so much information on their site that you might actually be better off searching for this answer on the internet. Just be sure to carefully analyze what you find.

2. **Q: Please talk about practical solution for older AHU's for older buildings.**
    a. This is not a recommendation from ASHRAE, but from personal knowledge, as ASHRAE as a Society does not make these types of recommendations. Aquis, a company in FL, will completely rework existing AHUs, including but not limited to reworking drain pans to pitch them so there will be no standing water, smooth surfaces to eliminate voids, anti-microbial coatings on surfaces, etc. Another company, BioMik, cleans coils and removes biofilm both inside and outside. These companies, as well as links to many others are on our website at newmanconsultinggroup.us/web-sites at the top of that page under COVID-19 Resources.

3. **Q: Are there conflicts between ASHRAE requirements and some COVID-19 best practices?**
    a. This is really a fascinating question. In reality, probably not. However, many people are not fully understanding some of the ASHRAE recommendations which may be leading to this question. ASHRAE updates their comments and suggestions on COVID-19 on a weekly basis so check their website often.

4. **Q: Will ASHRAE be getting into refereeing the disparate (and denigrating) claims made by ionization product manufacturers?**
    a. That is doubtful as that is not what ASHRAE's purpose is. It is up to the user to do their best to do that. As IAQ is one of our specialties we can often help.

5. **Q: Have bi-polar ionization or needlepoint ionization been used much in the Detroit market? Any issues encountered?**
    a. Bi-polar ionization has been used in the Detroit market in various types of buildings for several years now, and also has been used in many hospitals around the country. To the best of my knowledge at this time, however, it has not been used in hospitals in Detroit but is going into a new one in Lansing.

6. **Q: There was a lot of chatter in the ASHRAE journal last year about whether they produce ozone at unacceptable levels.**
    a. Ozone generation varies among manufacturers and types of ionization as was shown in the Product Comparison Chart. Most generate little enough ozone to be approved by UL Standards. That is why we added Note 3 to the Product Comparison chart that states

"depends on manufacturer/application". It specifically states that ozone generation, as well as many other aspects, can vary considerably among manufacturers and the application for which the product is being used.

7. **Q: Can you explain how bi-polar ionization can deal with aerosolized pathogens in a space and not just ductwork?**
    a. This can be misunderstood by many, as different manufacturers say different things. But the simplest way to look at bi-polar ionization (BPI) is that it puts out both positive and negative ions that bond with oppositely-charged ions. Because these ions go into the space either by means of the HVAC system or portable units they break down toxic gases from VOCs, and negatively affect the DNA or RNA of bacteria and viruses thus inactivating them. You can consider BPI to be an active method of dealing with pathogens rather than a passive method like UV where the pathogen has to pass by the UV lamp.

Active and passive methods are both effective. UV, when properly designed, installed and maintained, works well. Once again, as mentioned in the webinar, the key word for all the systems is "proper". It is important to do your homework, i.e., know the manufacturer and trust the salesperson.

8. **Q: What about bi-polar ionization and ozone or plating out contaminant on surfaces?**
    a. Most BPI systems put out little to no ozone per EPA standards. I'm not sure I understand what you mean by "plating out" but if you mean does it increase the size of particulate so it either falls to a horizontal surface or gets picked up by the air stream and returned to the a filter, the answer is yes. But since the particulate is now larger than before it is more apt to be caught in the filter. It actually makes filters more effective.

9. **Q: In typical office building HVAC systems, we can't increase the MERV rating due to reduced air flow, and UV or bi-polar ionization isn't economically feasible. What other options are there to stop the transmission of COVID-19 through HVAC systems?**
    a. Many office buildings have only MERV 8 filters. Changing to a MERV 11 – 13 is actually not a much higher S.P. resistance. If you look at a fan curve, the addition of 0.1 or 0.2"S.P. to a system of more than 3.5" is not going to considerably change the amount of air handled by the system.
    There actually are no inexpensive ways of stopping the transmission of COVID-19 through HVAC systems. However, in many cases in Michigan and in more than 30 other states, one may be able to use a PACE tax assessment to help pay for BPI or UV or other methods and spread the payment over 20-25 years.

10. **Q: The industrial hygiene/IAQ has been pretty well-grounded and mature with bio-aerosol testing and understanding for quite some time, and following on that the various remediations and ongoing best practices are fairly well understood. Is what's different now is that this virus is a previously unknown virus with its own set of unknowns as well as a high degree of virulence?**
    a. The real issue with SARS-CoV-2 is that we still don't really know a lot about it and, as you are aware, Glenn, what we hear that we are supposed to do or not do changes almost as fast as changing a baby's diaper. Is it mutating quickly or not so quickly? Should we wear face masks or not? If we should, then what type? If it's not necessary, then why stay 6' apart? And on and on and on. Are we going to know more 2-4 months from now? Undoubtedly, as we are learning more every week. But at this point we still have a long way to go before we truly understand what's going on and what are the best ways to fight it. In the meantime proper face masks properly worn, proper physical distancing, and proper hand washing will make a difference. As you are aware, the key word here is "proper". H-m-m-m-, have I said that before?

11. **Q: Please comment what you are seeing in higher education for reopening the school.**
    a. Many of the recommendations for higher education are very similar to what is recommended for commercial office buildings by ASHRAE, BOMA, and many other organizations. However, there are several magazines, organizations, etc, that specialize in education. Two of them are *American School and University* (asumag.com), and *Spaces 4 Learning* (spaces4learning.com).

12. **Q: Do you have some advice or requirements for school health suites and isolation rooms?**
    a. School health suites and isolation rooms both should be under negative pressure. That means they should have their own exhaust systems in order to have the air flow out of them so they are at a lower pressure than the area surrounding them. This can be as low as 0.05" S.P but there should be a double door space to go into and out of them so that their air is truly exhausted to the outside.

       Something else that should be considered is having portable machines in the space with proper filters and bi-polar ionization or UV lamps in the unit. These typically do not provide enough airflow to properly condition the space, but when run 24/7 can provide additional help. Some also have the capability of chemical filtration to reduce odors.