



Breaking News Archives: Novel H1N1 updates April - December 2009

Influenza Update - December 29, 2009

Yea! For the first time in 11 weeks, the number of reported influenza-like illnesses (ILI) and hospitalizations for influenza has dropped below what is considered the "epidemic" level threshold. Additionally, the number of states reporting widespread illness from influenza has dropped to 7 (recall that at its height, the number of states reporting widespread illness was up to 42). On the very pretty color-coded CDC map, Ohio now is reporting only sporadic cases and most of the severe activity is now taking place on the West Coast.

There are now over 36,000 confirmed cases of H1N1 influenza and 1630 deaths (almost 600 deaths in children under 17), although estimates of the true number range considerably higher. As detailed in our last email blast, the true number may be 79 times higher. Most cases of H1N1 influenza continue to be mild, but children with weakened immune systems, severe asthma, and underlying neurological problems are still at significant risk. Almost all cases of influenza reported nationally are still the H1N1 strain. But typically seasonal influenza begins in January, and we all have to be concerned about the implications of a resurgence in influenza activity in these next few weeks. We are especially concerned about the impact of Christmas and New Year's travel on the spread of influenza. We recently reviewed an article that is relevant to this discussion entitled, "The September epidemic of asthma hospitalization". In this study, Canadian researchers looked at the peak incidence of asthma in preschool, school age and adult populations. Over a 4 year period, and the study of over 250,000 hospitalizations, they found that the September asthma hospitalization epidemic peak in school aged children, occurred on average, 17.7 days after Labor Day Monday (the first Monday in September). Similar epidemics in preschool children peaked 1.7 days later and in adults 6.3 days later. The epidemics in all ages peaked 4.2 days earlier in northernmost provinces than in southernmost provinces. The theory behind this peak is that most Canadian children return to school the day after Labor Day, spread colds and other viruses and those who are predisposed to developing asthma will have flares of their asthma. The recommendation is that pediatricians tweak asthma management in late summer to help deal with this predicted spike. What is relevant to us at this time is that we can almost predict a peak in influenza illness activity in the next few weeks following holiday travel and the return to school. This makes vaccination against both H1N1 and seasonal flu very important in these next few weeks.

We have identified many patients who have still not received seasonal flu vaccination, especially following the shortages experienced last month. Many others have not received H1N1 vaccine (or in children under 9 years, have only received 1 dose). We are excited to report that we have a sufficient amount of seasonal flu vaccine and plenty of H1N1 vaccine and would like to provide easy access to our patients to be appropriately vaccinated.

H1N1 Update - November 30, 2009

It has been a few weeks since our last H1N1 update but that has not been because of a lack of activity. H1N1 as a disease has slowed down significantly both locally and nationally. The number of states reporting pandemic level numbers of cases has dropped from 45 to 32 and locally, the number of new cases that we have diagnosed in the office has dropped significantly. The Centers for Disease Control continues to consider H1N1 a serious disease with the potential for new outbreaks at any time. But as time has passed, there is now more information about the spread and about the numbers. The CDC estimates that the numbers of actual cases are underestimated greatly. According to a report released

last week, it is estimated that there are 79 unreported cases for every 1 reported case. This means that the actual number of cases in children under 17 years (using the mid level or conservative approach) are 8 million clinically infected patients with 36,000 hospitalizations and 540 deaths. The children who have died have been some of the most vulnerable patients, many with severe neurological problems and respiratory disease. The CDC (and our office) continues to strongly recommend vaccination in all children under 17 years of age. Even those who have had what appears to be H1N1 disease (respiratory symptoms and a positive influenza A rapid test) should be vaccinated so that they can expect to get permanent immunity that may protect them when they are elderly.

As for vaccine distribution, we have watched with significant frustration as we, at Senders Pediatrics, and many of our colleagues in primary care have been shut out of the vaccine distribution system while vaccine was available in day care centers, in high school vaccination programs and even in some local pharmacies. After multiple phone calls on many different levels, we are grateful for the intercession of State Representative Josh Mandel (R17) whose district includes Lyndhurst, Mayfield Heights and Solon. His office was able to set up a conference call with Roger Suppes R.S., Chief of the Division of Prevention for the Ohio Department of Health who helped explain the policy of the state on this matter. Their efforts were focused on mass distribution through the 131 local health departments (Cuyahoga Department of Health is one such unit). Cuyahoga Department of Health was then responsible for distribution according to its own internal recommendations and chose to distribute vaccine through mass programs at schools and day cares. Pediatricians and Obstetricians, although responsible for the highest risk patients, were left out of this phase. We are thrilled that many of you took advantage of the mass programs locally at Brush and Orange High Schools and at some of the schools in the Shaker School District. Our argument to Mr. Suppes was that we have access to many of the highest risk patients including those under 17, those with asthma and those with other breathing problems. Mr. Suppes explained that primary care physicians are part of the second tier distribution system (the third and final tier will be pharmacies).

H1N1 Update - November 2, 2009

H1N1 influenza continues to make headlines across the country. Doctor visits for influenza like illnesses or ILI (cough, sore throat, runny nose and fever are the most common symptoms) continue to rise. As of October 30, ILI now accounts for over 8% of all visits, a rise of almost 2% in the past 10 days. It is not clear whether this represents a rise in the actual number of cases of H1N1 or simply that increased awareness and widespread fear and concern have powered a rise in the number of visits. (Interestingly enough, in the Midwest region to which Ohio belongs, the proportion of doctor visits for ILI is only 2.5% which is typical of the number seen in a typical seasonal flu season).

What is known, however, is that the number of pediatric deaths has continued to rise, increasing to 114 cases since April 2009. It remains important to keep this number in context. Although it represents an almost twofold increase over a typical flu season, it continues to remain a vanishingly uncommon complication amongst the 75 million children under age 18 in this country. Moreover, although the greatest number of deaths has occurred in children under age 5, given the large volume of cases, death remains an extraordinarily rare complication amongst the nation's 25 million children in that age group. According to local health care experts, the greatest risk for severe complications is amongst those with neuromuscular diseases (that restrict breathing) and sickle cell disease (because of a condition called the acute chest syndrome). Asthmatics are considered at slightly higher risk by the CDC but have not been admitted locally to Pediatric Intensive Care Units (PICUs) in significantly greater numbers. To summarize then, H1N1 continues to be an annoying disease locally and nationally, but in the vast majority of cases, does not appear to be a serious disease.

Our experience with H1N1 has been similar to the national average. Our total October visits are up about 10% over last year with the largest percentage of increase related to ILI (influenza like illness). It remains important to emphasize that both nationally and locally, only 25% of ILI are H1N1 positive. (One caveat: Almost all pediatricians, family practitioners and emergency room doctors do not directly test for H1N1 which is still an expensive and slow test. Rather, we are doing a rapid test for Influenza A since 100% of Influenza A strains over the past few months have been the H1N1 strain). The challenge for all physicians has been how to respond to the huge increase in the volume of calls and requests for visits. At Senders

Pediatrics, the volume has risen from a baseline of 180 calls on a Monday or Tuesday (our largest volume days) to a peak of 355 two weeks ago and currently a steady 255 average. We have hired one and a half additional full time receptionists to help handle the load and have increased our number of available phone lines. We are monitoring the number of dropped calls and the average wait on the phone as we respond to this truly novel challenge. We have increased our computer speed and enhanced our advice capacity while we seek additional provider help because we anticipate that this heightened need for medical services will only grow as winter (and seasonal flu, influenza and rotovirus) approach.

We (and the CDC and Ohio Department of Health) believe the solution to the problem is vaccination. If we can successfully vaccinate most of our children by the end of the year (and that will be a challenge given polls that suggest fear is making almost 2/3 of people leery about receiving the vaccine), we will hopefully stop this pandemic in its tracks just in time for seasonal flu, RSV and rotovirus to rear their ugly heads in January. The groups at highest risk amongst our patient population are children from 6 months to 23 years. All children in these age groups should be vaccinated, including those who have had ILI or have had positive rapid tests for Influenza A. The rationale for seeking to vaccinate all children is to insure that they receive an immune boost against H1N1 while they are still at a relatively young and healthy age. As we have previously reported, the elderly appear to be dying of H1N1 in smaller numbers than with seasonal flu. From October, 2008 to April, 2009 there were 30,000 deaths amongst the elderly from seasonal flu while from April to October, 2009, there have been fewer than 3,000 deaths amongst the elderly from H1N1. The current theory is that most elderly men and women received an immune boost from the 1957 and 1976 Swine Flu epidemics and carry little markers called epitopes on their cell walls that provide protection against this year's H1N1 disease. If that is the case, our goal is that all children receive a similar immune boost from this year's H1N1 virus (from the disease or preferably from the vaccine), so that future H1N1 disease does not kill them when they are elderly. As annoying as that ILI or that vaccine is in 2009, it just may protect your child 50-60 years down the road.

Q & A on H1N1 - October 20, 2009

To help our patients with advice on the H1N1 disease, we have prepared this Q & A. Hopefully, most of the common questions will be answered in this document. Please feel free to forward this email to your friends, here and elsewhere because if, in some small way, it helps lighten the load for parents and providers, it will have been worth the effort. As always, please check the Breaking News section of www.senderspediatrics.com for more information. And of course, if you feel your child needs to be seen, please call and schedule a visit.

What are the most common symptoms of H1N1? Most commonly, we are seeing fever, cough, runny nose and congestion. Some children are experiencing nausea and vomiting. Sore throat is also common. Remember, strep throat is uncommon in this wave of illness and almost never causes a cough. Sore throat with a cough is usually a viral illness and H1N1 accounts for only 25% of the viral illnesses that we are seeing these days.

How about the fever? The fever can be as high as 105. Remember, that fever is not dangerous! It helps potentiate or enhance the immune response. There is even a recent study that shows that giving many doses of Tylenol prior to a vaccine, lowers the immune response (marginally) to the vaccine. So fever is our friend. It simply is annoying and is responsible for the achiness and misery. So treat a child with fever if they are uncomfortable but PLEASE don't keep monitoring their temperature since the actual numbers are not so relevant. We need to know about a child with fever if, when the fever comes down, the child continues to not be playful or is unable to drink.

Does a child need to be seen if they have the symptoms? Not really. There is not much we can do about flu like symptoms or fever. Providing relief of the symptoms is about the most important thing you can do (more about that below).

When should a child be brought in? Children should be brought in if: 1) They look really ill when their temperature is low (when they feel cool to the touch) 2) They got much better and now they look much worse. 3) They can't catch their breath 4) They aren't drinking. A drop in appetite is normal but kids

should continue to drink, even at 50% of normal. 5) They have had fever or have felt warm for more than a week. Occasionally, this indicates that the child is developing an ear or a sinus infection.

What can be done about the fever? Generally, we give ibuprofen (motrin and advil) first, at about 4 mg per pound (max of 400 mg) and this can be alternated with acetaminophen (Tylenol and others) at about 7 mg per pound (max of 500 mg) every 3 hours. If it is in the middle of the night, give a dose of ibuprofen or acetaminophen (whichever is due) and then wrap the child in wet, cold blankets on and off until they are feeling more comfortable. They will cry and you will cry but they will feel better and by the time you are finished, the meds will have kicked in and you will both be able to drift off to sleep.

What is the incubation period? Because there are so many illnesses floating around, this is a difficult question to answer. Generally, it is 3-5 days so if your child was exposed yesterday to a friend with H1N1 and comes down with these symptoms, it is likely a different virus.

Will exposure always lead to illness? No! This is true of all viruses. Many people have ongoing exposure but have immune protection against the disease.

How long do the symptoms last? Generally, we say 5-7 days. Many kids are ready to go back to school sooner but you should be a good citizen and wait until the cough subsides and the fever is gone. As mentioned above, if the child is getting better and, at a week, starts getting worse again, they should probably be seen. Remember, despite media hoopla, the kids who have serious complication from H1N1 are few and far between. They likely had a previously undetected immune deficiency. Most of the most miserable children we have seen actually do not have H1N1 but some other undefined virus. H1N1 has generally not made children seriously ill even if it has made them uncomfortably ill.

When can a child return to school? The rule of thumb is that they can go back when they are feeling better for at least 24 hours and at least fever free for 24 hours. As mentioned above, the only way we will be able to stop the passing of the disease is to either vaccinate everyone or avoid exposure. So even if you have to get back to work, please make arrangements for your child not to go back to school or day care until they are healthy enough.

Do I have to notify the school? No. Schools are full of children with H1N1 and the CDC and the Ohio Department of Health no longer requires notification. However, some schools are requiring a note to come back and if that is the case, we will need to see the child before we can sign that note.

Who is at highest risk for the disease and its complications? The children at highest risk are those under 6 months for whom there is no vaccine and children under 4 years of age whose immunity is felt to be less robust. Children with asthma, sickle cell disease, heart disease (not heart murmurs but requiring surgery) and diabetes are at higher risk as well.

How do we test for it and do you need to test for it? The test that we are doing in the office is a regular Influenza A rapid test. Since H1N1 is the only form of Influenza A that is circulating, we assume that if it is positive, that the child has H1N1 disease. This will become much more complicated once we hit January or February and there is more than one form of Influenza A circulating in the community. But for now, it is the least expensive way of testing for H1N1 disease.

Do you have to be tested if just exposed to a child or adult with H1N1? Of course not! As mentioned above, very few of those exposed actually come down with the disease. And if the child is not seriously ill, you can assume that they have H1N1 disease without testing for it since it is so common.

What about tamiflu? Tamiflu is an antiviral medication that has been shown to be effective against H1N1. It reduces the symptoms by only about 48 hours and gives a whole set of symptoms of its own including vomiting and diarrhea which are often as annoying as the disease. In consultation with Infection Disease specialists, it has not been our policy to treat patients with tamiflu unless they have underlying

immune deficiencies or other serious illnesses. We are worried about the side effects of the medication and more importantly, about the emergence of resistance. However, patients who are sick enough to be hospitalized will receive Tamiflu. We fortunately, have not had any such cases yet.

What about the vaccine? The vaccine that we will be distributing (when we receive it) has a great safety record. As with any flu vaccine, it cannot be given to children or adults with an egg allergy. Children will receive 2 doses, one month apart.

If your child has tested positive for H1N1 in our office, do they need the vaccine? It is not clear. Since we are not positively proving that they have H1N1, most infectious disease specialists are recommending that they get the vaccine when it is available.

How can we prevent the spread of the disease? We want patients to live in the real world but take care to wash their hands a lot more and use hand sanitizers more frequently. It is interesting that social niceties like shaking hands upon introduction are going out the window. But remember, for most people this is not a terribly serious disease. It is annoying and keeps a lot of kids up at night (and their parents) but like most diseases, is designed for our immune system to clear. There is even a lot of evidence that the elderly are not being hit very hard with H1N1 because they were exposed when much younger and were able to deal with it then.

We will continue to update our patients and their families. We ask that you call when you need to come in or if your situation seems to be different than the rest. Thanks for your patience as we form the front lines to tackle this latest infectious disease challenge.

H1N1 Update - October 16, 2009

This week has certainly been an eventful week nationally, locally and here, at Senders Pediatrics. The number of states reporting widespread H1N1 activity rose from 27 to 37 and now all 50 states are reporting significant H1N1 disease. The percentage of visits to doctors' offices has risen greatly in the past week by almost a full percentage point and at around 5.2%, is now higher than all but 2 weeks of last year's seasonal flu season. A word of caution about interpreting this information! As we reported last week, nationally, only about 25% of the increase in the number of visits is caused by actual H1N1 disease. Fully 75% are caused by other viruses that give some of the same symptoms: cough, achiness, fever and a runny nose. (There has been little of the vomiting and diarrhea that is typically seen in seasonal influenza). Local ERs are reporting a surge in visits although the rate of hospitalization has continued to be lower than during seasonal flu season.

Of interest to all parents, H1N1 appears to be affecting fewer adults than seasonal flu. This week there have been 19 pediatric deaths for a total of 86 over the past 6 months. That number is slightly higher than typically seen. Unfortunately, there doesn't seem to be a pattern to those who have had a more serious course. But it is important to emphasize that the vast majority of children that have contracted H1N1 have had a milder course than we have seen with seasonal flu. This week, we have seen about 100 children with the disease and most were on the road to recovery by the time they arrived. Like most other illnesses that affect children, there are two patterns that should alert parents to the possibility that they are dealing with a more severe disease. 1) In children under 2 years of age, look for the inability to drink. Normally, we drink, we swallow and we breathe. When breathing is abnormal, then drinking and swallowing is abnormal. But if drinking is relatively normal, that implies that breathing is normal and therefore, there is little about which to be concerned. 2) In children who get better and then suddenly get worse. The typical pattern is 5-7 days of misery with cough and congestion predominating and fever as high as 104-5. But there are usually periods of less misery especially when ibuprofen (motrin/advil) are on board. If your child suddenly gets worse over a 24 hour period, we should probably take a look and make sure that he/she hasn't developed an ear or sinus infection.

Of interest to those with elderly parents, H1N1 appears to have not hit the elderly very hard so far. In one recent study at the University of California, 33% of patients over age 60 had antibodies to the H1N1 virus. Whether this is because of exposure to 1957 and 1975 outbreaks or because of vaccination with a

previous H1N1 vaccine in the 1970s is unclear. We are hoping that this continues to be the case as the total US death toll from H1N1 over the past 6 months is under 3000 or 90% less than seen in a similar 6 month period last winter.

What about the vaccine? The CDC reported today that 30 million doses of vaccine will be released in the next few weeks, about 25% less than expected. The good news is that the government has purchased enough vaccine and vaccine components to vaccinate up to 280 million people over the next few months. Senders Pediatrics is on the list of health care facilities approved to vaccinate our patients with the H1N1 vaccine when it becomes available. We have prepared contingencies for immunizing as many patients as possible, as soon as possible and we will inform you via these email blasts as soon as vaccine is available. Please do not call the office to ask about vaccine. Our phones have been ringing off the hook. This past week, we experienced a 66% increase in phone calls over just last week. On Thursday alone, we received 360 phone calls, almost 140 more than the previous Thursday. We have hired additional staff and are working overtime to see every child who needs to be seen on the day that they need to be seen. And we will continue to see well visits because there is no evidence that coming to the doctor's office is any less dangerous to your health than going to the mall.

Which brings us the most important point! Don't allow H1N1 to control your life! We have heard of families that have stopped going to social events, have stopped going to churches and synagogues and have pulled their kids out of day care. H1N1 continues to be a mild if annoying disease for most and the silver lining for all those unlucky enough to contract the disease on this go around, is that they are likely to be more protected the next time H1N1 rears its ugly head. Please check our website www.senderspediatrics.com for further updates.

H1N1 Influenza Update - October 9, 2009

Much has happened since our most recent update, 3 weeks ago. What we are seeing in our practice and what is being seen all over town and across the country is a significant increase in the number of ILI or influenza like illnesses. Nationwide, close to 5% of acute visits to ERs and doctor's offices are for ILI (up from 2.5% during a typical early October and closer to the percentage seen in late February). ER utilization rates in local hospitals are up about 40% from last year at this time and the experience in our office is similar. The good news is that almost no one has been seriously ill (there is a real distinction between uncomfortably ill and seriously ill). And the interesting thing is that only about 25% of people with influenza like illnesses (cough, congestion, fever and vomiting) are actually positive for H1N1. There are a lot of other illnesses out there that mimic H1N1 (like rhinovirus and corona virus) that cause very similar symptoms. Still, nationwide, the number of states reporting widespread H1N1 disease is up to 27 (from 12, only 3 weeks ago) and 18 additional states are reporting significant regional H1N1 disease. Also nationwide, there have been a number of pediatric deaths, but as tragic as each pediatric death is, there is no increase over the number of deaths seen during the 2008-9 and 2007-8 seasonal flu seasons. Locally, there have been some cases of severe H1N1 disease (reported on the local news programs) but the number of hospitalized patients with H1N1 is still below what is seen in a typical seasonal flu or RSV season and the number of ICU admissions for H1N1 disease is still small.

What about the H1N1 vaccine? Three weeks ago, we reported that the FDA (Food and Drug Administration) had licensed 4 H1N1 influenza vaccines for use in adults and the following week, studies were completed in children, demonstrating great safety and efficacy for all 4 vaccines. It is important to repeat the last statement: The FDA approved vaccines are safe and effective. According to many news polls, fully one third of all those questioned are worried about the safety of the H1N1 vaccines. We believe that these worries are fueled primarily by hearsay and unsubstantiated rumors. These vaccines are made in the same way as the seasonal flu vaccine with the same processes and by the same companies except that instead of using the H3N2 strain, the H1N1 strain has been substituted. Ordinarily, a full scale study of an influenza vaccine is not conducted. In this case, because of all the hoopla, the health authorities actually went the extra mile and studied the H1N1 vaccine and found that it performs as safely and as effectively as the seasonal flu vaccine.

Why is it important to have your child vaccinated against H1N1 disease? As mentioned in an earlier email, the major reason is that thus far, few people are protected against H1N1. In typical seasonal flu where 15-20% of people are susceptible (50-60 million Americans), work and school absenteeism can be as high as 6% and the number of total deaths are about 30,000. With H1N1, where 4 times as many susceptible people, absenteeism can be as high as 30% or higher and the number of deaths could approach 200,000 nationwide. Therefore, even though the disease appears to be no more serious, the sheer number of people who are susceptible, makes this a huge medical and economic threat.

Moreover, vaccinating children helps save the lives of their parents and grandparents. When the Prevnar meningitis vaccine (which all of your children receive 4 times in the first 2 years of life) was introduced over a decade ago, we first saw a drop in the number of pediatric deaths from meningitis. But just a year later, there was a huge drop in the number of adult deaths from pneumonia since the most common cause of adult pneumonia is the germ that also causes meningitis in kids. In other words, by keeping kids healthy, we prevent their parents and grandparents from catching the disease. One local infectious disease expert went so far as to say that immunizing as many kids as possible may be the best public health response to the entire H1N1 problem in this county.

When will it be available? As you have read, to date, there have been a few million doses sent to very select areas of the country. Despite rumors to the contrary, to date, there are no doses of H1N1 vaccine available in the Cleveland area. We have ordered 7000 doses of the vaccine and we will be administering it to our patients as soon as it is released. Despite what you have read in the newspapers, the vaccine is being paid for by your tax dollars and the cost for administration should be covered by your insurance company. The details for patients without insurance are still being worked out. Please help us. Remember, we cannot administer 7000 doses all on one day. To echo what was said above, however, over 8 months, the disease has not evolved into a serious disease and the need for immediate vaccination is not present. We will hold extra vaccine administration clinics in the weeks ahead as vaccine becomes available. In addition, the Ohio Board of Health is beginning talks with various school districts to have public health nurses administer the vaccine in much the same way as polio sugar cubes were distributed a generation ago. We will have more to say about all of these options as vaccine becomes available over the next month.

Two additional comments:

1. Everyone needs a seasonal flu vaccine. We have administered 1200 doses to date and have over 900 scheduled by the end of October. Our goal is to provide seasonal flu coverage to everyone because it will protect those children and their families against seasonal flu which right now is a more serious problem than H1N1. Please call the office to schedule your child's flu vaccine over the next 3 months (flu season typically starts in January and there is no evidence that it will be starting any sooner this year so getting your vaccine by the end of the year should be sufficient.)
2. We are doing an H1N1 study that is looking at the next generation of H1N1 vaccine. The current vaccine is made in the same way as seasonal flu vaccine but there is a limit to the amount that can be produced with this process. The next generation of vaccine has the potential to produce 4-5 times as much vaccine. It is a slightly different process which uses a booster product to boost the immunity. If you are interested in participating in this study (advantage is getting H1N1 in the next few weeks - there is no placebo and participating in cutting edge science), please contact our research department by clicking on the Senders Research homepage.

Novel H1N1 Update - 9/17/2009

What's happened in the last 4 months? There is lots of news on the H1N1 front since our last update. As of last week, the Centers for Disease Control has reported continued spread of the H1N1 virus throughout the United States and its territories. Ohio is one of 13 states in which there is regional activity, meaning that there are cases in localized areas, rather than widespread involvement. We have personally tested over 100 children over the past few months who were positive for the H1N1 virus. The good news is that none of our patients have had serious disease, most have had a cough and fever and some have had nausea

and vomiting. None of our patients have been hospitalized and per the local health authority recommendations, none have received tamiflu. Most have recovered in 2-3 days.

What's happening around the country? On the national scene, the situation is similar. There have been 44 pediatric deaths from H1N1 identified influenza disease that have been recorded in the past 35 weeks. This compares to 78 during the same number of weeks of the 2008-09 seasonal flu season and 88 in the 2007-08 flu season. This means that in the first 8 months, H1N1 influenza appears to be at worse, no different than seasonal flu and possibly slightly less virulent than seasonal flu. Nationally, hospitalization rates for H1N1 are slightly less than for seasonal flu and outpatient visits appear to be about the same.

Why all the hoopla? So if after almost 9 months, H1N1 is not such a terrible disease, why all the hoopla created this week about an H1N1 vaccine? The answer is not about virulence or the seriousness of the disease. It is about the number of people susceptible to the disease and the possible impact on the health, economic and educational lives of ordinary Americans. Put more bluntly, if during a normal flu season, 15% of the population is susceptible to "catching the flu" and that leads to 35,000 total deaths and 88 pediatric deaths, what happens when H1N1 hits and the susceptible group is 75% of the population. Does that mean that the number of total and pediatric deaths rise 5 fold? Moreover, if school and work absenteeism during a typical flu season is about 8-15%, what happens if 5 times as many people are infected? What is the impact on the economy or on the educational system? That is why the CDC in partnership with state health authorities have developed a plan to vaccinate all: 1) Pregnant women 2) Household contacts of children under 6 months 3) Healthcare personnel and 4) All children from 6 months to 24 years. Again, it is not about the danger of the disease. It is about the number of people who are susceptible.

What about the vaccine? On Tuesday, September 15, Secretary Sebelius announced that 5 vaccines had been licensed for use in vaccinating against H1N1 in adults. We have had the opportunity to discuss these vaccines with local health authorities as well as to look at the package inserts. The vaccines are all essentially variations on the seasonal vaccines. Despite what you may have heard from friends and other medical personnel, these are safe vaccines with no preservatives and no thimerisol. The exciting news is that they appear to be very safe and very effective in adults and seem to require only one dose. In all likelihood, this strain will be incorporated into next year's seasonal flu vaccine and then adults will only need one vaccine.

What about children? There are ongoing studies at the National Institutes of Health about the safety of these same vaccines in children. It is likely that they will be licensed soon for use in children but there is a strong possibility that 2 doses will be required. In any event, there is currently no licensed H1N1 vaccine for children.

When will the vaccine be available? According to local health authorities, the first doses are likely to be available for adults in limited numbers at the beginning of October. Up to 80 million doses will be available by the end of October and more after that. In kids, the entire process will be delayed about 3 weeks since it is likely that the safety studies in kids will not be available for review for a few more weeks.

Who will give our child the H1N1 vaccine? That is the hardest question to answer. To give out 100 million doses of vaccine in children is a monumental task especially since the vaccine will not be available until after many of those same children have already received the seasonal flu vaccine. Public health authorities are talking about flu fairs in gyms and in auditoriums much like polio fairs in the 1950s. We have registered with the State of Ohio to be one of the potential sites and so we hope and expect to continue to be a real resource for our patients on this matter in the months to come.

Who will pay for H1N1 vaccine administration? That is not clear. The government will likely purchase the vaccine for distribution. How insurance companies deal with this matter is being discussed on the highest levels.

What should our patients do now?

1. Call to schedule your child's seasonal flu vaccine. We are seeing patients on Friday, Saturday and Sunday in our flu clinic and for now, have plenty of vaccine available. Even if your child never had a flu vaccine, this is the year to give them one because it will keep them healthier in school and make it easier to diagnose H1N1.
2. Teach your children good hygiene. Purchase hand sanitizer and use upon entering the house and before eating. Don't go crazy! Germs in general are not evil. They help build our immunity. However, simple precautions are very helpful.
3. Don't eat at your workplace computer. Computer keyboards are some of the germiest areas of the world and should be wiped down on a semiregular basis.
4. Continue to check our website on a regular basis. We will be posting new information in the Breaking News section and will be sending weekly or biweekly updates throughout flu season.

Novel H1N1 Influenza (Swine Flu) Update - 6/3/2009

Novel H1N1 Influenza has been spreading slowly throughout the United States. Most of you have read about the first case reported in Alaska yesterday, making it now truly a national disease in all 50 states. There have been over 11,000 cases reported nationally (as of Monday) and 17 deaths. Compared to a typical flu season (2008-9 for example), this is exceedingly mild. By comparison, four weeks into a typical season (as we are now), we would have expected close to 500,000 cases and hundreds of fatalities (mostly in the elderly).

As many of you are aware, Cuyahoga County has not been spared. There have been a number of cases reported in east side school districts (we diagnosed 4 today). All of the children affected have had mild cases with fever, achiness and a bad cough. As we have learned more and more about the mildness of this disease, we continue to be more reassured. How the Board of Health decides to deal with this problem is not clear but according to most local infectious disease specialists, it should be treated no differently than the way we deal with typical fall/winter influenza.

A few comments about how to look at this disease now that it is more common in our backyards:

1. Please don't panic! Please continue to go to church and synagogue. Please continue to go to school end-of-the-year functions. Please continue to send your children to Little League and soccer practice and please continue to frequent the local swimming pools (make sure to use sunblock—check out the sunblock piece posted on our website for the latest 2009 recommendations)
2. Use common sense. If your child is sick, please don't send him or her to school or camp. This recommendation is no different than it is for any other illness.
3. If your child is sick with a bad cough, fever and general aches and pains, give us a call. We will be happy to see your child but will take precautions and bring your child back right away so that there is less exposure to others.
4. In children with suspected Novel H1N1 influenza who have a positive rapid flu test, we will not treat with medication. Per the recommendations of the local infectious disease experts, just as treatment of regular influenza often carries more side effects (30% vomit and have abdominal pain) than the disease, the same is true with Novel H1N1. Only if your child is sick enough to be hospitalized, will he or she will be treated with an anti flu medication according to current CDC recommendations.
5. Healthy children will stay healthy in the doctor's office. As many of you know, few practices have as many examining rooms as we do. We have identified an effective way of isolating patients with suspected Novel H1N1 influenza so that all of your healthy children are protected and have instituted across the board disinfectant precautions for the duration of this outbreak much as we do every flu season.
6. Call if you need reassurance!

Latest H1N1 Influenza Disease (Swine Flu) Information - May 12, 2009

The number of diagnosed cases of H1N1 (so called Novel Influenza) that have been reported in the US is

over 3000. Seven states (those that border to Mexico as well as New York because of its large ethnic populations and strong travel history) have widespread activity, 14 states with regional activity and 17 states (including Ohio,) with sporadic activity. The number of deaths (3) is still extremely low and all have had underlying health issues as far as we can tell. The good news then, is that this rise in documented cases is expected in part because that is the natural history of the disease and in part because the CDC has now distributed to all the state health departments, an easy to use diagnostic kit that makes making the diagnosis that much quicker.

To date, only 13.2% of specimens sent to the state health departments because of a suspicion for H1N1 Novel Influenza, have been positive. Another 20% have not been typable and are suspicious for H1N1. The majority of patients with positive tests have had symptoms including fever, cough, sore throat, body aches, headache, chills and fatigue. In addition, a large percentage of people have reported nausea, vomiting or diarrhea.

Groups that continue to remain at risk are children under 2 years (the same group at risk for seasonal influenza), immunosuppressed individuals and children with sickle cell disease, asthma and diabetes. Almost 100% of all cases of H1N1 Novel Influenza are sensitive to the two approved anti viral medications, Tamiflu and Relenza. However, it is important to note that the CDC is not recommending the use of these medications in mild cases (those that are not hospitalized).

We will continue to monitor the spread of this disease but must also continue to emphasize that now 5 weeks into the illness, there remains no reason for alarm. Rather, parents should encourage the practice of good hygiene with hand washing and alcohol based gels (like Purell) and the same common sense approaches that have served us so well during the winter seasons. Encourage your children to go outdoors and play!

Novel H1N1 Flu Disease (Swine Flu) Update - May 5, 2009

Good news for parents and graduating seniors. The CDC revised its school closing recommendations late in the day today to reflect the spread of the disease and the relative mildness of the disease. As we pointed out yesterday, for a variety of immunological reasons, this swine flu outbreak is behaving more like seasonal flu than like the more serious SARS and bird flu outbreaks in Southeast Asia last year.

The number of confirmed cases has risen to 403 but there are an additional 600 cases likely to become confirmed in the next 24 hours. Many of these cases represent clusters of individuals and the CDC has found that closing schools is proving ineffective in preventing the spread of the disease. The focus now is on early identification of ill students and staff, encouraging sick student and faculty to stay home when ill, and good cough and hand hygiene etiquette.

Accordingly, the CDC is now recommending that we treat Swine Flu like we have treated seasonal flu in the past.

- Schools should not be closed unless the number of students and faculty who are ill or are at home make it difficult to continue to conduct classes
- Students who are ill with flu like illnesses should stay home for a week (excused absences). If they are moderately ill, they should be seen by their doctors (that's us, not the Emergency Room). And if they are still ill one week into their illness, they should stay home until they are better.
- Students who come to school ill with flu like illnesses (and we know what those are from our experience with seasonal flu), should be sent home
- Hand washing should continue to be encouraged

These new recommendations are encouraging. Despite the spread of the disease (and there is still almost none in this area), the symptoms appear to be mild and self limited and common sense and being a good citizen are emerging as the most valuable tools in fighting the spread of this disease.

Novel H1N1 (Swine Flu) - 5/4/09

As those of you who have been reading these email and website updates, the name continues to change. We have pointed out previously that H1N1 describes the influenza type (as opposed to H1N2, H3N1 and H3N2). The reason it is now being referred to as Novel H1N1 Disease is that upon further analysis, it appears that this virus is different from all previously known swine flu types. In fact, it appears to be a combination of 4 genes, 2 genes that normally circulate in pigs in Europe and Asia and one each from a bird and human. Flu viruses commonly "reassort" or swap genes and the resulting virus produced by those genes may be weaker or stronger.

The number of cases nationwide has risen slowly to 246 with 3 cases in Ohio (two more were diagnosed this past weekend in central Ohio). There continues to be only 1 death in the United States. This death occurred in a Mexican boy who was staying in Texas.

This week appears to be a critical week in the evolution of this disease. Epidemics spread in a logarithmic manner, meaning they increase by 10 fold on a regular basis. Thus far, we have only seen spread in an arithmetic manner with increases of 20-40 per day rather than 200-1000 per day. Since we are entering into the period where the contacts of the first cases are now ending their incubation period, if we do not see a dramatic increase this week, we should be able to breathe a collective sigh of relief.

Why is there so much hoopla about this disease? The truth is that there have been individual cases of Swine Flu disease every other year for many years. The most widespread cases occurred in 1976 when 13 soldiers at Fort Dix were diagnosed with the disease with one death. In all previous cases including those that were fatal, there was little spread outside the initial group. When there was evidence that the 2009 Swine Flu cases had spread outside the initial group, there was concern by the CDC that it could affect tens of millions of people with little or no immunity or protection to this virus, putting the country and its economy at risk. Hence, the precautions!

But so far, the disease is behaving very differently. Instead of attack rates of 80% or more (which would be expected in a pandemic), the attack rate is under 10% and possibly much lower. This year's Swine Flu virus is behaving very much like many people are already protected. Why is that? One theory that has been advanced is worth considering. According to this theory, the virus has already mutated (common language) or reassorted (medical language) to become less virulent. Remember, viruses like every other living organism, don't do well when they kill their host. The ideal situation is to make the host ill enough to spread it to others. And that is how this virus is behaving. Almost all of the cases studied so far have been adults or children with mild flu like symptoms that have resolved without intervention. Time will tell whether this theory is correct. In the meantime, it should continue to reassure everyone when the numbers on the daily lists continue to rise as slowly as they are rising.

H1N1 Flu Disease Update (Swine Flu) - 5/1/09

The number of confirmed cases of H1N1 Flu disease continues to rise slowly (141 total cases and still only 1 death) as would be expected with any disease with this wide a distribution.

One of the theories about why the disease continues to be milder in this country than in Mexico is offered by one of our patients, a Microbiology professor at one of the local colleges. And that is the "Purell effect". Countries with poor hygiene actually develop stronger immune systems and react more significantly against immune challenges. Countries such as ours where good hygiene practices have been in effect for many years and where alcohol based scrubs are common, have weaker immune systems and react less severely to outside insults such as influenza infections. This is one of the theories about why the 1918 pandemic was so severe. We were a less healthy country then and we reacted more strongly against everything.

Continue to use reason and you are likely to be just fine.

Today, the Centers for Disease Control (CDC) issued guidelines for school closures which should be of interest and relevance to all parents. For more detailed information see: http://www.cdc.gov/h1n1flu/k12_dismissal.htm.

According to the CDC, the goal of school closure is to "1) delay the peak of the disease in order to "buy time" for the production and distribution of a vaccine against this new virus, 2) decrease the number of people who get sick from this virus in a given community, thus reducing the "surge" on healthcare systems, and 3) reduce the total number of people who get sick or die." To that end, the CDC had developed an approach, which though well thought out, has the potential to cause much pain to working parents. Indeed, President Obama has cautioned all parents to make contingency day care arrangements for long periods of time over the next few months as this problem evolves.

The CDC is recommending that any decision to close a school be made in conjunction with the local and state health officials (Cuyahoga, Lake, Geauga and Ohio State Health Boards). Schools should consider dismissing students if: 1) There is a confirmed case of H1N1 disease in that school 2) If there are cases in a local school and there is reasonable cross over between students and teachers 3) If there are cases in an adjacent district and there is reasonable cross over between districts.

When schools are closed, it is recommended that they be closed for up to 14 days because transmission occurs for 7-10 days. This is not likely to be a problem over the next few weeks as the semester draws to a close but we will have to watch the spread closely to know what to expect of the 2009-10 school year. In addition, when a school is closed, the reason is to prevent congregation of children in close quarters. That also means that parents should prevent large gatherings of "out of school" children. Again, this poses some real logistical problems for parents that we all have to know about as this problem evolves.

Is the disease more severe? Again, we have taken great pains to point out that the vast majority of adults and children in this country with H1N1 disease have recovered uneventfully in much the same way as they have recovered from regular influenza. So why is the CDC being so conservative about closing schools? The answer is that they don't completely understand which direction this disease will go and want to be ready for all contingencies.

Swine Flu Update - 4/30/09

As of early this morning, there are 109 confirmed cases of swine flu. Many have noticed that the name of the disease is being modified because of the concerns of the pig industry. Although experience over decades indicates that there is no transmission of this form of influenza by eating pork or meat of pig origin, there are reports from other countries of wholesale destruction of pig livestock. The term swine origin influenza A or S-OIA will be appearing more and more in the lay press and on television.

Influenza viruses are characterized by their type as influenza A and influenza B. Of influenza A viruses, further characterization is provided by the presence of enzymes on their outside coat called hemagglutinin (H) and neuraminidase (N). These enzymes are thought to be responsible for the attack rate because of their ability to penetrate cells. Each year, the subtype of influenza changes. For example, last season, the subtype was H1N1 or H3N2. The bird flu subtype that caused such a stir last year in Southeast Asia was H5N1. The S-OIA (swine flu) subtype is also H1N1 and you may be noticing this term increasingly in the media.

Although the WHO has raised the level of alert to a Level 5, the point of this alert is "that the time (for governments) to finalize the organization, communication, and implementation of the planned mitigation measures is short." That means that it is the responsibility of governments and health care organizations to make preparations for larger scale outbreaks. It does not mean that you or your child is at any greater risk. It does mean that the Obama Administration and the CDC are beginning to finalize their plans for testing and treating people who may be at risk. (There was a news conference at 1PM today given by the Director of Homeland Security and the Acting Chief of the CDC).

Currently, the only children at risk are children who may have come in contact with someone with H1N1 swine flu and since there are only 2 confirmed cases in Ohio, that likelihood is small. In addition, children who appear ill with severe cough, fever and vomiting should be evaluated. We have spoken to many parents and evaluated many children and so far no one has met the criteria necessary for further evaluation. Please exercise judgment. In California, there are so many worried people that ERs have set up tents outside to evaluate all those concerned. If you are concerned, call us or come in but we continue to emphasize that your children are at no greater risk of this disease than many other diseases that affect children.

A word about Tamiflu. Many have asked for prescriptions for Tamiflu just in case their child has the disease some day and there isn't enough available. The CDC strongly recommends against this approach. There are large stockpiles available and only children with a high suspicion of having H1N1 disease should be given any antiviral treatment.

Swine Flu Alert - 4/29/09

The number of confirmed cases of Swine Flu in the United States has increased to 66 as of the end of the day yesterday. Today, the Centers for Disease Control (CDC) has reported the first death, in a 23 month old Texas child. Dr. James Besser, the Acting Head of the CDC commented, "I can confirm very sad news coming out of Texas that a child has died from the H1N1 (Swine Flu) virus. As a parent and a pediatrician, my heart goes out to the family." However, he cautioned that the rise in cases including the fatality is not unexpected given the nature of influenza disease. Most people don't realize that so-called, garden variety influenza, the type that affects people in the winter, is a serious disease causing up to 36,000 deaths a year, mostly in the elderly. In children, the average number of deaths over the past 5 years has been 90 per season. In fact, it is the most common vaccine preventable cause of death in the United States in both adults and children. We don't know as yet whether the child who died had any other complicating conditions but we do know that in almost all affected children and adults, it continues to cause only mild disease.

The CDC has, therefore, not altered its recommendations which are the same recommendations for avoiding any illness. Hand washing with soap and water or with alcohol based gels is the most important deterrent. If your child has thicker secretions, encourage or teach him/her to use a tissue and dispose of the tissue afterwards. There is no evidence that standard masks are at all helpful. And if you are concerned that your child is more seriously ill, we would be happy to see him/her for an evaluation.

As an aside, it is worth putting in a plug for getting influenza vaccine every fall/winter. This past flu season, we vaccinated almost 3000 of our patients but most were children under 6 years. The vaccine was an excellent match for the disease and the incidence of influenza in our vaccinated patients was minimal. However, many teenagers missed valuable time from school because of influenza and should be strongly urged to have the influenza vaccine next winter.

Swine Flu Update - 4/28/09

There have been no additional confirmed cases of Swine Flu reported in Ohio in the past 24 hours and few additional cases reported nationwide. The Centers for Disease Control (CDC) has released some of its stockpile of Tamiflu, the medication used to treat severe cases of Swine Flu. However, the CDC has been very clear about not using antiviral medication unless the child is moderately to severely ill (or hospitalized) and there is good reason to believe that the child has Swine Flu. There has been no evidence thus far that Swine Flu is pervasive (there has only been 1 confirmed case in Elyria) or that the disease at this time of year will cause such severe reactions. Of interest, the reason that garden variety influenza (the flu) rarely causes disease this time of year is that the influenza virus appears to be very heat sensitive and simply dies off during the hotter months of the year.

Those who love to get inundated by information are welcome to sign up on Twitter (twitter.com/cdcemergency) for minute by minute CDC reports. However, there is no evidence thus far, that this Swine Flu issue requires any more vigilance than the normal type of monitoring that good parents

do of their children on every other day. For those who continue to enjoy having us process the information, we will continue to keep you apprised of Swine Flu patterns and valuable information for your family on the Breaking News section of our website.

Swine Flu Disease - 4/27/09

No doubt, many of you have read about the first case of Swine Flu diagnosed in Ohio in a 9 year old boy in Elyria. There is a lot of information floating around our 24 hour news world and we feel it is helpful to give you our take on this problem to prevent mass confusion.

Swine flu is a type of influenza or flu that is transmitted amongst pigs. In the past, the Centers for Disease Control and Prevention (CDC) has received reports of approximately one human swine influenza virus infection every 1-2 years in the United States. However, during December 2005-January 2009, 12 cases of human infection with swine influenza were reported. Five of these 12 cases occurred in patients who had direct exposure to pigs, six in patients reported being near pigs, and the exposure in one case was unknown. Although the vast majority of human infections with animal influenza viruses do not result in human-to-human transmission, it is critical to evaluate each case to insure that there is no increased chance of infecting large numbers of unprotected humans with an animal virus. The same matter arose last year in Southeast Asia with cases of bird flu. In both cases, the type of flu (called H1N1) is the same type as in the flu vaccine but because it contains genetic material from animals or birds, the influenza vaccine is not protective. The unusual situation in this outbreak is that it appears that an animal disease is now spreading amongst humans.

Thus far, there have been 20 cases diagnosed in the United States, many in children. All have had mild "flu-like" symptoms like cough, congestion, headache, nausea and vomiting as well as fever. All have recovered without a problem. The problem is that in Mexico, there have been many more cases and 88 recent deaths are being investigated as being possibly linked to this new strain. In Mexico, up to 1100 people are suspected as being possibly infected. Schools have been closed throughout Mexico City as the country's health department is taking a very serious approach to the problem. Airlines are refunding money for passengers who have cancelled trips to Mexico and health officials are recommending that travel to Mexico be curtailed. The Elyria boy with the confirmed case of swine flu had travelled last week to Mexico.

With health officials plotting the next move, there are a number of things to remember. So far, swine flu in the US has not been any more dangerous than regular flu. Although the Elyria school attended by the infected 9 year old has been closed, the CDC is not recommending any similar precautions in Cuyahoga County. Children who look sick should always be evaluated but no more so today than any other day. Cough, runny nose, nausea, vomiting and fever are much more likely to be caused by Enterovirus, a common spring virus, rather than Swine Flu. Any child who is suspected of having swine flu will be cultured and the culture will be sent to the local health authorities. At this point, although Swine Flu is sensitive to an antiviral medication called Tamiflu, it is not being recommended to be given unless the child is moderately to severely ill because the side effects of Tamiflu are often as severe as the disease. Remember that you cannot get this disease from eating pig or pork products.

The CDC will be issuing more directives as more information becomes available. Please check back on our website for more breaking news.

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