

INFECTIOUS DISEASE SERVICES OF GEORGIA, P.C.

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DIPLOMATES AMERICAN BOARD OF INTERNAL MEDICINE
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MAA Pandemic Report January 24, 2007

The annual dinner at the Buckhead Club on June 7, 2006, provided an opportunity to discuss thoughts on pandemic preparations with Dr. Matt Gwynn and Dr. John Harvey of the Medical Association. This was done at their request as members of the Board of the Medical Association of Atlanta. The discussion resulted in an invitation by Dr. Gwynn to be interviewed on a radio program at Radio Sandy Springs. We had an hour-long interview in which there was full discussion about preparation and concerns for a pandemic flu and how it related to the Atlanta area. I was subsequently asked to host a weekly program on Monday evenings at Radio Sandy Springs on the subject of pandemic influenza.

The radio program was used as a vehicle to have hour-long discussions that were archived as part of a public record concerning pandemic flu issues and preparation. The first interview was September 11, 2006, and the following people were interviewed.

- September 11, 2006 Phil Huff, M.D. and Terry Moraczewski, M.D.
Internal Medicine and Family Practice
- September 18, 2006 Dan Callahan, M.D.
Pulmonary Medicine
- September 25, 2006 Wink Weinberg, M.D.
Infectious Disease
- October 16, 2006 J. Patrick O'Neal, M.D.
Medical Director
Office of Emergency Medical Services and Trauma
Division of Public Health
State of Georgia
- Dave Greenspan
Sandy Springs Councilman
- October 18, 2006 John Harvey, M.D.
Trauma Surgeon

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October 30, 2006	Pam Blackwell Director of Emergency Preparedness and Response Cobb Public Health Center
November 20, 2006	Arthur Yancey, M.D. Deputy Director/Emergency Medicine Fulton County Department of Health and Wellness
December 4, 2006	Dave Anderson COO, North Fulton Hospital
December 11, 2006	Robert Albin, M.D. MAA President Pulmonary Medicine
December 18, 2006	Michael Lipscomb, M.D. Director of Emergency Services North Fulton Hospital

These interviews led to the ideas listed in this report.

Pandemic influenza while very likely in our future cannot be predicted, and consequently preparations are difficult. What can be said is that in a pandemic there will be four different types of medical care services that will be needed:

- 1) The most severe medical care will be patients with respiratory failure, either from influenza virus infection or complicating pneumonia, who need ventilator support.
- 2) There will be a large group who will need respiratory and ventilator support who will not be able to be treated because hospitals will be overwhelmed with group one.
- 3) A third group involves patients who require urgent care in the form of intravenous fluids, or intravenous antibiotics, along with antiemetics, and could be evaluated, treated, and safely returned to their homes.
- 4) Finally, the fourth group is individuals who have uncomplicated influenza who could receive either advice or simple measures plus-or-minus antiviral medication and would not have to be hospitalized nor receive urgent care.

The pandemic flu planning seems to be most advanced in group one and group four and problematic in group two and group three. It was my sense that pandemic flu planning from a patient care perspective was slightly more mature in Cobb County than it is in Fulton County. The geographic makeup of Fulton County provides unusual challenges to try to deliver this care in a centralized fashion. My meetings with both state and county authorities revealed a planning

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process that was well-along in many areas. Both County and State authorities welcomed participation from organized medicine.

Based on government, CDC, and local web sites as well as my own review, I have attempted to evaluate the needs of my own community to serve as a guide for the type of support that physicians may need to give to this effort. I have used as a model Roswell and Alpharetta with a population of 150,000, and I have assumed a 1% mortality which is between the 1918 Spanish flu and the 1957 Asian flu, but tending toward the more severe side.

If 30% of the population was infected with this pandemic flu, 45,000 individuals would be infected. And, if there was a 1% mortality, one could anticipate up to 900 ventilator patients, assuming a 50% mortality among cases. Many patients will not survive to get to the hospital. I estimated that if this were as much as 50%, we would have 450 respiratory failures. I have further inquired into the nature of the ventilator needs on an average three-month period for respiratory failure, and this is in the neighborhood of 25 at North Fulton Hospital. Assuming we could even double the number of ventilators, which seems highly-unlikely based on anybody's estimate, the maximum number of ventilators that we could have available would be 50. Consequently, there may be 8 patients who die of respiratory failure for every one ventilator patient who makes it to respiratory support. The humane care of individuals for whom we do not have critical care support will be challenging.

The estimation of patient care needs in the urgent care group is problematic. Articles suggest that 24-35% of patients who were admitted to the hospital for acute influenza require hydration for hypovolemia and/or complications including renal insufficiency. After discussing with emergency room experts, I finally decided to assume a very conservative need of 1%. This means that one patient out 100 would need hydration. If that is true, we would have 450 patients who need either hydration, IV antibiotics, or antiemetics. If the mortality in this group was as much as 20%, the remainder, approximately 360, could be saved by these efforts. In summary, one might estimate that 7 patients could be saved by urgent care for every one patient who could be saved by critical care respiratory support.

In view of the above analysis, I turned attention to the issue of who would provide this urgent care. In the metropolitan area, there are hospitalists at most hospitals who are providing in-patient care. The primary care doctors, such as internal medicine and family practice, do not come to the hospital any more and treat patients, nor do they provide these services in their offices. The amount of urgent care sites is limited, and these might be used for emergency room surrogates during a pandemic flu. One patient group that might be available is the Medical Reserve Corps which is a volunteer corps that is organized under public auspices and is a group of retired physicians in the Atlanta area. Preliminary discussions suggest that this group would be an unlikely source to provide the amount of care needed in the metropolitan area. Under pandemic conditions, if 30% of hospital staff is out at any one time with influenza, and 30% of their families are infected, and 30% of emergency responders are infected, the actual net effect on the population may be closer to 50% of people being unavailable at any one time at the peak of this problem. As a result we would likely need significant redundancy in our ability to deliver

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urgent care to the population. In short, I feel we need both private volunteer support as well as public health support for this effort. My discussions with Drs. Huff and Moraczewski suggest that physicians would be willing to participate if they were asked and understood their role in such a challenging event.

In summary, it seems that we need physician voluntary efforts to provide urgent care in the community when hospitals are functionally closed because of pandemic flu. The current pandemic flu plans assume that hospitals will be open and that, therefore, the hospitals are providing this care. Since we know from virtually any model that we pick that hospitals will be functionally closed, we need to provide urgent care to our communities separate from our hospitals. The critical question is who will do this and how will it be organized?

It would seem prudent that each community have a pandemic care committee that would include physicians, emergency response personnel, and hospital personnel to organize a voluntary physician effort. Hospitals may well be able to provide the logistical support to do this, including antibiotics, fluids, and medication under these circumstances. The major question is who will provide the urgent care? Hospital physicians and personnel will in all likelihood be overwhelmed by the need to keep up with care in the hospitals. This suggests that primary care physicians in the community, such as family practitioners, internists, and any other physician who remotely remembers being an intern and resident could provide these services. The urgent care needs are perhaps the simplest of needs that one could think of in a medical emergency. Fluids, two types of intravenous antibiotics, antiemetics, and medication for allergic reactions as well as the ability to take vital signs and perhaps a pulse oximeter would be necessary items. Most, if not all, physicians have done this at one point in their career.

I am providing this report in hopes of getting a consensus from the Medical Association of Atlanta to urge communities to organize to deliver urgent care to their patients in this manner during pandemic flu conditions as this will clearly provide the greatest return of lives saved compared to any other facet of pandemic care. The various groups who deliver this care can be coordinated as time allows. We will need to communicate these efforts to patients. We will need to coordinate with EMS. Before all this, we need to recognize that we need to expand the surge capacity of our community by asking physicians to help.

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