Combating the H1N1 Flu Virus

By Rachel Moore

As anyone who has watched or read the news recently is surely aware, state, federal, and world officials have been busy grappling with what could prove to be a substantial challenge to public health across the globe. In April of this year, findings of a new strain of the H1N1 influenza first emerged in Mexico. Since that time, cases have been reported in more than 168 countries throughout the world, and the World Health Organization (WHO) has declared the outbreak to be a pandemic. Although the virus is popularly called the “swine flu,” concern that this term causes confusion about how the virus is spread (there is no danger in eating well cooked pork) has led WHO and other organizations to refer to the virus as “influenza A (H1N1)” instead. In the United States, nearly 70,000 cases of H1N1 flu have been reported this year, with at

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least 556 deaths so far. Georgia has not been immune. The Department of Community Health (DCH) reports that as of August 26, there have been 147 H1N1 related hospitalizations and four deaths in the state so far. Of course, influenza is a common killer every year across the globe, so what makes this latest strain different and what can be done to lessen its damage?

How serious is the threat?

Medical experts agree that the H1N1 virus poses a significant threat to public health, although there is still some debate about how severe this pandemic is likely to be. In a typical flu season, up to 20 percent of the general public becomes infected (not all exhibiting symptoms) and 36,000 people die annually. However, on August 24, the President's Council of Advisors of Science released a report that described a grim plausible scenario of 30 to 50 percent of the U.S. population becoming infected this fall and winter with the H1N1 virus and 20 to 40 percent of the population exhibiting symptoms. At least half of these symptomatic individuals would seek medical attention, culminating in 1.8 million hospital admissions throughout the nation. In all, H1N1 could result in a death toll of 30,000 to 90,000 in the United States alone.

After this dire report received a great deal of media attention, the Centers for Disease Control's (CDC) head, Dr. Thomas Frieden, stated that this scenario is unlikely to become a reality, so long as the virus maintains its current pattern. So far, H1N1 has not been any deadlier than the average flu seen each year. As winter comes to an end in the Southern Hemisphere, experts have been relieved to find that the impact of the H1N1 virus has not been as heavy as had once been feared. Even more encouraging, genetic tracking over the past few months has not found any signs that the virus is mutating into a more dangerous strain.

While the H1N1 flu so far is not significantly deadlier than the seasonal flu virus, what has alarmed medical experts is the demographics of the virus's victims. The typical flu's fatalities occur mainly in the elderly population. With H1N1, however, infections are 20 times more common among individuals ages five to 24 than in persons over 65. While about 80 to 100 children in the U.S. die each flu season, approximately three dozen children have died already this year, according to the CDC. Besides young people, pregnant women are also vulnerable; although they make up only one percent of the U.S. population, pregnant women have composed six percent of H1N1 deaths. Other at-risk populations include persons with chronic conditions such as neurological disorders, respiratory disease, and diabetes.

As with any flu, it is important for the general public to recognize the symptoms and to know when to stay home from school or work. H1N1 flu symptoms are similar to ordinary flu symptoms and can include fever, cough, sore throat, body aches, headache, fatigue, chills, and, less often, diarrhea or vomiting. Although fever is commonly thought to be a classic symptom of the flu, health officials caution that an absence of fever is no guarantee that a person is not infectious. According to CDC estimates, ten to 40 percent of infected individuals do not experience fever, possibly leading to a greater risk of spreading the disease because these persons do not realize they need to stay home.

Recommendations for the Public

With children disproportionately affected by this virus, public health officials have been carefully considering the question...
ruling for three years to give Congress time to authorize water supply as a purpose for Lake Lanier. At the end of three years, if there is no resolution, the operation of Buford Dam on Lake Lanier will return to 1970s baseline levels. Thus, the required water flow from the dam will be 600 cubic feet per second (cfs) and only Gainesville and Buford will be allowed to withdraw water from the lake (eight million gallons for Gainesville and two million gallons for Buford).

In his ruling, Judge Magnuson documented a detailed history of Lake Lanier. Two feasibility reports, the Parks Report and the Newman Report, noted hydropower and navigation as direct benefits. The Southeastern Power Administration (SEPA) ultimately paid approximately $30 million towards construction of the dam. Even though Atlanta did not contribute to the construction costs, Congressional hearings showed that Atlanta was not required to pay because water supply was an incidental benefit in the form of regulation of the Chattahoochee River’s flow. The cities of Buford and Gainesville were authorized to withdraw small amounts of water from the lake because their original water intake structures on the Chattahoochee River were inundated by Lake Lanier. The Corps’ 1958 operation manual provided for releases of 600 cfs from Buford Dam; however, the Corps agreed to additional withdrawals and a flow of 750 cfs in 1975. A drought in 1980 and 1981 caused the Corps to re-evaluate its operation of the dam, agreeing to provide minimum releases of 1750 cfs at the request of Georgia Power during the summer months.

Furthermore, despite the fact that only Buford and Gainesville were authorized to withdraw water, both Gwinnett County and the City of Cumming contracted with the Corps to withdraw water in the 1970s. In 1981, a U.S. Senate-directed

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May, U.S. Department of Health and Human Services Secretary Kathleen Sebelius directed approximately $1 billion in existing federal funds to the development and clinical study of a potential H1N1 vaccine. Such a vaccine is expected to be available for distribution sometime in October and will be provided by the federal government to states at no cost. Government officials, including President Barack Obama, have stressed that the vaccine will be voluntary while also strongly urging Americans to line up to be vaccinated.

At a joint hearing of the Georgia House and Senate Public Safety Committees on August 10, officials from DCH gave an overview of current plans for vaccine distribution to Georgians. Because supplies of the H1N1 vaccine may be limited at first, initial vaccination efforts will be directed towards five key populations:

- All people ages six months...
Atlanta water study was completed. It found that Lake Lanier and the Chattahoochee River provided more than 90 percent of the total water supply for metro Atlanta, and it recommended a new dam below Lake Lanier. Alternatively in 1989, the Corps determined that the most economical solution was reallocation of storage of Lake Lanier to water supply. This determination was included in a 1989 draft Water Control Plan, however; it was never adopted because in 1990, Alabama filed suit challenging the plan and the water supply contracts. This is the lawsuit that began the “water wars.”

Based on the fact that water supply contracts reallocated more than 20 percent of Lake Lanier storage, Judge Magnuson’s ruling in July of this year, states that the Corps’ actions to support water supply constitutes a “major operational change” and “seriously affects” Lake Lanier’s authorized purpose.

Our state insists that the Court take into account return flows, which are water the municipalities return to the lake and the Chattahoochee River in the form of highly treated wastewater. In recent years, metro Atlanta’s average net water use from the Chattahoochee is roughly 1 percent of the average annual flow at the Florida state line during non-drought periods, and less than 3 percent during drought periods. However, Judge Magnuson ruled that the Corps does not require the municipalities to return water; the only requirement in their water contracts is that the Corps allows them to withdraw water. Therefore, the Corps’ obligation remains the same.

While Georgia has discussed appealing the Judge’s decision, it also has contingency plans in place that focus on negotiations with Florida and Alabama, working with our state’s Congressional delegation, and developing additional water sources, including reservoirs. There have been many reports about converting a tract of forest land in Dawson County, owned by the City of Atlanta and Atlanta Hartsfield-Jackson Airport, into a reservoir.

Furthermore, several Senators are still showing an interest to explore agreements with Tennessee for use of the Tennessee River, or to move the Georgia-Tennessee border north. In fact, the border marker, the Camak Stone, was recently found to be missing. The United States Congress in 1796 established the state of Tennessee and designated its southern border as the 35th parallel. In the spring of 1818, Georgia mathematician James Camak camped near Nickajack Cave and used the stars to calculate where the parallel would be. In 1826, Mr. Camak returned for a second calculation, moving the line and the marker, the Camak Stone, nearer to the Tennessee River but still about a mile south of the real 35th parallel. Had the line been designated correctly, it would fall about in the middle of the main river channel near Nickajack Cave.

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- Persons living with or caring for babies under the age of six months;
- All pregnant women;
- Healthcare and emergency services personnel;
- and people ages 25 through 64 who have health conditions associated with a higher risk of medical complications from influenza.

Once demand for vaccination from these key populations is satisfied, health care providers may begin vaccinating healthy people ages 25 to 64. Adults aged 65 or older are considered low priority because of their relatively lower risk for H1N1.

While H1N1 has garnered much attention lately, medical experts stress that seasonal flu is still a serious concern as well. The H1N1 vaccine will not be a replacement for the seasonal flu vaccine, and state health officials encourage Georgians to receive both vaccines.

Influenza is an ongoing and unfortunate threat to the health of our society, and the H1N1 strain does seem to pose some unique challenges for the doctors and researchers who battle influenza year after year. While little can be done to stop the H1N1 virus from coming to Georgia or anywhere else, public health officials hope that vigilance and cooperation on the part of the general public will go a long way in assuring that this flu season is not significantly worse than any other.