Avian Influenza A (Bird Flu): Is the Threat Real?

Avian influenza is an infectious disease of birds caused by type A strains of the influenza virus. During the 20th century, the world experienced 3 pandemics caused by influenza A virus subtypes: the great influenza pandemic of 1918–1919 (Spanish flu; H1N1 virus), which caused an estimated 40 million to 50 million deaths worldwide, and the pandemics of 1957–1958 (Asian flu; H2N2 virus) and 1968–1969 (Hong Kong flu; H3N2 virus). In late 2003 and early 2004, new outbreaks of lethal avian influenza A (H5N1 virus) infection in poultry were reported by several Asian countries: China, Cambodia, Malaysia, South Korea, Thailand, Vietnam, Japan, Indonesia, and Laos. Since May 2005, outbreaks of H5N1 disease have been reported in poultry in China, Egypt, Iraq, Kazakhstan, Niger, Romania, Russia, Turkey, and Ukraine. In the same period, outbreaks of H5N1 in migratory birds were reported in Austria, Bulgaria, Bosnia-Herzegovina, China, Croatia, France, Greece, Germany, Hungary, Italy, Iran, Mongolia, Romania, and Slovenia. As of March 10, 2006, a total of 176 confirmed cases of avian influenza A (H5N1) in humans had been reported to the World Health Organization; of these, 97 were fatal. Flu viruses such as H5N1 occur naturally among birds. Wild birds around the world carry the viruses in their intestines but usually do not get sick. However, avian influenza is highly contagious among birds and can cause illness and death in domesticated birds, including chicken, duck, and turkey.

The H5N1 virus has already shown 2 characteristics of previous pandemic flu strains: the ability to infect the human population and the ability to cause severe disease when such human infection occurs. So far, the virus has not shown the ability to pass easily among people. Avian influenza is transmitted by inhalation of infectious droplets and droplet nuclei, by direct contact, and perhaps by indirect contact through self-inoculation of the upper respiratory tract or conjunctival mucosa. Oral ingestion of contaminated water during swimming and direct intranasal or conjunctival inoculation during exposure to water are other potential modes of transmission. Symptoms of avian influenza in humans have ranged from typical flulike symptoms (fever, cough, sore throat, and myalgia) combined with lower respiratory tract symptoms to eye infections, pneumonia, severe respiratory disease, and other life-threatening complications. Diarrhea, vomiting, abdominal and pleuritic pain, and bleeding from the nose and gums have also been reported. Common laboratory findings have been leukopenia, mild to moderate thrombocytopenia, and elevated levels of aminotransferase. Diagnosis has been confirmed by viral isolation, the detection of specific RNA, or both methods. Most patients with avian influenza A who have been admitted to hospital have required intensive care with ventilatory support. Empirical treatment with broad-spectrum antibiotics, antiviral agents, and corticosteroids has been used for most patients, although the effects of these treatments have not been vigorously assessed. No influenza A (H5) vaccine is commercially available for human use at this time. The H5N1 virus is resistant to rimantadine and amantadine. Oseltamivir and zanamivir are the primary treatment options, but additional studies are required to demonstrate their clinical utility and effectiveness. Isolation precautions, including negative pressure rooms, high-efficacy masks (N-95 or equivalent) long-sleeved gowns, face shield, and gloves, are recommended for health care workers in health care facilities. Prophylaxis with 75 mg oseltamivir once daily for 7 to 10 days is warranted for anyone who has had possible exposure. Household contacts of persons with confirmed avian influenza should receive postexposure prophylaxis, and their symptoms should be monitored closely.

As of March 2006, no cases of avian influenza (H5N1) had been detected in wild birds, domestic poultry, or people in North America. Although exposure to the bird flu is currently not a threat in North America, health care workers and the general public should be aware of all aspects of this disease. In particular, people should not handle diseased or dead wildlife, and they should contact provincial, state, or federal natural resource agencies if a sick or dead animal is found.

References
CSHP Position Statement on Pharmacist as Head of Hospital Pharmacy

In our consideration of the role of the pharmacist as head of hospital pharmacy services, we have come to conclusions that differ markedly from those of the authors of the recent CSHP position statement on this topic.1 The rationales provided in the position statement are relevant for a site-based manager or director, but we feel that a nonpharmacist director can function effectively in a large health care region if there has been proper structuring of the pharmacy management team. We respond here to each of the rationales in turn.

The complexity of the medication use system necessitates a comprehensive and specialized knowledge base: The role of the pharmacy director in a large integrated health region is not to design the medication use system, but rather to lead strategic planning and implementation, with the support of a pharmacy management team composed of pharmacists and pharmacy technicians. For clinical or drug utilization decisions, a properly structured management team allows a nonpharmacist director to delegate decisions to pharmacist members of the management team and then to support these initiatives with senior executives of the health care region.

Pharmacists are best suited to have the knowledge, skills, and abilities required of a head of hospital pharmacy services: The appropriate skill set for the position of head of pharmacy services depends on whether this person’s role focuses on the detailed day-to-day operation of the on-site pharmacy department or is one of strategic planning, fiscal responsibility, and setting the general direction of the regional department. The position statement notes that the skill sets required of a good hospital pharmacy director include “practice foundation skills, leadership, planning, marketing, securing resources, [and] implementation (of programs and services)”7. However, none of these skill sets require a pharmacist’s clinical knowledge, nor are they present in all graduating pharmacists. In fact, allowing a nonpharmacist with strong business acumen to do this job may actually prove to be an advantage for regional pharmacy management in the current environment of burgeoning demand, competitive funding, and rationalization of services.

Several provincial pharmacy regulatory bodies in Canada specify that the head of hospital pharmacy services must be a pharmacist: Provincial regulations regarding pharmacy management vary across the country. However, according to what was presented in the position statement,1 having a nonpharmacist as the head of pharmacy services would not contravene any of these provincial acts, provided that the site pharmacies were managed by pharmacists, since that is the level of direct control and oversight of a department. That is also the level of management where specific clinical knowledge and an understanding of medication delivery systems are of most importance.

National and international professional practice guidelines recommend that heads of hospital pharmacy services be pharmacists: Standards of practice set by both the CSHP and the American Society of Health-System Pharmacists (ASHP) have endorsed having residency-trained pharmacists as directors of pharmacy. ASHP further recommends that directors have postgraduate business management degrees (e.g., master of business administration [MBA] or master of health services administration [MHSA]). In a regional setting, where the director of pharmacy is supported by a team of pharmacists in management roles, it could be argued that an advanced management degree is of greater importance than a degree in pharmacy or a residency program. Some regional departments of pharmacy have multi-million-dollar budgets, larger than ever expected when the CSHP and ASHP standards of practice were written. A businesslike attitude and strong skills in fiscal planning are keys to the success of the department in these situations. It may be time for both CSHP and ASHP to think outside the box and consider the points at which strong leadership from pharmacists is essential within hospital pharmacy organizations.

Pharmacists are needed in management roles for leadership and advancement of the profession of pharmacy: It is absolutely essential that pharmacists take their place as leaders in direct patient care and in interdisciplinary hospital environments. Opportunities to support the growth and development of future leaders in our profession are required but have for some time been overlooked in hospital pharmacy practice.

Now is the time for CSHP to forgo the status quo and instead look to the future by envisioning a pharmacy department that recognizes the different skill sets needed in different types of pharmacy management positions. This means putting pharmacists in management roles where clinical decision-making is essential and supporting the development of opportunities for pharmacists who are interested in moving into director’s roles, by helping them to acquire the business management skills they will need to be successful in these roles.

In conclusion, we would like to emphasize that it is not our

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