

**Purpose:** The threat of an avian influenza pandemic is growing, and the medical and public health communities are accelerating plans to prepare for a potentially severe impact on the population. Improving public health preparedness and preparing to cope with a pandemic depends on practicing in symbiosis with all elements of the healthcare team, including the public health community. This 1-day program’s goals were to: 1) increase students’ understanding of the multi-dimensional nature of disaster and pandemic response; 2) demonstrate how health care delivery and systems may be affected by the circumstances of an infectious outbreak; and 3) provide specific content information relevant to preparing for an influenza pandemic.

**Methods:** The module began with core topic lectures on disaster medicine, the current pandemic threat and state of preparedness, and how pandemic treatment and triage may occur. Beginning 3rd year students were divided into 40-student groups for the 2 part practical exercise. In the Hospital Simulation, students managed a 140 “bed” hospital, created in a large lecture hall using a new method for simulating a hospital environment. Each seat was a bed, and each 15-seat row was a hospital unit, staffed by 4 students in roles of physician, nurse and nursing assistant. The cardboard patients came to life as staff members continuously placed paper “action flags” on each patient, to indicate what treatment or evaluation was required. Students “treated” the patients by bringing a matching action flag to the bedside. Students also became infected, and were “treated” by colleagues, further burdening the hospital and degrading capabilities. In the Public Health Simulation, students learned about the complexities of case tracking in an outbreak by performing interviews with standardized patients. Through successive layers of epidemiologic interviews, students located infection sources and individuals at risk for contracting the disease. A debriefing with the county health department director put their findings into a real world focus. In both simulations, students were closely supervised by medical and public health leaders that serve in key roles during actual emergencies.

**Results:** Students quickly embraced the scenario and participated with energy and enthusiasm. They valued the hands-on nature of the simulations. The simulation fidelity and intensity were enhanced by wearing isolation gowns and masks, supply shortages, and the presence of real news media personnel. The overall simulation was very well received, and highly rated on student evaluations and comments. In debriefings, students indicated they had improved knowledge about pandemic influenza, but also had developed greater understanding of broader concepts that are vastly more difficult to teach – teamwork, collaboration, communication, leadership, interdisciplinary respect.

**Conclusions:** This pandemic simulation provided a unique venue for students to learn about pandemic preparedness and the threat of avian influenza. Students gained appreciation for the essential roles of every member of the healthcare team in a manner that cannot easily be replicated in everyday experiences. This type of exercise can readily be generalized to other circumstances and health disciplines, and exported to other institutions.