

**Medical College of Wisconsin Master of Public Health Program
PUBLIC HEALTH STUDENT WRITING TUTORIAL**

SAMPLE DISCUSSION SECTION #1

Influenza has a long history of morbidity and mortality in the United States. Furthermore, the world has been the victim to three prior influenza pandemics, as observed by the WHO.^[3] The United States public health system has always anticipated the arrival of another influenza pandemic. Prevention through mass immunization programming and personal prevention education, such as the importance of hand washing, has been the best defense against the virus. Federal, state and local health departments (LHDs) created, practiced and re-evaluated pandemic plans in order to best prepare for future pandemics. In the spring of 2009, a novel H1N1 influenza pandemic tested the nation's emergency response system yet again.

It was near impossible for federal and state health officials to foresee exactly when the next pandemic would emerge and how it would affect the population. Furthermore, LHD and regional preparedness plans could not account for the difficulties in communication that occurred. While the next flu pandemic will require a learning curve, there are tools and exercises the Wauwatosa Health Department (WHD) and the Milwaukee/Waukesha Consortium could use to better prepare for the next pandemic.

Statewide Pandemic Flu Practice

In order to satisfy emergency preparedness grant requirements, LHDs hold mock mass clinics for practice. While regular staffing at seasonal flu clinics and mock clinics were a valuable tool for making LHD staff familiar with mass clinic operations, they offered little practice for the vertical and horizontal communication that occurs during a pandemic. This type

of communication becomes important when vaccine availability and vaccination target groups change frequently. In the After Action Report, members of the Consortium considered communication challenging when vaccination guidelines continually changed and the distribution of vaccine was unpredictable. Furthermore, mock mass clinics are currently held as a single event and do not offer an opportunity to practice organizing multiple mass clinics across several communities and over an extended period of time.

During the 2009 H1N1 pandemic, individual LHDs would hold mass clinics as soon as vaccine became available. Coordinating with other LHD clinics was not always possible. The manner in which vaccine was delivered to the LHDs and the urgency in which LHDs were required to distribute the vaccine made it difficult to effectively inform the public and other health departments. Mock mass clinics, as they are currently executed, do not adequately address these challenges.

As practice for future pandemics, the Consortium would benefit if mock mass clinic drills involved coordinating multiple clinics across multiple LHDs over the course of 1-3 months. Throughout the series of clinics, MCW, as an outside partner of the Consortium, could design “challenge scenarios”, such as unstandardized vaccine distribution and resources among LHDs. The Consortium would then need to develop a written plan to overcome these challenges. Basing mass clinics drills around these challenge scenarios would force the Consortium to better plan for mass clinics when complications arise. Debriefing meetings following these drills would allow the Consortium to further discuss solutions to these problems. While it is impossible to foresee every potential problem, these discussions would force LHDs to practice solution strategies.

A drawback to these frequent exercises would be resources (time and staff) allocated to this type of mock clinic coordination and follow-up discussion. This would not only require more time on behalf of LHD staff and volunteers, but also on MCW, or another outside partner, to develop scenarios for practice and discussion. One solution to this problem would be simulating these disease scenarios on a web-based platform. Since the true benefit of holding multiple drills is to improve communication between Consortium members, physically setting up clinics for every exercise is unnecessary.

Emergency Operations Software

E-sponder is an online software system used in the state of Wisconsin for coordinating management during emergency operations.^[19] This software is web based, completely free and available for use by government agencies, such as law enforcement, city fire chiefs, Department of Natural Resources and LHDs. Tools included in the software are a message posting system, event calendar, and a geographic information system (GIS). A GIS is a computer program for visualizing population data on a map. Furthermore, data from one agency can be linked with that of other agencies, such as census data, DPW and other LHDs. It was originally designed as a form of on-line emergency operations center (EOC) for disaster situations, such as floods. For the H1N1 mass clinics, this type of software would be very beneficial for coordinating mass clinics across southeast Wisconsin. Since all Consortium members utilized the same public health emergency preparedness plan, it would be beneficial if all Consortium members were able to communicate using this one system.

One major drawback to the E-sponder program is that it is heavily content driven. It is only as useful as the data that LHDs and other city departments enter into it. Second, this program works best if all city departments are using it. The ability to combine data and

collaborate with other departments involved in emergency operations is where this program draws its strength. Therefore, the WHD would gain little benefit if they were the only Wauwatosa government agency that used the system. A third drawback for using this type of system are that there are already a number of web-based alert and management systems that Consortium members currently utilize and are familiar with, such as the Health Alert Network (HAN). It may be difficult to persuade every member to pick up the E-sponder system, let alone all the other city departments involved in emergency operations.

Social Networking Websites

In the past few years, social networking sites, such as Facebook, have become a popular medium for people to stay connected with friends and share their interests. Businesses have quickly picked up on this developing online community as a new frontier for advertising. Currently, over 1.5 million businesses advertise their products on Facebook.^[20] Advertising on social networking websites can be easily targeted and inexpensive.

Citizens use these sites as a way to connect with friends and share their interests. In 2008, 52% (over 17 million) of Facebook users were between the ages of 18 and 25, and an additional 31% (over 10 million) were between the ages of 26-55. In 2009, users between the ages of 26 and 55 jumped to 49%.^[21] While this age group was not included in the initial target groups when vaccine was first distributed in October, they would have been potential parents of children ages 6 months to 18 years. Connecting with citizens using social networking sites, such as Facebook, would be an effective way to relay information quickly to these parents while not relying on the media. Within Facebook, there are several methods for reaching a target population. Creating web pages called groups are free and allow for interaction with group

members. An LHD or Consortium group page could hold information on clinic times, information about target groups, discussion boards for citizens with questions and links to other websites, such as www.flu.gov. According to Facebook statistics, over 50% (100 million) of Facebook users check their profiles on a daily basis.^{[20][21]} Posting local H1N1 mass clinic updates on Facebook would be an effective way to reach targeted groups and other interested people.

By advertising through Facebook, it is very easy to target users by age, gender, location, and other interests listed in their accounts. Advertisements can be created in a matter of minutes and can be linked to a group page or other outside website. These advertisements appear in the sidebars of targeted user home pages. As the world relies more on digital media for information, the public health system must adapt to stay current and in the public eye. This recommendation would require adequate staffing to post and interact with the public and may require a designated Public Information Officer connected to the LHD or Consortium.

Other Recommendations

Other recommendations for improving mass clinic operations included revamping the WHD Go Kits, creating a floating nurse role to alleviate congestion during clinic operations, and better ascertainment of volunteer credentials. These recommendations should be viewed as minor. Clinic operations ran smoother as staff became acclimated to the novel H1N1 immunization procedure. Communication should be considered as the primary area for improvement.

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SAMPLE DISCUSSION SECTION #2

After extensive research regarding available information, there is convincing evidence that will aid the Department of Transportation (DOT) examiner in identifying those individuals with obstructive sleep apnea (OSA). The literature indicates there are several physical characteristics that aid in this identification. In particular, these include snoring, witnessed apnea, body mass index, neck circumference, hypertension, diabetes, and cardiovascular disease. It is also obvious that further research is needed to provide additional evidence of the relationships between physical characteristics and the presence of OSA in the commercial driver. The evidence thus far provides useful, measurable characteristics that a DOT examiner may include in his arsenal to identify drivers with OSA.

In addition, modifications of the DOT long form are easily applied to the existing long form to reflect these findings and, therefore, aid in the protection of public safety, which is the underlying basis for the DOT medical examination and certification. Based on the available data, the utilization of screening tools for OSA, such as the Epworth Sleepiness Scale (ESS), may not provide reliable information regarding the presence of OSA in the commercial driver. This observation is supported by clinical observations both in my own practice as well as in the articles reviewed. In point of fact, the ESS may have an inverse relationship concerning the presence of OSA in commercial drivers. While this fact has not been validated, it seems plausible. The commercial driver has an economic incentive to evade identification for any health condition that could result in loss of income and this would include in particular screening and treatment for OSA. A driver identified as having possible OSA may incur costs in the

thousands of dollars when one considers polysomnography (PSG) as well as the concomitant Continuous Positive Airway Pressure (CPAP) trial that may ensue following PSG indicating possible sleep apnea. In addition, a driver identified as having OSA must, as a condition of continued commercial driver operation, obtain and document sufficient use of a CPAP machine. While the costs of the machines are variable, it can be substantial. The ESS has been validated as a useful tool in identifying an individual seeking treatment for symptoms consistent with OSA.