Outbreak of Influenza in a Kentucky Nursing Home

Assume that an outbreak of Influenza A occurred among 400 residents of a New York Nursing Home during December 2006 and January 2007, despite the vaccination of 375 of them between mid-October and mid-November of 2006. The residents, 70% of whom were female, had a mean age of 85 years and shared common recreational and dining areas. (Textbook Case Study 2.2)

Case Questions: Base your reply upon this influenza outbreak case, research of influenza, and proposed solutions. You are to write a 2-3 page paper in APA formatting that addresses the following questions. Note: A minimum of two references should be used, which should include your textbook and the CDC, and others that support your responses in your paper. This is a paper, so your answer should not be numbered, but rather it should use titles and subtitles.

1. If 75 of the residents developed influenza-like illness (ILI), what proportion of the residents became sick?

2. Of those with ILI, 40 developed pneumonia, 25 required hospitalizations, and two died. What proportion of those with ILI developed pneumonia? What percent of those with ILI and pneumonia were hospitalized? What proportion of those with ILI died?

3. Of the 375 residents who were vaccinated, 60 developed ILI. Of the 25 residents who were not vaccinated, 20 developed ILI. What percent of vaccinated residents developed ILI? What percent of unvaccinated residents developed ILI? How many more times higher is the rate of ILI among those who were unvaccinated compared to those who were vaccinated?

4. Of the 375 vaccinated residents, 35 developed pneumonia following ILI compared to 15 residents among the 25 who were not vaccinated. What percent of vaccinated residents developed pneumonia following ILI? What percent of unvaccinated residents developed pneumonia following ILI? How many more times higher is the pneumonia following ILI among those who were unvaccinated compared to those who were vaccinated?

5. What was the vaccine efficacy for preventing ILI and pneumonia?