

Korean Influenza Surveillance Scheme (KISS), 2000-2002

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Abstract

Influenza is an acute respiratory disease caused by influenza type A or B viruses. The clinical severity of influenza infection can range from asymptomatic illness to primary viral pneumonia and death. Complications of influenza infection include secondary bacterial pneumonia and exacerbation of underlying chronic health conditions. As influenza viruses undergo constant antigenic change, both virologic surveillance, in which influenza viruses are isolated for antigenic analysis, and disease surveillance, in which the proportion of influenza-like illness (ILI) patients are measured, are necessary to identify influenza virus variants and to determine their ability to spread and cause disease. This information is essential for selecting the optimal influenza vaccine composition each year. Also it may be used to treat the ILI patients with anti-viral drugs.

In 1997, there was an epidemic caused by avian influenza virus A(H5N1) in Hong Kong and 6 among 18 infected patients were deceased. With this finding, the need for the surveillance of influenza became apparent. Korean National Influenza center (NIC), which have participated in global influenza surveillance since 1971 by sending the virus isolates to WHO influenza collaborating center, began the small scale surveillance with about 80 volunteer sentinel physicians on October, 1997. They sent respiratory specimens of ILI patients and reported the number of ILI patients and total number of consulted patients every week. With this surveillance system we set the threshold of influenza epidemic in Korea by 5% of ILI patients per total patients and gave official warning and alert to the public and doctors.

In 2000 the Communicable Diseases Prevention Act was revised in which influenza was designated as group 4, the diseases needed the surveillance. In September 2000, Korean Influenza Surveillance Scheme (KISS) has been launched with 630 sentinel doctors who were selected by the population size of the community. Among them, 157 doctors participated in virologic surveillance.

With the result of influenza surveillance during two seasons, there had been two peaks during the season. The first peak was in December and the second one was in March-April. The participation rate was approximately 50% and ILI reporting rate was about 6.3% which needs more efforts to increase them. For the type of isolate, the major type was A/H3N2 for 2000-2001 season and A/H1N1 for 2001-2002. The A/H1N1 epidemic coincided with that of Japan. During 2000-2001 season, there was no B isolate but during 2001-2002 various type of influenza B virus had been isolated including B/Hong Kong/22/01 like strain which was one of the 2002-2003 influenza vaccine component.

This the data is from only two seasons of influenza surveillance. But the data from this surveillance system have been used to prevent the influenza in the community and shared with global influenza

surveillance. As the advent of avian influenza virus raise the worry for the pandemic, it is important to establish the pandemic preparedness by developing the current influenza surveillance system, KISS.

Keywords: Influnza, Influenza like illness (ILI), Surveillance, KISS

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Figures & Tables

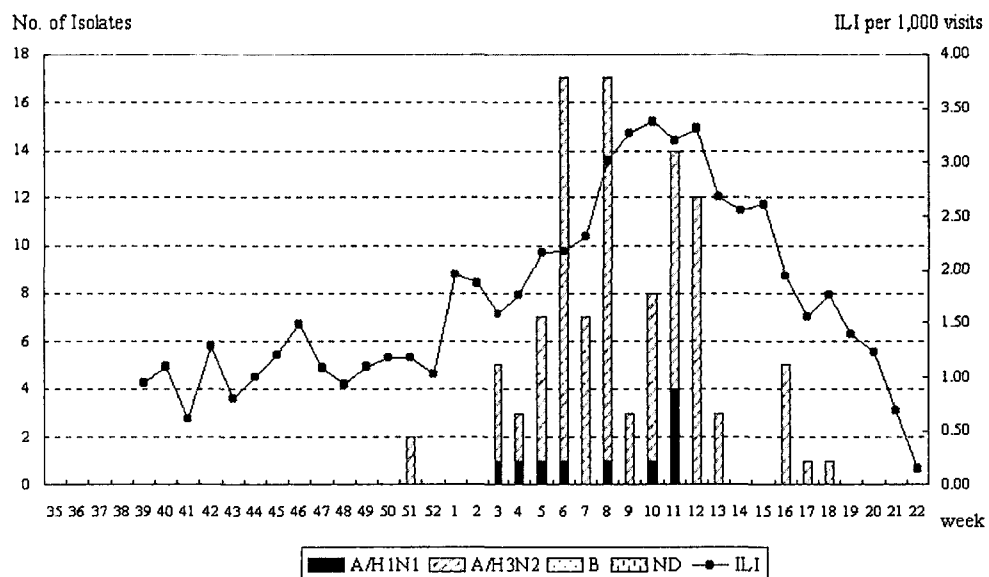


Figure 1. Weekly virus isolation vs ILI proportion, 2000-2001

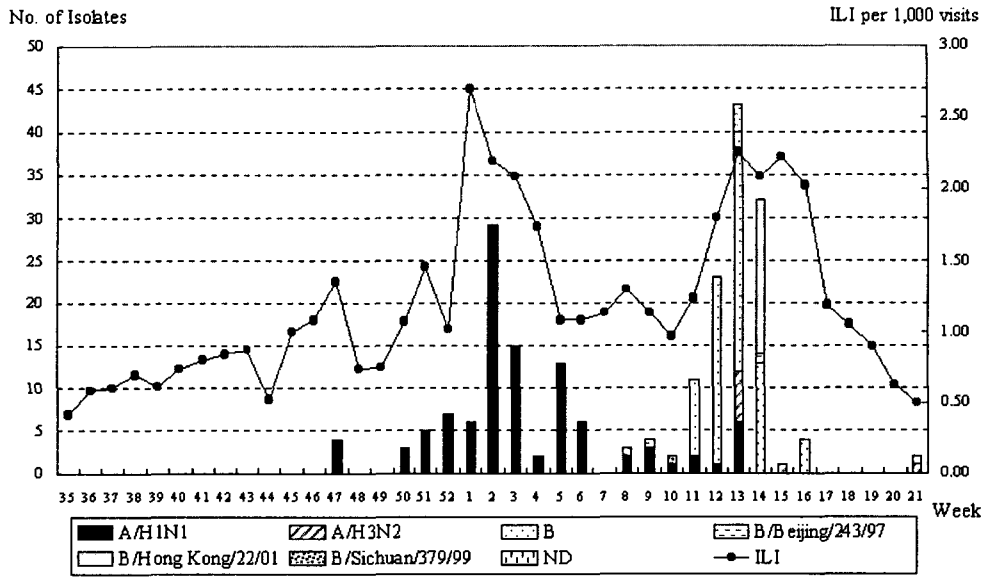


Figure 2. Weekly virus isolation vs ILI proportion, 2001–2002