Influenza Activity—United States, 2000-01 Season

MMWR. 2001;50:207-209

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This report summarizes influenza activity in the United States during October 1, 2000–March 10, 2001.1 Influenza activity increased in December and January and peaked at the end of January. The most frequently isolated viruses were influenza A (H1N1); however, influenza B viruses have been co-circulating and appear to be increasing.

During October 1, 2000–March 10, 2001, the World Health Organization (WHO) collaborating laboratories and National Respiratory and Enteric Virus Surveillance System (NREVSS) laboratories tested 64,840 specimens for influenza, and 8386 (13%) were positive. Of these, 4885 (58%) were influenza type A and 3501 (42%) were influenza type B. Of the 4885 influenza A viruses identified, 1826 (37%) were subtyped: 1746 (96%) were A (H1N1) and 80 (4%) were A (H3N2). The percentage of specimens positive for influenza infections, an indicator of influenza activity, peaked at 24% during the week ending January 27, 2001. For the week ending March 10, 6% of tested specimens were positive for influenza.

CDC antigenically characterized 436 influenza viruses received from U.S. laboratories since October 1. Of the 259 influenza A (H1N1) isolates characterized, 246 (95%) were similar to A/New Caledonia/20/99, the H1N1 component of the 2000-01 influenza vaccine, and 13 (5%) were similar to A/Bayern/07/95. Although A/Bayern-like viruses are antigenically distinct from A/New Caledonia-like viruses, the A/New Caledonia/20/99 vaccine strain produces high titers of antibody that cross-react with A/Bayern/07/95-like viruses.2 Of the 16 influenza A (H3N2) characterized viruses, all were antigenically similar to the vaccine strain A/Panama/2007/99. Of the 161 influenza B viruses characterized, 29 (18%) were similar to the vaccine strain B/Beijing/184/93, and 132 (82%) were more closely related antigenically to the B/Sichuan/379/99 reference strain than to the current vaccine strain. The B/Sichuan virus exhibited cross-reactivity with the vaccine strain.

During October 1–March 10, the percentage of patient visits to U.S. sentinel physicians for influenza-like illness (ILI)† peaked at 4.1% during the week ending January 27. During that week, the percentage of patient visits for ILI was elevated above baseline levels (0-3%) in six of nine surveillance regions. For the week ending March 10, 1.6% of patient visits to U.S. sentinel physicians were the result of ILI.

As reported by state and territorial epidemiologists, influenza activity‡ peaked during the weeks ending February 3 and 10, 2001, when 38 states reported regional or widespread influenza activity. For the week ending March 10, one state reported widespread activity. Twelve states reported regional activity, 35 states reported sporadic activity, one state reported no activity, and one state did not report.

For the week ending March 10, the 122 Cities Mortality Reporting System attributed 8.0% of recorded deaths to pneumonia and influenza (P&I). This percentage was below the epidemic threshold of 8.7% for this week. The percentage of P&I deaths remained below the epidemic threshold each week since October 1.

Reported by: Participating state and territorial epidemiologists and state public health laboratory directors. WHO collaborating laboratories. National Respiratory and Enteric Virus Surveillance System laboratories. Sentinel Physicians Influenza Surveillance Network. Surveillance Systems Br, Div of Public Health Surveillance and Informatics, Epidemiology Program Office; WHO Collaborating Center for Reference and Research on Influenza, Influenza Br and Respiratory and Enteric Virus Br, Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases, CDC.

CDC Editorial Note: Influenza activity during the 2000-01 season was moderate and lower than the previous three seasons. Three surveillance system components (i.e., WHO/NREVSS laboratories, U.S. sentinel physicians, and state and territorial epidemiologists’ reports) indicated that activity peaked during late January and early February. The predominant influenza strain circulating this season has been influenza A (H1N1); however, the proportion of influenza B virus isolates has been increasing. During the weeks ending February 24, March 3, and 10, 70% of isolates nationwide were influenza B, and during those weeks influenza B viruses predominated (range: 61%-93%) in eight of nine surveillance regions.

Influenza activity as reported by WHO/NREVSS laboratories and U.S. sentinel physicians peaked during the week ending January 27, when 24% of specimens tested were positive for influenza and 4.1% of visits to U.S. sentinel physicians were the result of ILI. During the previous three seasons, the peak percentage of specimens testing positive for influenza ranged from 28% to 32% and the timing of the peak varied from as early as mid-to-late December during the 1999-2000 season to as late as the middle of February during the 1998-99 season. The peak percentage of patient visits to sentinel physicians for ILI ranged from 4.9% in late December of the 1997-98 season to 5.6% during early February of the 1999-2000 season.

As reported by state and territorial epidemiologists, influenza activity peaked during the weeks ending February 3 and 10, when 38 states reported regional or widespread influenza activity. This peak was lower than those reported during the 1997-98, 1998-99, and 1999-2000 seasons, when 46, 43, and 44 states reported regional or widespread influenza activity, respectively. Similar to the laboratory and sentinel physician data, the peak number of states reporting...
Influenza B Virus Outbreak on a Cruise Ship—Northern Europe, 2000

MMWR. 2001;50:137-140

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During June 23–July 5, 2000, an outbreak of respiratory illnesses occurred on the MS Rotterdam (Holland America Line & Windstar Cruises) during a 12-day Baltic cruise from the United Kingdom to Germany via Russia. The ship carried 1311 passengers, primarily from the United States, and 506 crew members from many countries. Although results of rapid viral testing for influenza A and B viruses were negative, immunofluorescence staining and viral culture results implicated influenza B virus infection as the cause of the outbreak. This report summarizes the findings of the outbreak investigation conducted by the ship’s medical department and describes the measures taken to control the outbreak. Travelers at high risk for complications of influenza who were not vaccinated with influenza vaccine during the preceding fall or winter should consider receiving influenza vaccine before travel with large tourist groups at any time of year or to certain regions of the world.

On June 26, nine crew members presented to the ship’s infirmary with cough, sore throat, and fever ≥100.0°F (≥37.8°C). All had developed symptoms during the preceding 24 hours. Oropharyngeal specimens from two crew members were tested by a commercial rapid influenza diagnostic test designed to detect both influenza A and B viruses but not to distinguish between them. Although test results were negative, three crew members with high fevers were started on rimantadine therapy for clinically suspected influenza A infection.

To characterize and control the suspected outbreak among crew members, ship’s medical staff implemented a respiratory illness protocol that included surveillance for cases of respiratory illness. A case of acute respiratory illness (ARI) was defined as cough or sore throat. Influenza-like illness (ILI), a subset of ARI cases, was defined as ARI with fever ≥100.0°F (≥37.8°C) or self-reported feverishness. Active surveillance was initiated among crew members. Supervisors on each work shift observed and asked crew members about symptoms of influenza and required any crew member with symptoms to report to the ship’s infirmary for evaluation. Crew members with confirmed ILI were relieved of duty and placed in cabin isolation either alone or with other ill crew members. Passive surveillance was initiated among passengers and identified any passenger who presented to the ship’s infirmary with respiratory illness. A commercial rapid influenza diagnostic test, designed to detect both influenza A and B viruses but not to distinguish between them, was used selectively to assist in diagnosis. Medical and demographic information, including country of residence, cabin number, and crew duties (if applicable), was collected from ill patients.

By June 29, 38 crew members and 26 passengers had been seen in the infirmary for ARI; of these, 32 (84%) crew members and 11 (42%) passengers had ILI. Eight crew members were tested by rapid influenza diagnostic testing; all had negative results. Because the etiology of crew respiratory illnesses remained uncertain, four symptomatic crew members disembarked in Stockholm, Sweden, for medical evaluation that included testing of nasopharyngeal specimens by immunofluorescence staining and viral culture. Two of four nasopharyngeal specimens tested positive for influenza B virus by immunofluorescence staining; one of the two specimens also was positive by culture. Neither of the

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two crew members diagnosed with influenza B virus infection had been tested using the rapid influenza diagnostic test. On the basis of immunofluorescence results, crew members on rimantadine therapy, which is effective only against influenza A infection, were advised to discontinue their medication. Oseltamivir, an antiviral agent that is effective against both influenza A and B infection, was sent to the ship for treatment of ill crew members and passengers.

A total of 64 (13%) crew members and 54 (4%) passengers were identified with ARI during the cruise. Of 63 crew members and 54 passengers with ARI for whom clinical information was known, 45 (71%) and 25 (46%), respectively, also had ILI. The median age of ill crew members was 32 years (range: 21-56 years) and of passengers, 68 years (range: 7-85 years). By cross-referencing crew duties, cabin locations of ill crew members and passengers, and dates of illness, medical staff identified the potential index case-patient as a 78-year-old U.S. passenger who boarded the ship ill with unconfirmed ILI after visiting London. She remained in her cabin except for occasional meals and did not seek medical attention until the fifth day of the cruise (June 28). Two of the 13 crew members with ILI, who were seen in the infirmary on June 25 and 26, were her cabin and dining room stewards. Both had worked, socialized, or shared cabins with other crew members who became ill. Surveillance among passengers and crew members was continued during the subsequent cruise and showed a decrease in the number of ARI and ILI cases.

REFERENCES

MMWR. 2001;50:166-169
1 table, 2 figures omitted

Physical activity is associated with numerous health benefits, and increased participation in various types of leisure-time physical activity had been encouraged during the 1990s. To determine national estimates of leisure-time physical activity during 1990-1998, data were obtained from the Behavioral Risk Factor Surveillance System (BRFSS). This report summarizes the results of that analysis, which indicate that leisure-time physical activity trends have remained unchanged.

BRFSS is a population-based, random-digit–dialed telephone survey of the civilian, noninstitutionalized U.S. population aged ≥18 years. Forty-three states and the District of Columbia collected data about physical activity for 1990, 1991, 1992, 1994, 1996, and 1998. Data were not collected by all states during 1993, 1995, and 1997. Respondents were asked about the two physical activities or exercises they engage in most often and about the frequency, duration, and distance (as appropriate) of each activity. Responses were then classified as one of six selected activities. Moderate activity was defined as any of the 56 selected activities, and vigorous activity was defined as aerobic physical activity classified as vigorous-intensity based on estimated metabolic expenditure (MET). To classify an activity as vigorous, it must be aerobic with an assigned MET value that is at least 3.5. It must be aerobic with an assigned MET value that is at least 3.5. To have achieved recommended levels of activity, a person must have reported engaging in moderate-intensity physical activity ≥5 times per week for ≥30 minutes each time, vigorous-intensity physical activity ≥3 times per week for ≥20 minutes each time, or both during the preceding month. Persons reporting some activity during the preceding month but not enough to be classified as moderate or vigorous were classified as insufficient. Persons classified as inactive reported no physical activity outside of their occupation during the preceding month. Data were analyzed using SUDAAN to obtain prevalence estimates for recommended levels of physical activity. All data were age adjusted to the 2000 standard population.

The prevalence of those who engaged in recommended levels of activity increased slightly from 24.3% in 1990 to 25.4% in 1998, and the prevalence of those reporting insufficient activity increased from 45.0% in 1990 to 45.9% in 1998. Those reporting no physical activity decreased from 30.7% in 1990 to 28.7% in 1998. The components of recommended activity remained relatively stable.

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CDC Editorial Note: The findings in this report indicate that trends in physical activity remained stable during 1990-1998. Classifying persons according to their main pair of nonoccupational activities during the preceding month suggests that only approximately one fourth of U.S. adults meet recommended levels of physical activity. During 1990-1998, the BRFSS formula for calculating vigorous intensity changed. In 1992, vigorous intensity was calculated as 50% of MCC; before 1992, it was calculated as 60% of MCC, the generally accepted threshold for vigorous activity. The data reported here vary from previous reports because all years of data were calculated using the same formula for vigorous intensity (60% MCC). Therefore, the slight increase in vigorous physical activity that might have appeared after 1992 in previous reports was attributed to differences in calculating vigorous physical activity rather than an actual increase among the population.

The findings in this report are subject to at least four limitations. First, these data are self-reported and are subject to recall bias. Second, because these data do not include information on non-leisure-time physical activities, total activity may be underestimated. Third, only the two most common activities the respondents engaged in during the preceding month are reported. Finally, these data are limited by coverage- and nonresponse-related errors.

Moderate-intensity physical activity has substantial health benefits. Moderate-intensity activities include housework, childcare activities, occupational activity, or walking for transportation, which may be more prevalent among women and certain subgroups of the population. However, surveillance systems that primarily are based on sports-related vigorous activities may miss a substantial portion of this type of activity. Also, systems based on only two reported activities may miss less intense or moderate-intensity activities. Public health programs usually encourage participation in moderate-intensity rather than vigorous-intensity activities for sedentary persons. Surveillance systems should be updated so that a broader range of physical activities can be measured. A more extensive measurement system would enable determination of whether the trends in this report are an accurate reflection of physical activity trends in the United States.

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**Sudden Death in a Traveler Following Halofantrine Administration—Togo, 2000**

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On July 17, 2000, a previously healthy 22-year-old U.S. student collapsed and died suddenly while leading a teenage exchange group in West Africa. This report summarizes the results of the investigations of this incident, which implicate use of halofantrine for treatment of malaria as the cause of death. Travelers should be warned that halofantrine treatment may be dangerous in persons with cardiac abnormalities or in those taking mefloquine for malaria prophylaxis.

The student began taking mefloquine for malaria prophylaxis approximately 1 week before departure on July 5. On July 12, he developed fever of 102°F (39°C), chills, headache, and cough, and was seen at a clinic in Togo 2 days later. He was diagnosed with malaria and bronchopneumonia and treated orally with halofantrine, d rifl or hydrochloride (Fansidar®, Roche Laboratories, Nutley, New Jersey), and atova quene-proguanil (Malarone, Glaxo Wellcome, Research Triangle Park, North Carolina) are acceptable options for presumptive self-treatment, depending on local drug resistance patterns. However, all travelers should be cautioned that presumptive self-treatment for malaria is not a substitute for a prompt medical evaluation.

Halofantrine treatment may be dangerous in those with cardiac abnormalities or in those taking mefloquine for malaria prophylaxis. However, because P. falciparum malaria is a potentially life-threatening illness, the benefit of halofantrine treatment may outweigh the risks in the case of laboratory-confirmed P. falciparum infection if no other effective therapies are available. Additional information about malaria prophylaxis and treatment is available from CDC by telephone, (888) 232-3228, fax, (888) 232-3299, or on the World Wide Web, http://www.cdc.gov/travel.

**REFERENCES**


* Use of trade names is for identification only and does not imply endorsement by CDC or the U.S. Department of Health and Human Services.