Update: Influenza Activity—United States, 2001-02 Season

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Although data collected from the four components of the CDC influenza surveillance system are preliminary, national influenza activity appears to have peaked during the week ending February 23, 2002 (week 8). During the 2000-01 and 1999-2000 influenza seasons, peak activity occurred during week 4 and week 31, respectively. The viruses most commonly isolated during the 2001-02 season have been influenza A (H3N2). These viruses were well-matched antigenically by the 2001-02 influenza A (H3N2) strain in the vaccine. This report summarizes influenza activity in the United States† during September 30, 2001—March 23, 2002, and updates previous summaries from this season.1,2

For the weeks ending January 26 (week 4) through March 23 (week 12), the period covered since the last report, the percentage of respiratory specimens testing positive for influenza viruses, a key indicator of the level of influenza activity, ranged from 17.6% (week 4) to 25.9% (week 8). Since September 30, 2001, World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories in the United States tested 72,877 specimens for influenza viruses; 12,017 (16.5%) were positive, of which 11,599 (97%) were influenza A viruses and 418 (3%) were influenza B viruses. Approximately one third of the influenza B viruses were isolated in the Mid-Atlantic region of the United States. Of the 3,479 influenza A viruses that have been subtyped, 3,426 (98%) were H3 viruses, and 53 (2%) were H1 viruses.

CDC has characterized antigenically 391 influenza isolates collected in the United States since September 30. Of these, 279 were influenza A (H3N2) viruses, 14 were influenza A (H1) viruses, and 96 were influenza B viruses. Of the 14 A (H1) viruses, five were A (H1N1) viruses and nine were A (H1N2) viruses. These nine A (H1N2) viruses came from patient specimens collected in Wisconsin in December 2001. Two other A (H1N2) viruses were isolated from patient specimens collected during July and September in Texas and Nevada, respectively. The influenza A (H3N2) and A (H1) viruses were similar antigenically to the vaccine strains A/Panama/2007/99 (H3N2) and A/New Caledonia/12/99 (H1N1) viruses, respectively.

Influenza B viruses currently circulating worldwide can be divided into two antigenically distinct lineages: B/Yamagata/16/88 and B/Victoria/2/87. B/Yamagata viruses have circulated widely since 1990, and the B component of the current influenza vaccine belongs to this lineage. Since 1991, B/Victoria viruses had not been identified outside of Asia. However, since March 2001, B/Victoria lineage viruses have been identified in many countries, including the United States. Of the 96 U.S. influenza B viruses characterized antigenically this season, 53 were of the B/Yamagata lineage, and 43 were of the B/Victoria lineage. Of the 53 B/Yamagata lineage viruses, 22 were similar to the vaccine strain, B/Sichuan/379/99, and 31 demonstrated reduced titers to ferret antisera produced against B/Sichuan/379/99.

During January 20–March 23, 2002, the weekly percentage of patient visits for influenza-like illness (ILI)† reported by U.S. sentinel physicians in 47 states ranged from 1.7% to 3.5%. For the week ending March 23, the percentage of patient visits for ILI was 1.7%, below the national baseline of 1.9%. During the same week, influenza activity‡ reported by state epidemiologists was widespread in three states (Arizona, Missouri, and Vermont), and regional in 17 states (California, Idaho, Illinois, Louisiana, Michigan, Montana, Nebraska, New York, Ohio, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, and Wisconsin). Twenty-seven states, New York City, and Washington, D.C. reported sporadic influenza activity, and Alaska and Georgia reported no influenza activity. One state did not report.

During the week ending March 23, the 122 Cities Mortality Reporting System attributed 8.8% of recorded deaths to pneumonia and influenza (P&I). This percentage was above the epidemic threshold of 8.2% for that week. The percentage of P&I deaths was above the epidemic threshold during weeks 9 through 12.

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CDC Editorial Note: Influenza activity in the United States during the current season increased steadily during December-January, peaked in February, and is declining nationwide. Influenza activity has peaked during February or later during 15 of the last 25 seasons. Last season, influenza activity peaked in January. In recent weeks, influenza virus activity has increased in certain areas of the country, and both influenza A and B viruses might continue to circulate during April.

During 2001-2002, influenza A (H1N2) viruses have been isolated from several countries, including the United States. These new A (H1N2) viruses appear to have resulted from reassortment of the genes of currently circulating influenza A (H1N1) and A (H3N2) subtypes. Because hemagglutinin pro-
proteins of the A (H1N2) viruses are similar to those of the currently circulating A (H1N1) viruses, and the neuraminidase proteins are similar to those of the current A (H3N2) viruses, the current vaccine should provide good protection against the new A (H1N2) viruses. No information indicates that A (H1N2) viruses are causing more severe illness than other influenza viruses, and no unusual increases in influenza activity have been associated with these viruses. Similar reassortment of A (H1N2) viruses were isolated in China during the 1988-89 influenza season but had not been reported in other parts of the world since that time. Whether the new A (H1N2) viruses will persist is uncertain.

The Food and Drug Administration’s Vaccine and Related Biological Products Advisory Committee (VRBPAC) recommended inclusion of the A/New Caledonia/20/99-like (H1N1), A/Moscow/10/99-like (H3N2), and B/Hong Kong/330/2001-like viruses in the 2002-03 trivalent influenza vaccine for the United States. The A (H1N1) and A (H3N2) components are the same as those used in the 2001-02 season vaccine. The influenza B component of the 2002-03 season vaccine is new and will be a virus of the B/Victoria lineage. The emergence of B/Victoria lineage influenza viruses around the world led to the recommended change in the B strain to be included in the 2002-03 vaccine. The B component of the current influenza vaccine is expected to provide lower levels of protection against viruses of the B/Victoria lineage.

CDC annually collects and reports U.S. influenza surveillance data during October-May. During this period, the information is updated weekly and is available through CDC voice information, 888-232-3228, fax information, 888-232-3299 (request document number 361100), or at http://www.cdc.gov/ncidod/diseases/flu/weekly.htm.

Acknowledgment

This report is based on data contributed by participating state and territorial epidemiologists and state health laboratories, WHO collaborating laboratories, National Respiratory and Enteric Virus Surveillance System laboratories, Sentinel Physicians Influenza Surveillance System, Div of Public Health Surveillance and Informatics, Epidemiology Program Office, Div of Vital Statistics, CDC.

REFERENCES

5 available

WHOand NREVSS collaborating laboratories, national sentinel physician influenza-like illness tracking system, 122 Cities Mortality Reporting System, and state and local health department reporting.

As of April 3, 2002.

Temperature of ≥100.0°F (≥37.8°C) and either cough or sore throat in the absence of a known cause.

The national baseline was calculated as the mean percentage of visits for ILI during noninfluenza weeks plus two standard deviations. Because of wide variability in regional level data, calculating region-specific baselines is not possible, and to apply the national baseline to regional level data is not appropriate.

Levels of activity: (1) no activity, (2) sporadic—sporadically occurring ILI or laboratory-confirmed influenza with no outbreaks detected, (3) regional—outbreaks of ILI or laboratory-confirmed influenza in counties with a combined population of ≤50% of the state’s population, and (4) widespread—outbreaks of ILI or laboratory-confirmed influenza in counties with a combined population of ≥50% of the state’s population.

The expected baseline proportion of P&I deaths reported by the 122 Cities Mortality Reporting System is projected by using a robust regression procedure in which a periodic regression model is applied to the observed percentage of deaths from P&I since 1983. The epidemic threshold is 1.654 standard deviations above the seasonal baseline. Before the 1999-2000 season, a new case definition for a P&I death was introduced. During summer 2000, the baseline and epidemic thresholds were adjusted manually to account for these changes in case definition. For the 2001-02 season, sufficient data have been collected by using the new case definition to allow projection of the baseline using the regression procedure employed before the 2000-01 season.

Alcohol Use Among Women of Childbearing Age—United States, 1991-1999

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1 table, 2 figures omitted

Prenatal exposure to alcohol is one of the leading preventable causes of birth defects, mental retardation, and neurodevelopmental disorders in the United States. One of the national health objectives for 2010 is to increase the percentage of pregnant women abstaining from alcohol to 94%. During 1991-1995, alcohol use by pregnant women increased substantially, and alcohol use by nonpregnant women of childbearing age increased slightly. To characterize trends in alcohol use among women of childbearing age, CDC analyzed representational survey data from the Behavioral Risk Factor Surveillance System (BRFSS) during 1991-1999. This report summarizes the results of the analysis, which indicate that the rate of any alcohol use (i.e., at least one drink) during pregnancy has declined since 1995. However, rates of binge drinking (i.e., ≥5 drinks on any one occasion) and frequent drinking (i.e., ≥7 drinks per week or ≥5 drinks on any one occasion) during pregnancy have not declined, and these rates also have not declined among nonpregnant women of childbearing age. Health-care providers should routinely screen women of childbearing age for alcohol use and counsel them about the adverse effects of alcohol use during pregnancy.

BRFSS is an ongoing, state-based, random-digit-dialed telephone survey of the noninstitutionalized U.S. civilian population aged ≥18 years. Data were analyzed for women aged 18-44 years in all 50 states. Women were asked about their use of alcohol during the 30 days preceding the survey. Three alcohol drinking patterns were examined: any use, binge drinking, and frequent drinking. Information on alcohol use was obtained every year through 1993 and every other year thereafter.

Sample data were weighted to reflect general population estimates, and standard errors were calculated by using SUDAAN. Linear regression models were used to examine temporal trends. To determine statistical significance, the inverse of the variance estimates was used for weights. Multivariate logistic analysis was conducted to examine the age, race, education level, employment, and marital status of pregnant and nonpregnant women by patterns of alcohol use. Because of the
limited number of pregnant women surveyed, data were combined for 1995-1999 for the analysis of the characteristics of pregnant women who engaged in these risk behaviors.

During 1995-1999, a total of 4,695 (4.3%) of the 107,141 women aged 18-44 years who were interviewed about their alcohol use during the month preceding the survey reported that they were pregnant at the time of the interview. The prevalence of any alcohol use among pregnant women increased from 12.4% in 1991 to 16.3 % in 1995. Compared with 1995 data, prevalence was lower in 1997 (11.4%) and 1999 (12.8%). In contrast, the rates of binge drinking and frequent drinking reported by pregnant women in 1995 remained substantially unchanged in 1997 and 1999: binge drinking rates were 2.9% in 1995, 1.8% in 1997, and 2.7% in 1999, and frequent alcohol use rates were 3.3% in 1995, 2.1% in 1997, and 3.3% in 1999. Among nonpregnant women who reported any alcohol use, rates remained stable: 53.2% in 1995, 52.8% in 1997, and 53.3% in 1999. Binge drinking rates among this population were 11.2% in 1995, 10.8% in 1997, and 12.3% in 1999.

In comparison with other pregnant women, pregnant women who reported any alcohol use, binge drinking, and frequent drinking were more likely to be aged >30 years, employed, and unmarried. Nonpregnant women who reported any alcohol use, binge drinking, and frequent drinking had similar employment and marital status as pregnant women. In addition, nonpregnant women reporting any alcohol use were more likely to be white and to have higher education levels than women who did not engage in this behavior; nonpregnant women who reported binge drinking and frequent drinking tended to be aged <30 years.

The findings in this report are subject to at least three limitations. First, BRFSS data are self-reported and might be subject to reporting biases, especially among pregnant women who are aware that alcohol use is not advised. Second, because BRFSS is a telephone survey of the noninstitutionalized U.S. population, homeless women, women in homes without telephones, and women who are institutionalized were not surveyed. Both of these limitations could have an impact on prevalence rates. Finally, because the proportion of pregnant women in this sample who were drinkers was limited, these estimated prevalence rates are subject to variability.

Heavy alcohol use before pregnancy is highly predictive of continued use, chiefly among older prenatal patients. Because levels of binge and frequent drinking among nonpregnant women have not declined, all women of childbearing age should be warned about the adverse effects of alcohol use, especially high-risk drinking patterns (i.e., binge drinking and frequent drinking), and health-care providers should learn effective techniques for screening for, and intervening with, binge and frequent drinkers.

Routine screening can enhance women’s present and future health and might avert early prenatal exposure before women become aware of pregnancy. Using brief intervention techniques and encouraging patients to seek social support through friends, family, and community groups might encourage women to abstain from alcohol use during pregnancy.

Potential disparities in health knowledge of pregnant women might be a contributing factor to sustained levels of binge and frequent drinking. To ensure more uniform dissemination of prenatal alcohol prevention messages, CDC, in collaboration with the Association of Schools of Public Health, will conduct targeted media campaigns to increase public awareness of the adverse effects of alcohol use during pregnancy among diverse geographic and racial/ethnic populations and among younger women.

Additional information about CDC’s activities to prevent alcohol-exposed pregnancies is available at www.cdc.gov/ncbddd/fas.

REFERENCES

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CDC Editorial Note: The findings in this report indicate that overall rates of any alcohol use during pregnancy declined since 1995. However, rates of binge drinking and frequent drinking during pregnancy did not decline and remain higher than the 2010 Healthy People objectives. These findings are consistent with those from the National Household Survey on Drug Abuse. Among nonpregnant women in their peak childbearing years, the use of alcohol, including the riskier practices of frequent and binge drinking, has not declined. Prenatal drinking patterns are highly predictive of alcohol use during pregnancy.

Pregnant women who are unmarried and older tend to have the highest rates of alcohol use. Women who drink alcohol are more likely than other women to be white, unmarried, younger, and working full time outside the home. Age is one characteristic that distinguishes heavier drinking patterns among pregnant and nonpregnant women. In this analysis, binge drinking and frequent drinking during pregnancy were more common in women aged 30-44 years, but among nonpregnant women, these drinking patterns were more likely to occur among women <30 years. Women aged <30 years tend to reduce alcohol use when they become aware they are pregnant, but women aged ≥30 years are less likely to reduce alcohol use after learning they are pregnant, indicating greater alcohol dependency and difficulty in reducing or eliminating alcohol use during pregnancy.

The findings in this report are subject to at least three limitations. First, BRFSS data are self-reported and might be subject to reporting biases, especially among pregnant women who are aware that alcohol use is not advised. Second, because BRFSS is a telephone survey of the noninstitutionalized U.S. population, homeless women, women in homes without telephones, and women who are institutionalized were not surveyed. Both of these limitations could have an impact on prevalence rates. Finally, because the proportion of pregnant women in this sample who were drinkers was limited, these estimated prevalence rates are subject to variability.

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REFERENCES
Dental caries (i.e., tooth decay) is a transmissible, multifactor disease that affects 50% of children aged 5-9 years, 67% of adolescents aged 12-17 years, and 94% of adults aged ≥18 years in the United States. During the second half of the 20th century, a major decline in the prevalence and severity of dental caries resulted from the identification of fluoride as an effective method of preventing caries. Fluoridation of the public water supply is the most equitable, cost-effective, and cost-saving method of delivering fluoride to the community. In the United States during 2000, approximately 162 million persons (65.8% of the population served by public water systems) received optimally fluoridated water compared with 144 million (62.1%) in 1992. This report presents state-specific data on the status of water fluoridation in the United States and describes a new surveillance system designed to routinely produce state and national data to monitor fluoridation in the public water supply. The results of this report indicate slow progress toward increasing access to optimally fluoridated water for persons using public water systems. Data from the new surveillance system can heighten public awareness of this effective caries prevention measure and can be used to identify areas where additional health promotion efforts are needed.

The 2000 and 2010 national health goals include objectives (13.9 and 21.9, respectively) to increase the 1989 and 1992 national baseline fluoridation levels (61% and 62%, respectively) to 75% of the U.S. population served by community water systems that receive water with optimal levels of fluoride (0.7-1.2 ppm depending on the average maximum daily air temperature of the area). The U.S. Environmental Protection Agency (EPA) does not regulate the addition of fluoride to water, and EPA’s Safe Drinking Water Information System (SDWIS) actively tracks fluoride concentrations only in water systems with naturally occurring fluoride levels above the established regulatory limits (≥2.0 ppm).

During 1998-2000, CDC developed the Water Fluoridation Reporting System (WFRS), a surveillance database that included CDC’s 1992 water fluoridation census and EPA’s SDWIS. To ensure that initial data were accurate and complete, in 2000, CDC sent state-specific reports generated from WFRS to the oral health contact at each state health agency for review; updated information was returned, and nonrespondents were contacted through telephone calls and electronic messages. In July 2001, each state received its preliminary public water system data and was asked to submit corrections. Alabama, California, Kansas, Louisiana, Montana, Rhode Island, Texas, and Wyoming had not returned their data by September 1, 2001; therefore, existing WFRS data were used in this report. Fluoridation percentages were determined by dividing the number of persons using public water systems with fluoride levels considered optimal (naturally occurring and adjusted) for the state by the total population of the state served by public water systems. When the population served by public water systems exceeded the 2000 population census for that state, the state census was used as the population using the public water supplies. This might occur as a result of the methods used by water systems to estimate the population served. These states were Alabama, Hawaii, Louisiana, Massachusetts, Missouri, Utah, and Wyoming.

In the United States during 2000, approximately 162 million persons (65.8% of the population served by public water systems) received optimally fluoridated water compared with 144 million (62.1%) in 1992; state-specific percentages ranged from 2% (Utah) to 100% (District of Columbia) (median: 76.7%). In 27 states during 1992-2000, the proportion increased (range: 0.8%-63.8% [Georgia and Nevada, respectively]; median: 4.9%), and in 23 states, the proportion decreased (range: from 0.1% to 6.0% [Iowa and Alaska, respectively]; median: 2.9%); the District of Columbia remained 100% fluoridated. Delaware, Maine, Missouri, Nebraska, and Virginia reached 75% in 2000 and Oklahoma reached 74.6%. The national objective has been met by 26 states, and the small increase from 1992 to 2000 of 3.7 percentage points has left a gap of 9.2 percentage points from the overall target.

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CDC Editorial Note: WFRS data indicate that during the 1990s, the estimated proportion of the U.S. population using public water supplies that maintained optimally fluoridated water increased from 62.1% to 65.8%. This modest progress occurred as the result of substantial increases in coverage in a few states and, in some instances, because several large metropolitan areas...
commenced fluoridation (e.g., Clark County [Las Vegas], Nevada; Los Angeles and Sacramento, California; and Manchester, New Hampshire).

The findings in this report are subject to at least three limitations. First, nonresponses might have affected the accuracy of some states’ final water fluoridation percentages by not accounting for changes in status. Second, use of the 2000 U.S. census data as the denominator for calculating water fluoridation percentages in seven states might have resulted in the percentages being underestimated because, in most states, the number of persons using public water systems was probably less than the 2000 U.S. census population. Finally, three states (Kentucky, Rhode Island, and South Dakota) reported their 1992 fluoridation rates as 100%; in these states, the apparent decrease from 1992 to 2000 in the percentage of persons using public water supplies receiving optimally fluoridated water represents an error correction in reporting methods rather than a true decrease.

WFRS will become an increasingly valuable tool for monitoring state and annually updating national water fluoridation data as more users register and routinely participate in entering data and receiving reports. WFRS updates and reports will assist states in monitoring the extent and consistency of water fluoridation. During 2002, CDC will provide online information on water fluoridation for states that update their data electronically.

Although the new WFRS online site might facilitate public knowledge about optimally fluoridated water, efforts to convince jurisdictions to provide such water must address (1) the perception by some scientists, policymakers, and members of the public that dental caries is no longer a public health problem or that fluoridation is no longer necessary or effective; (2) the often complex political process involved in adopting water fluoridation; and (3) unsubstantiated claims by opponents of water fluoridation about its alleged adverse health effects. To reach the goal of 75% of the public drinking water population supplied with optimally fluoridated water, policymakers and public health officials at the federal, state, and local levels will need to devise new promotion and funding approaches to gain support for this prevention measure.

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REFERENCES


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