



# MMWR<sup>TM</sup>

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### National Suicide Prevention Week — September 9–15, 2007

Suicide is the eleventh leading cause of death in the United States and the third leading cause among youths and young adults aged 10–24 years, accounting for 4,599 deaths in this age group in 2004 (1). Approximately 142,000 visits are made to emergency departments by persons in this age group each year to receive medical care for self-inflicted injuries (1).

Known risk factors for suicide include 1) a previous suicide attempt, 2) history of depression or other mental illness, 3) alcohol or drug abuse, 4) family history of suicide or violence, 5) physical illness, and 6) feeling alone (2). However, because U.S. mortality data lack information on many risk factors for suicide, reasons for subgroup vulnerabilities are not addressed. Using data from the National Violent Death Reporting System, CDC has begun to compile additional information about the circumstances of suicide to better understand why suicides occur and how they might be prevented.

During National Suicide Prevention Week, September 9–15, 2007, CDC encourages parents, educators, health-care providers, and health authorities to learn more about suicide, including the groups at greatest risk, warning signs for suicide, and potential prevention strategies. Additional information is available at <http://www.cdc.gov/ncipc/dvp/suicide/default.htm>.

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### Suicide Trends Among Youths and Young Adults Aged 10–24 Years — United States, 1990–2004

In 2004, suicide was the third leading cause of death among youths and young adults aged 10–24 years in the United States, accounting for 4,599 deaths (1,2). During 1990–2003, the combined suicide rate for persons aged 10–24 years declined 28.5%, from 9.48 to 6.78 per 100,000 persons (2). However, from 2003 to 2004, the rate increased by 8.0%, from 6.78 to 7.32 (2), the largest single-year increase during 1990–2004. To characterize U.S. trends in suicide among persons aged 10–24 years, CDC analyzed data recorded during 1990–2004, the most recent data available. Results of that analysis indicated that, from 2003 to 2004, suicide rates for three sex-age groups (i.e., females aged 10–14 years and 15–19 years and males aged 15–19 years) departed upward significantly from otherwise declining trends. Results further indicated that suicides both by hanging/suffocation and poisoning among females aged 10–14 years and 15–19 years increased from 2003 to 2004 and were significantly in excess of trends in both groups. The results suggest that increases in suicide and changes in suicidal behavior might have occurred among youths in certain sex-age groups, especially females aged 10–19 years. Closer examination of these trends is warranted at federal and state levels. Where indicated, health authorities and program directors should consider focusing suicide-prevention activities on these groups to help prevent suicide rates from increasing further.

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Annual data on suicides in the United States during 1990–2004 (1) were obtained from the National Vital Statistics System via WISQARS™ (2) by sex, three age groups (i.e., 10–14, 15–19, and 20–24 years), and the three most common suicide methods (firearm, hanging/suffocation,\* and poisoning†). Although coding of mortality data changed from the *International Classification of Diseases, Ninth Revision (ICD-9)* to the *Tenth Revision (ICD-10)* beginning in 1999, near total agreement exists between the two revisions regarding classification of suicides (3). Suicide trends during the 15-year period were examined for each sex-age group overall and by method, using a negative binomial rate regression model. Differences between observed rates and model-estimated rates for each year were evaluated using standardized Pearson residuals, which account for the general level of variability in the year-to-year rates. Standardized Pearson residuals >2 or <-2 were used to identify unusual departures from the modeled rate trends. A comprehensive explanation of these methods has been published previously (4).

Significant upward departures from modeled trends in 2004 were identified in total suicide rates for three of the six sex-age groups: females aged 10–14 years and 15–19 years and males aged 15–19 years (Table). The largest percentage increase in rates from 2003 to 2004 was among females aged 10–14 years (75.9%), followed by females aged 15–19 years (32.3%) and males aged 15–19 years (9.0%). In absolute numbers, from 2003 to 2004, suicides increased from 56 to 94 among females aged 10–14 years, from 265 to 355 among females aged 15–19 years, and from 1,222 to 1,345 among males aged 15–19 years.

In 1990, firearms were the most common suicide method among females in all three age groups examined, accounting for 55.2% of suicides in the group aged 10–14 years, 56.0% in the group aged 15–19 years, and 53.4% in the group aged 20–24 years. However, from 1990 to 2004, among females in each of the three age groups, significant downward trends were observed in the rates both for firearm suicides ( $p < 0.01$ ) and poisoning suicides ( $p < 0.05$ ), and a significant increase was observed in the rate for suicides by hanging/suffocation ( $p < 0.01$ ). In 2004, hanging/suffocation was the most common method among females in all three age groups, accounting for 71.4% of suicides in the group aged 10–14 years, 49% in the group aged 15–19 years, and 34.2% in the group aged 20–24 years. In addition, from 2003 to 2004, hanging/suffocation suicide rates among females aged 10–14 and 15–19 years increased by 119.4% (from 0.31 to 0.68 per 100,000 persons) and 43.5% (from 1.24 to 1.78), respectively (Figures 1 and 2). In absolute

\* Includes self-inflicted asphyxiation and ligature strangulation.

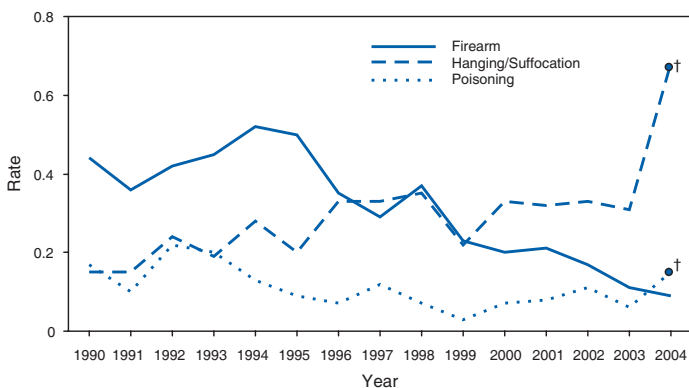
† Includes intentional drug overdose and carbon monoxide exposure.

**TABLE. Suicide rates\* for youths and young adults aged 10–24 years, by age group, method, sex, and year — National Vital Statistics System, United States, 1990–2004**

Sex/Year	10–14 yrs				15–19 yrs				20–24 yrs			
	All methods†	Firearm	Hanging/Suffocation§	Poisoning¶	All methods	Firearm	Hanging/Suffocation	Poisoning	All methods	Firearm	Hanging/Suffocation	Poisoning
<b>Females</b>												
1990	0.80	0.44	0.15**	0.17**	3.73	2.09	0.55	0.89	4.11	2.19	0.43	1.15
1991	0.67	0.36	0.15**	0.10**	3.70	1.83	0.59	1.09	3.88	1.79	0.52	1.11
1992	0.90	0.42	0.24	0.22**	3.42	1.62	0.62	1.03	3.84	1.92	0.58	1.02
1993	0.93	0.45	0.19**	0.20**	3.80	2.00	0.62	0.92	4.36	2.11	0.59	1.24††
1994	0.95	0.52	0.28	0.13**	3.44	1.99	0.51	0.74	3.87	2.00	0.61	0.82
1995	0.82	0.50	0.20**	0.09**	3.07	1.64	0.57	0.62	4.21	2.15††	0.80	0.97
1996	0.80	0.35	0.33	0.07**	3.49	1.69	1.02††	0.51	3.57	1.65	0.71	0.88
1997	0.76	0.29	0.33	0.12**	3.31	1.70	0.95	0.47	3.59	1.63	0.88	0.75
1998	0.86	0.37	0.35	0.07**	2.84	1.43	0.81	0.38	3.70	1.72	0.87	0.65
1999	0.51	0.23	0.22	0.03**	2.75	1.11	0.89	0.48	3.37	1.36	0.84	0.79
2000	0.62	0.20**	0.33	0.07**	2.75	1.06	1.02	0.42	3.23	1.29	0.78	0.70
2001	0.64	0.21	0.32	0.08**	2.70	0.96	0.99	0.52	3.06	1.03	0.87	0.83
2002	0.62	0.17**	0.33	0.11**	2.36	0.75	0.98	0.43	3.48	1.18	0.95	0.92
2003	0.54	0.11**	0.31	0.06**	2.66	0.77	1.24	0.43	3.39	1.18	1.10	0.82
2004	0.95††	0.09**	0.68††	0.15**††	3.52††	0.98	1.72††	0.54††	3.59	1.14	1.23	0.76
<b>Males</b>												
1990	2.17	1.19§§	0.91	0.02**	18.17	12.63§§	3.48††	1.49	25.69	16.69§§	5.19	2.41
1991	2.28	1.37	0.78	0.08**	17.92	12.70	3.16	1.26	25.40	16.97	4.52	2.51
1992	2.40	1.44	0.80	0.11**	17.61	12.59	3.17	1.20	25.42	16.79	5.04	2.11
1993	2.40	1.51	0.78	0.04**	17.39	12.29	3.20	1.11	26.47	18.04	4.94	2.23
1994	2.36	1.43	0.79	0.08**	17.95††	13.11††	3.27	0.74	27.96††	18.80††	5.21	2.30
1995	2.57	1.38	1.06	0.06**	17.11	11.86	3.39	0.85	27.01††	17.27	5.96††	1.96
1996	2.23	1.29	0.90	0.01**	15.38	10.20	3.50	0.88	24.47	15.73	5.36	1.79
1997	2.29	0.98	1.21	0.03**	14.94	9.78	3.84	0.51§§	22.66	14.34	5.02	1.79
1998	2.30	1.15	1.12	0.01**	14.34	9.31	3.57	0.65	22.33	13.71	5.72	1.50
1999	1.85	0.77	0.99	0.03**	13.05	8.40	3.36§§	0.54	20.85	12.81	4.80§§	1.61
2000	2.26	0.86	1.28	0.08**††	13.00	7.63	3.98	0.67	21.40	12.90	5.66	1.32
2001	1.93	0.64	1.21	0.02**	12.87	7.11	4.33	0.63	20.37	11.76	5.92	1.38
2002	1.81	0.63	1.11	0.00**	12.22	6.38	4.32	0.72	20.62	11.78	6.11	1.11
2003	1.73	0.57	1.11	0.03**	11.61	6.26	4.22	0.57	20.21	11.42	6.26	1.16
2004	1.71	0.46	1.24	0.00**	12.65††	6.47	4.71	0.66	20.84	11.12	6.63	1.49††

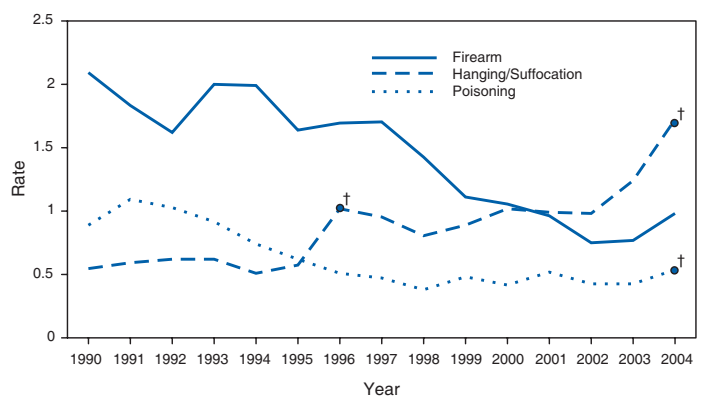
\* Per 100,000 population in sex-age group.  
 † Includes cutting, jumping, burning, drowning, and other or unspecified methods.  
 § Includes self-inflicted asphyxiation and ligature strangulation.  
 ¶ Includes intentional drug overdose and carbon monoxide exposure.  
 \*\* Unstable rate based on 20 or fewer deaths.  
 †† Standardized Pearson residual >2.  
 §§ Standardized Pearson residual <-2.

**FIGURE 1. Yearly suicide rates\* for females aged 10–14 years, by method — National Vital Statistics System, United States, 1990–2004**



\* Per 100,000 population.  
 † Standardized Pearson residual >2.

**FIGURE 2. Yearly suicide rates\* for females aged 15–19 years, by method — National Vital Statistics System, United States, 1990–2004**



\* Per 100,000 population.  
 † Standardized Pearson residual >2.

numbers, from 2003 to 2004, suicides by hanging/suffocation increased from 32 to 70 among females aged 10–14 years and from 124 to 174 among females aged 15–19 years. Aside from 2004, the only other significant departure from trend among females in these two age groups during 1990–2004 was in suicides by hanging/suffocation among females aged 15–19 years in 1996 (Figure 2).

**Reported by:** *KM Lubell, PhD, SR Kegler, PhD, AE Crosby, MD, D Karch, PhD, Div of Violence Prevention, National Center for Injury Prevention and Control, CDC.*

**Editorial Note:** The findings in this report indicate that 2004 suicide rates for males aged 15–19 years and females aged 10–14 years and 15–19 years diverged upward significantly from modeled trends during 1990–2004. For females in the two age groups, significant departures were observed for 2004 in suicides by hanging/suffocation and poisoning. The rate for suicide by hanging/suffocation among females aged 10–14 years more than doubled from 2003 to 2004, from 0.31 to 0.68 per 100,000 population. During 1990–2003, the highest yearly rate for such deaths among females in this age group was 0.35 per 100,000 population in 1998.

The marked increases in suicide rates among females in the two younger age groups suggest possible changes in risk factors for suicide and the methods used, with greater use of methods (e.g., hanging by rope) that are readily accessible (5). Scientific knowledge regarding risk factors for suicide in young females is limited. Research that focuses on suicide mortality has emphasized males, who constitute approximately three fourths of suicide decedents aged 10–19 years (2). In contrast, research on suicidal behavior among females primarily has examined factors related to suicidal thoughts and non-fatal self-inflicted injuries. One comparative study, conducted in Singapore, suggested that perceptions of interpersonal relationship problems are more common among young female suicide decedents than among their male counterparts (6). Family discord, legal/disciplinary problems, school concerns, and mental health conditions such as depression increase the risk for suicide among youths of both sexes (6,7). Drug/alcohol use can exacerbate these problems (7).

Recent reports have detailed unintentional asphyxia fatalities resulting from adolescents playing “the choking game” (i.e., intentionally restricting the supply of oxygen to the brain, often with a ligature, to induce a brief euphoria). Some of these fatalities likely are misclassified as suicides. However, such deaths are unlikely to account for a substantial portion of the recent increases in hanging/suffocation suicides among young girls. The available evidence suggests that choking-game fatalities occur predominantly among boys (8). In addition, analysis of hanging/suffocation deaths classified as unintentional or undetermined in this population did not reveal

increases that paralleled those in hanging/suffocation suicides (CDC, unpublished data, 2007).

The findings in this report are subject to at least three limitations. First, because U.S. mortality data currently are available only through 2004, whether the increases observed in 2004 represent changes in trends or single-year anomalies is not clear and suggests a need for further study as more current data become available. Second, official mortality data for suicides might include classification errors. Previous research has highlighted the extent to which suicides are undercounted (9). Finally, because U.S. mortality data include limited variables, these data do not allow examination of potential differences or changes in the underlying risk factors for fatal suicidal behavior among young females. Other data sources (e.g., the National Violent Death Reporting System) that collect a broader array of information about the circumstances surrounding suicides (10) might provide additional insights.

These findings demonstrate the potential mutability of youth suicidal behavior. Public health researchers and suicide-prevention practitioners need to learn more about both the risk factors for suicide among young females and effective strategies for suicide prevention. The trends in suicide rates and methods described in this report, if confirmed, suggest that prevention measures focused solely on restricting access to the most lethal means are likely to have limited success. Prevention measures should address the underlying reasons for suicide in populations that are vulnerable.

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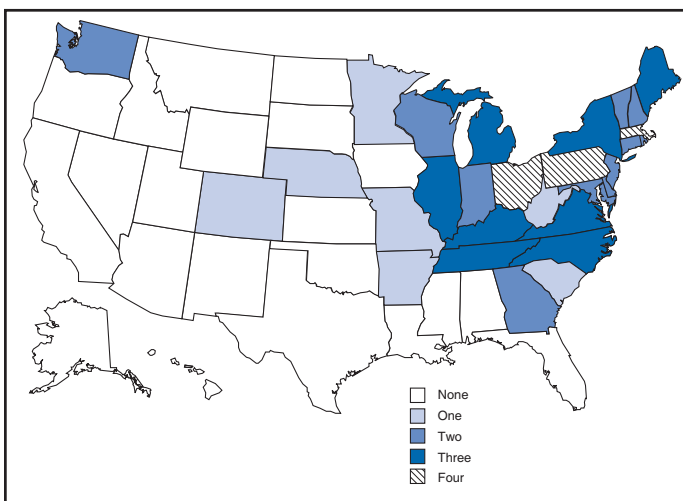
## Multistate Outbreaks of *Salmonella* Infections Associated with Raw Tomatoes Eaten in Restaurants — United States, 2005–2006

During 2005–2006, four large multistate outbreaks of *Salmonella* infections associated with eating raw tomatoes at restaurants occurred in the United States. The four outbreaks resulted in 459 culture-confirmed cases of salmonellosis in 21 states (Figure). This report describes the epidemiologic, environmental, and laboratory investigations into these four outbreaks by state and local health departments, national food safety agencies, and CDC. The results of these investigations determined that the tomatoes had been supplied to restaurants either whole or precut from tomato fields in Florida, Ohio, and Virginia. These recurrent, large, multistate outbreaks emphasize the need to prevent *Salmonella* contamination of tomatoes early in the production and packing process. Current knowledge of mechanisms for tomato contamination and methods of eradication of *Salmonella* in tomatoes is incomplete; the agricultural industry, food safety agencies, and public health agencies should make tomato-safety research a priority.

### *Salmonella* Newport: Multiple States, July–November 2005

A total of 72 culture-confirmed *S. Newport* isolates with indistinguishable pulsed-field gel electrophoresis (PFGE) patterns (PulseNet XbaI pattern JJPX01.0061 [BlnI pattern JJPX01.0021]) were identified from stool specimens collected during July–November 2005 in 16 states (Delaware, Illinois,

**FIGURE. Number of outbreaks of *Salmonella* infection associated with raw tomatoes eaten in restaurants, by state — United States, 2005–2006**



Maine, Maryland, Massachusetts, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Vermont, Virginia, and Wisconsin) (1). Median patient age was 29 years (range: <1–75 years); 42 (58%) patients were female. Eight (11%) patients were hospitalized, and no deaths were reported.

A case-control study of persons aged 18–70 years was conducted; 29 case-patients were matched geographically with 140 well community controls in nine states. Illness was associated with eating raw, large, red, round tomatoes at restaurants; 19 (70%) of 27 case-patients ate such tomatoes compared with 26 (20%) of 128 controls (matched odds ratio [mOR]: 9.7; 95% confidence interval [CI] = 3.3–34.9). Implicated tomatoes had been purchased whole and sliced at restaurants. No single restaurant or restaurant chain was associated with the outbreak.

Investigators determined that the implicated tomatoes were grown on two farms on the eastern shore of Virginia. The outbreak strain of *S. Newport* was isolated from irrigation pond water near tomato fields in this region in October 2005. This region also had been the source of tomatoes for a multistate outbreak of *S. Newport* infections in 2002 (1); strains from both outbreaks had the same PFGE pattern.

### *Salmonella* Braenderup: Multiple States, November–December 2005

A total of 82 culture-confirmed *S. Braenderup* isolates with indistinguishable PFGE patterns (PulseNet XbaI pattern JBPX01.0050 [BlnI pattern JBPA26.0004]) were identified in eight states (Illinois, Indiana, Kentucky, Massachusetts, Michigan, Ohio, Pennsylvania, and West Virginia) during November–December 2005. Median patient age was 34 years (range: 6–78 years); 51 (67%) patients were female. Eighteen (35%) patients were hospitalized, and no deaths were reported.

A case-control study of persons aged 18–60 years was conducted; 38 case-patients were geographically matched to 108 well community controls in two states. Twenty (52%) of 38 patients had eaten at chain restaurant A compared with 13 (12%) of 108 controls (mOR: 19.9; CI = 4.6–86.6). Among chain restaurant A patrons, illness was associated with eating items containing raw, prediced Roma (i.e., plum) tomatoes (OR: 11.3; CI = 2.0–62.2).

The implicated tomatoes had been grown in one of two tomato fields in Florida and were prediced and packaged at a firm in Kentucky before being shipped to chain restaurant A. The environmental investigation revealed that multiple potential animal reservoirs of *Salmonella* (e.g., cattle, wild pigs, wild birds, amphibians, and reptiles) were present in and adjacent to the drainage ditches. Environmental samples from

the farm, including drainage ditch water and animal feces from around the tomato fields, yielded *Salmonella* of different serotypes than the outbreak strain.

### ***Salmonella* Newport: Multiple States, July–November 2006**

A total of 115 culture-confirmed *S. Newport* isolates with indistinguishable PFGE patterns (PulseNet XbaI pattern JJPX01.0061 [BlnI pattern JJPX01.0021]) were identified from stool specimens provided during July–November 2006 in 19 states (Colorado, Connecticut, Delaware, Georgia, Illinois, Kentucky, Maine, Massachusetts, Maryland, Michigan, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, Tennessee, Virginia, and Washington). The PFGE pattern was identical to the pattern observed during the 2005 *S. Newport* outbreak. Median patient age was 28 years (range: <1 month–86 years); 54 (50%) patients were female. Eight (32%) patients were hospitalized, and no deaths were reported.

A case-control study of persons aged 18–75 years was conducted; 25 case-patients were geographically matched with 41 well community controls in nine states. Illness was associated with eating raw tomatoes in restaurants; 14 (67%) of 21 matched case-patients ate raw tomatoes in restaurants compared with nine (28%) of 32 controls (mOR: 4.9; CI = 1.03–23.3). No single restaurant or restaurant chain was associated with the outbreak. The source of the implicated tomatoes was not determined. An assessment of tomato-growing practices in the suspected region was conducted by the Food and Drug Administration (FDA) during the July 2007 growing season.

### ***Salmonella* Typhimurium: Multiple States and Canada, September–October 2006**

A total of 190 culture-confirmed *S. Typhimurium* isolates with indistinguishable PFGE patterns (PulseNet XbaI pattern JPXX01.0604 [BlnI pattern JPXA26.0174]) were identified during September–October 2006 in 21 states (Arkansas, Connecticut, Georgia, Indiana, Kentucky, Maine, Massachusetts, Michigan, Minnesota, Nebraska, New Hampshire, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, Tennessee, Vermont, Virginia, Washington, and Wisconsin). The median age of patients was 34 years (range: 2–88 years); 112 (58%) patients were female. Twenty-four (22%) patients were hospitalized, and no deaths were reported.

A case-control study of persons aged 18–70 years was conducted; 59 case-patients were geographically matched with 59 well community controls in nine states. Illness was associated with eating raw, large, red, round tomatoes at a restau-

rant; 26 (52%) of 50 case-patients ate such tomatoes compared with 12 (24%) of 50 controls (mOR: 3.1; CI = 1.3–7.3).

Implicated tomatoes were traced to a single packinghouse in Ohio supplied by three tomato growers from 25 fields in three counties. Tomato production had ended by the time the packinghouse was implicated. As a result, FDA deferred the investigation until the next growing season and completed the investigation in August 2007.

**Reported by:** SA Bidol, MPH, Michigan Dept of Community Health. ER Daly, MPH, New Hampshire Dept of Health and Human Svcs. RE Rickert, MPH, Pennsylvania Dept of Health. S. Newport Investigation Team 2005, S. Braenderup Investigation Team 2005, S. Newport Investigation Team 2006, S. Typhimurium Investigation Team 2006, PulseNet. TA Hill, MPH, S Al Khaldi, PhD, Food and Drug Admin. TH Taylor Jr, MS, Div of Bacterial Diseases, National Center for Immunization and Respiratory Diseases; MF Lynch, MD, JA Painter, DVM, CR Braden, MD, PA Yu, MPH, L Demma, PhD, Div of Foodborne, Bacterial, and Mycotic Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases; C Barton Behraves, DVM, CK Olson, MD, SK Greene, PhD, AM Schmitz, DVM, DD Blaney, MD, M Gershman, MD, EIS officers, CDC.

**Editorial Note:** *Salmonella* infections can be transmitted through various foods and cause an estimated 1.4 million illnesses and 400 deaths annually in the United States (2). The first large multistate outbreak of *Salmonella* infections was linked to contaminated tomatoes in 1990, when *Salmonella* Javiana caused 176 illnesses in four Midwestern states (3). Since 1990, at least 12 multistate outbreaks of salmonellosis traced to various types of tomatoes (e.g., red, round; Roma; and grape) have been reported to the CDC Electronic Foodborne Outbreak Reporting System (eFORS) by state public health departments. These 12 outbreaks accounted for approximately 1,990 culture-confirmed infections. However, because an estimated 97.5% of *Salmonella* infections are not confirmed by culture, these outbreaks might have resulted in as many as 79,600 illnesses (2).

Approximately 5 billion pounds of fresh tomatoes are eaten annually in the United States. The data in this report demonstrate the potential for large outbreaks of *Salmonella* infections caused by contaminated tomatoes. The outbreaks described were widely dispersed, indicating that contamination occurred early in the distribution chain, such as at the farm or packinghouse, rather than in restaurants. Illness in the four multistate outbreaks was associated with eating tomatoes that originated from growing regions in Florida, Ohio, and Virginia. Clusters of infections with *S. Newport* PFGE pattern JJPX01.0061 have been detected every year since 2002 and were traced to tomatoes grown in Virginia in 2002 and 2005. These recurrent multistate outbreaks indi-

cate that the tomato-growing environment is an ongoing source of contamination of tomatoes.

Possible sources for environmental *Salmonella* contamination of tomatoes include feces from domestic or wild animals (e.g., reptiles, amphibians, or birds) or contaminated habitats, such as ponds or drainage ditches. Although the mechanism by which tomatoes become contaminated is not known, certain possibilities are suggested by experimental evidence. Tomatoes can internalize *Salmonella* when they are immersed in water with a temperature less than the temperature of the tomato (4). Tomatoes also can become internally contaminated when tomato stems and flowers are inoculated with *Salmonella* (5), which can occur during growth if contaminated water is applied directly to plants. Contamination on the tomato surface also can be transferred to the interior of a tomato when it is cut. Once contaminated, cut tomatoes provide an efficient medium for bacterial amplification (6).

Tomatoes served in restaurants pose a particular concern because restaurants often store and handle tomatoes in ways that allow for amplification of bacteria. In response to these recurrent outbreaks and experimental evidence that *Salmonella* can replicate on the surface of a cut tomato, the 2007 FDA Federal Food Code has been amended so that cut tomatoes (because they have a pH  $\geq 4.2$  and water activity  $>0.99^*$ ) are defined as a "time/temperature control for safety" food, which requires refrigeration of cut, sliced, or processed tomatoes (7). In addition, growers, harvesters, repackers, retailers, and food service employees should follow guidelines for good manufacturing practices and good agricultural practices when handling tomatoes (8,9).

Consumers should avoid purchasing bruised or damaged tomatoes. All tomatoes, including those grown conventionally or organically at home or purchased from a grocery store or farmer's market, should be thoroughly washed under running water just before eating. Tomatoes that appear spoiled should be discarded. Cut, peeled, or cooked tomatoes should be refrigerated within 2 hours or discarded. Refrigeration of cut tomatoes at 40°F (4.4°C) is needed to maintain both quality and safety. Cut tomatoes should be separated from raw, unwashed produce items, raw meats, and raw seafood.

To prevent future tomato-associated outbreaks of *Salmonella* infections, further environmental and laboratory research is necessary to determine the source and routes of contamination, mechanisms by which pathogens contact tomatoes and become internalized, the stages of development at which plants are most susceptible to contamination that persists, and procedures by which contamination can be

reduced or eliminated. Toward this end, the North American Tomato Trade Work Group published *Commodity Specific Food Safety Guidelines for the Fresh Tomato Supply Chain* in May 2006 to promote adoption of good agricultural practices throughout the fresh tomato supply chain. Traceback investigations in future outbreaks should consider all levels of tomato production, including the field and packinghouse. Studies focused on these areas should be a priority for the agricultural industry, food safety agencies, and the public health community.

### Acknowledgments

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\*A measure of the free moisture in a food. Pure water has a water activity of 1.0 and potentially hazardous foods have a water activity of 0.85 and higher.

## Asthma Self-Management Education Among Youths and Adults — United States, 2003

Asthma is a prevalent chronic respiratory disease and major cause of morbidity in the United States (1). However, with appropriate medication, medical care, and self-management, most asthma symptoms are preventable (2). Recent evidence indicates that asthma self-management education is effective in improving outcomes of chronic asthma (3). Guidelines issued by the National Asthma Education and Prevention Program (NAEPP) specify essential components of asthma management, including patient education, objective monitoring of symptoms, and avoiding asthma triggers (3). *Healthy People 2010* objectives include increasing the proportion of persons with asthma who receive formal patient education from 8% to 30% (objective 24-6) and who receive care according to NAEPP guidelines (objective 24-7) (4,5). The National Health Interview Survey (NHIS) routinely includes questions that assess asthma status. In 2003, the survey included a series of questions designed to reflect clinical best practices for asthma and to serve as a baseline assessment for progress toward national respiratory health objectives. These questions have not been repeated in any NHIS since 2003 but are scheduled to be included in the 2008 NHIS. To characterize asthma education among youths and adults with current asthma by selected demographic characteristics, CDC analyzed data from the 2003 NHIS. This report describes the results of that analysis, which indicated that the prevalence of asthma education varied by sex, age group, race/ethnicity, and health insurance status. The findings also suggest that a substantial proportion of youths and adults with current asthma lack the education necessary for effective self-management and control of asthma symptoms.

NHIS is an annual, in-person survey of the civilian, non-institutionalized U.S. population based on a multistage sampling of households (6). A total of 43,101 sample adults and youths were included in the 2003 NHIS; an adult family member was selected to act as a proxy respondent for youths. Consistent with current Council of State and Territorial Epidemiologist recommendations, respondents were considered to have current asthma if they answered “yes” to both of the following questions: “Have you ever been told by a doctor or other health professional that you had asthma?” and “Do you still have asthma?” (7).

A supplement to the 2003 NHIS included a series of questions to assess components of effective asthma self-management (4). In that supplement, respondents were asked the following six questions regarding asthma self-management education: “Have you ever taken a course or class on how to

manage asthma yourself?” “Has a doctor or other health professional ever given you an asthma management plan?” “Has a doctor or other health professional ever taught you how to monitor peak flow for daily therapy?” “Has a doctor or other health professional ever taught you how to recognize early signs or symptoms of an asthma episode?” “Has a doctor or other health professional ever taught you how to respond to episodes of asthma?” “Has a doctor or other health professional ever advised you to change things in your home, school, or work to improve your asthma?” Only respondents with current asthma who answered these questions are included in this report.

Prevalence estimates of asthma education for youths and adults by sex, age group, race/ethnicity, and health insurance status were calculated from the total number of respondents who reported current asthma. Samples were weighted to produce national estimates, and univariate and bivariate analyses were conducted; 95% confidence intervals were calculated, accounting for sample weights and complex sample design. Group differences (exclusive categories) were calculated by using chi-square tests; for insurance status (nonexclusive categories), pairwise differences between subgroups were determined using *t* tests. The significance level for all tests was  $p < 0.05$ .

In 2003, an estimated 8.5% ( $n = 1,046$ ) of U.S. youths (i.e., persons aged  $\leq 17$  years) and 6.4% ( $n = 2,048$ ) of U.S. adults had current asthma. Overall, the prevalence of each component of asthma education analyzed in this report was significantly greater among youths than adults (Tables 1 and 2). The prevalence of various asthma education components for youths ranged from 40% who reported they had ever had an asthma management plan to 78% who reported they had ever been taught how to respond to an asthma attack (Table 1). Estimates for adults ranged from 12% who reported they had ever taken a class on asthma management to 65% who reported they had ever been taught how to respond to an asthma attack (Table 2).

Among youths, the prevalence of taking an asthma class or being taught to respond to an asthma attack was lower among non-Hispanic whites (12% and 76%) than among non-Hispanic blacks (23% and 80%, respectively) and other non-Hispanic races/ethnicities (21% and 92%, respectively). Among Hispanic youth subgroups, the only significant difference was in the proportion of persons taught to respond to an asthma attack (Mexicans, 69%, versus Puerto Ricans, 88%) (Table 1).

Among adults, significant differences were found by sex, by age group, and between Hispanic subgroups. The prevalence of asthma education for women was higher than that for men for four of six components: 1) ever had an asthma management plan, 2) taught to monitor peak flow, 3) taught how



**TABLE 1. Estimated prevalence of asthma self-management education among youths aged  $\leq 17$  years with current asthma,\* by selected characteristics — National Health Interview Survey, United States, 2003**

Characteristic	No. with current asthma	Ever had asthma management plan <sup>†</sup>		Taught how to monitor peak flow <sup>§</sup>		Taken a class on asthma management <sup>¶</sup>		Taught to recognize early signs of asthma attack <sup>**</sup>		Taught how to respond to asthma attack <sup>††</sup>		Advised to change aspects of home, school, or work <sup>§§</sup>	
		%	(95% CI <sup>¶¶</sup> )	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
<b>Total</b>	<b>1,046</b>	<b>39.5</b>	<b>(36.1–43.0)</b>	<b>56.8</b>	<b>(52.8–60.7)</b>	<b>16.1</b>	<b>(13.8–18.8)</b>	<b>72.4</b>	<b>(69.0–75.6)</b>	<b>77.5</b>	<b>(74.3–80.4)</b>	<b>53.1</b>	<b>(49.6–56.5)</b>
<b>Sex</b>													
Male	599	42.0	(37.6–46.5)	58.1	(52.8–63.2)	15.8	(12.9–19.2)	74.2	(69.9–78.0)	79.5	(75.4–83.0)	52.1	(47.5–56.7)
Female	447	36.2	(30.8–41.9)	55.0	(49.6–60.4)	16.5	(12.9–20.9)	70.1	(64.8–74.9)	74.8	(69.7–79.4)	54.3	(48.9–59.6)
<b>Age group (yrs)</b>													
0–4	193	34.6	(27.3–42.6)	51.8	(43.3–60.2)	15.6	(10.7–22.1)	70.7	(63.0–77.4)	77.8	(70.6–83.7)	48.8	(41.1–56.6)
5–14	639	40.6	(36.4–44.9)	58.9	(54.0–63.6)	16.6	(13.8–19.7)	73.1	(68.8–76.9)	78.0	(74.0–81.5)	54.9	(50.4–59.3)
15–17	214	40.8	(33.0–49.0)	54.8	(46.9–62.5)	15.3	(10.1–22.4)	71.9	(64.5–78.3)	75.3	(68.0–81.4)	51.5	(43.6–59.4)
<b>Race/Ethnicity</b>													
White, non-Hispanic	487	37.1	(32.5–42.0)	53.6	(48.1–59.1)	11.8 <sup>†††</sup>	(9.1–15.1)	71.6	(66.9–75.8)	75.8 <sup>†††</sup>	(71.4–79.7)	52.8	(47.7–57.8)
Black, non-Hispanic	242	42.4	(34.9–50.4)	62.3	(54.0–69.9)	23.3	(17.4–30.3)	75.2	(67.5–81.5)	80.2	(73.5–85.5)	60.0	(52.7–66.8)
Other, non-Hispanic <sup>***</sup>	70	46.2	(32.4–60.6)	63.1	(47.5–76.3)	20.8	(11.6–34.4)	79.0	(65.0–88.5)	91.8	(83.9–96.0)	54.6	(39.9–68.5)
Hispanic	247	39.6	(32.4–47.3)	56.4	(48.5–63.9)	18.0	(13.0–24.5)	68.0	(60.2–74.9)	72.0	(63.9–78.8)	43.1	(36.3–50.2)
Mexican	119	37.4	(26.6–49.6)	57.0	(45.0–68.1)	16.1	(10.3–24.5)	65.9	(54.7–75.6)	69.0 <sup>†††</sup>	(57.9–78.3)	38.2	(28.9–48.6)
Puerto Rican	53	43.3	(29.2–58.7)	65.5	(50.3–78.1)	29.9	(16.5–47.9)	80.5	(66.1–89.7)	87.8	(74.1–94.8)	50.9	(35.3–66.4)
<b>Health insurance<sup>§§§</sup></b>													
Private	570	43.5	(38.8–48.2)	58.5	(53.1–63.8)	16.9	(13.8–20.5)	75.7	(71.4–79.6)	79.7	(75.6–83.3)	56.7	(52.2–61.1)
Medicaid	347	34.3	(28.7–40.4)	53.8	(47.5–60.0)	16.3	(12.3–21.2)	67.8	(61.6–73.4)	73.8	(68.4–78.7)	49.8	(43.8–55.9)
Other	63	40.4	(27.6–54.6)	63.1	(46.6–77.0)	14.3 <sup>¶¶¶</sup>	(6.4–29.0)	76.1	(59.9–87.2)	86.1	(70.9–94.1)	53.1	(39.5–66.3)
None	86	31.5	(21.6–43.5)	51.3	(39.3–63.2)	10.5 <sup>¶¶¶</sup>	(5.6–18.7)	65.8	(53.3–76.4)	72.2	(58.4–82.8)	42.5	(31.2–54.7)

\* Child was classified as having current asthma if parent or guardian answered “yes” to the question, “Has [child] ever been told by a doctor or other health professional that [child] had asthma?” and “yes” to the question, “Does [child] still have asthma?”

† Child was classified as having a management plan if parent or guardian of child answered “yes” to the question, “Has a doctor or other health professional ever given [child] an asthma management plan?”

§ Child was classified as having been taught how to use a peak flow meter if parent or guardian of child answered “yes” to the question, “Has a doctor or other health professional ever taught [child] or [his/her] parent or guardian how to monitor peak flow for daily therapy?”

¶ Child was classified as having taken a class on management if parent or guardian of child answered “yes” to the question, “Has [child] or [his/her] parent or guardian ever taken a course or class on how to manage [child's] asthma?”

\*\* Child was classified as having been taught to recognize early signs of attack if parent or guardian of child answered “yes” to the question, “Has a doctor or other health professional ever taught [child] or [his/her] parent or guardian how to recognize early signs or symptoms of an asthma episode?”

†† Child was classified as having been taught to respond to an episode of asthma if parent or guardian of child answered “yes” to the question, “Has a doctor or other health professional ever taught [child] or [his/her] parent or guardian how to respond to episodes of asthma?”

§§ Child was classified as having ever been advised to change things in home, school or work if parent or guardian of child answered “yes” to the question, “Has a doctor or other health professional ever advised you to change things in [child's] home, school or work to improve [his/her] asthma?”

¶¶ Confidence interval.

\*\*\* Includes American Indian/Alaskan Native, Asian, and persons of multiple races.

††† Prevalence of asthma-management technique significantly associated with characteristic by chi-square test ( $p < 0.05$ )

§§§ Nonexclusive categories. “Medicaid” includes Medicaid and Children’s Health Insurance Program. “Other” includes Indian Health Service insurance, military insurance, other state-sponsored health plans, and other government programs.

¶¶¶ Estimate has a relative standard error  $> 30\%$ . This estimate is considered statistically unreliable and should be interpreted with caution.

to respond to an asthma attack, and 4) advised to change aspects of home, school, or work. A greater proportion of persons aged 18–34 years, compared with persons aged  $\geq 65$  years, reported having been 1) taught how to respond to an asthma attack and 2) advised to change aspects of home, school, or work. A greater proportion of those aged 35–64 years had been taught to recognize early signs of an asthma attack, whereas a greater proportion of adults aged  $\geq 65$  years reported that they had an asthma management plan. Puerto Ricans reported significantly higher percentages for each component compared with Mexicans, with the exception of those who had ever taken a class on asthma management (Table 2).

No significant differences were observed in asthma education for youths by health insurance status. In contrast, a significantly higher proportion of adults with private insurance compared with those with no insurance reported 1) having

ever had an asthma management plan, 2) being taught to monitor peak flow, 3) taking a class on asthma management, and 4) being taught how to respond to an asthma attack (Table 2). Adults with private health insurance had significantly higher proportions of asthma education than those with Medicare with regard to 1) being taught to recognize early signs of an asthma attack, 2) being taught how to respond to an asthma attack, and 3) being advised to change aspects of home, school, or work. Compared with those without health insurance, a higher proportion of people with Medicaid reported having an asthma management plan, and a higher proportion of adults with Medicare reported having an asthma management plan or taking a class on asthma management.

**Reported by:** ME King, PhD, RA Rudd, MSPH, Div of Environmental Hazards and Health Effects, National Center for Environmental Health, CDC.

**TABLE 2. Estimated prevalence of asthma self-management education among adults aged ≥18 years with current asthma,\* by selected characteristics — National Health Interview Survey, United States, 2003**

Characteristic	No. with current asthma	Ever had asthma management plan†		Taught how to monitor peak flow§		Taken a class on asthma management¶		Taught to recognize early signs of asthma attack**		Taught how to respond to asthma attack††		Advised to change aspects of home, school, or work§§	
		%	(95% CI¶¶)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
<b>Total</b>	<b>2,048</b>	<b>33.6</b>	<b>(31.2–36.1)</b>	<b>45.0</b>	<b>(42.4–47.8)</b>	<b>12.4</b>	<b>(10.8–14.3)</b>	<b>55.1</b>	<b>(52.5–57.6)</b>	<b>64.8</b>	<b>(62.4–67.2)</b>	<b>47.4</b>	<b>(44.9–50.0)</b>
<b>Sex</b>													
Male	605	28.7***	(24.8–33.0)	38.5***	(34.1–43.1)	10.4	(8.0–13.3)	51.9	(47.3–56.5)	59.4***	(55.1–63.7)	41.1***	(36.3–46.1)
Female	1,443	36.2	(33.2–39.2)	48.5	(45.2–51.8)	13.5	(11.4–15.8)	56.7	(53.6–59.7)	67.6	(64.9–70.3)	50.7	(47.7–53.6)
<b>Age group (yrs)</b>													
18–34	616	26.7***	(22.9–31.0)	43.0	(38.0–48.1)	10.0	(7.5–13.2)	56.3***	(51.7–60.8)	69.7***	(65.1–73.9)	49.1***	(44.3–53.9)
35–64	1,082	36.5	(33.2–39.9)	47.6	(44.1–51.2)	13.3	(10.9–16.0)	57.2	(53.7–60.6)	65.0	(61.6–68.3)	49.1	(45.6–52.6)
≥65	350	39.0	(33.3–45.1)	40.2	(34.5–46.2)	14.9	(11.0–19.9)	44.3	(38.6–50.1)	52.8	(47.1–58.4)	37.4	(31.7–43.6)
<b>Race/Ethnicity</b>													
White, non-Hispanic	1,384	34.8	(31.8–37.9)	44.7	(41.5–48.0)	12.6	(10.6–15.0)	54.3	(51.2–57.3)	65.1	(62.2–67.9)	48.5	(45.6–51.5)
Black, non-Hispanic	310	29.7	(24.4–35.7)	47.9	(40.8–55.1)	11.4	(8.0–16.0)	58.8	(52.0–65.3)	66.8	(59.9–73.0)	44.9	(38.8–51.1)
Other, non-Hispanic†††	71	35.2	(25.0–46.9)	39.6	(28.0–52.5)	15.9§§§	(8.5–27.9)	60.9	(47.6–72.7)	69.1	(56.3–79.6)	54.0	(40.5–67.0)
Hispanic	283	29.0	(22.6–36.3)	45.8	(38.4–53.4)	10.9	(7.8–15.2)	54.2	(46.4–61.9)	58.0	(50.2–65.5)	39.1	(32.0–46.8)
Mexican	125	23.7***	(15.6–34.3)	38.5***	(27.7–50.5)	9.2	(5.6–14.7)	44.7***	(33.0–57.1)	48.9***	(36.6–61.4)	32.8***	(22.9–44.5)
Puerto Rican	79	45.8	(34.1–58.0)	62.3	(48.4–74.4)	17.0§§§	(9.1–29.5)	73.3	(62.4–81.9)	72.7	(61.4–81.7)	52.7	(40.2–64.9)
<b>Health insurance¶¶¶¶</b>													
Private	1,193	36.2****	(32.8–39.7)	46.4****	(42.8–50.0)	13.4****	(11.2–16.0)	55.8****	(52.6–58.9)	67.3†††††	(64.2–70.2)	48.7****	(45.6–51.8)
Medicare	453	39.2††††	(33.9–44.7)	44.2	(38.8–49.8)	14.1††††	(10.7–18.4)	48.7	(43.6–53.9)	56.1	(50.9–61.2)	38.9	(33.7–44.4)
Medicaid	348	30.4§§§§	(24.7–36.8)	43.6	(37.6–49.8)	9.3	(6.3–13.5)	54.2	(47.8–60.5)	62.4	(55.9–68.5)	43.7	(37.6–50.1)
Other	111	40.8¶¶¶¶¶	(30.7–51.7)	50.6	(39.4–61.6)	21.4¶¶¶¶¶	(13.9–31.5)	57.5	(47.5–66.9)	69.6	(59.0–78.5)	50.7	(39.7–61.6)
None	306	21.6	(16.7–27.4)	36.6	(30.8–42.9)	8.6	(5.6–13.1)	53.3	(47.0–59.6)	58.0	(51.2–64.4)	46.8	(40.1–53.6)

\* Respondents were classified as having current asthma if they answered “yes” to the question, “Have you ever been told by a doctor or other health professional that you had asthma?” and “yes” to the question, “Do you still have asthma?”

† Respondents were classified as having a management plan if they answered “yes” to the question, “Has a doctor or other health professional ever given you an asthma management plan?”

§ Respondents were classified as having been taught how to use a peak flow meter if they answered “yes” to the question, “Has a doctor or other health professional ever taught you how to monitor peak flow for daily therapy?”

¶ Respondents were classified as having taken a class on management if they answered “yes” to the question, “Have you ever taken a course or class on how to manage asthma yourself?”

\*\* Respondents were classified as having been taught to recognize early signs of attack if they answered “yes” to the question, “Has a doctor or other health professional ever taught you how to recognize early signs or symptoms of an asthma episode?”

†† Respondents were classified as having been taught to respond to an episode of asthma if they answered “yes” to the question, “Has a doctor or other health professional ever taught you how to respond to episodes of asthma?”

§§ Respondents were classified as having ever been advised to change aspects of home, school or work if they answered “yes” to the question, “Has a doctor or other health professional ever advised you to change things in your home, school, or work to improve your asthma?”

¶¶ Confidence interval.

\*\*\* Prevalence of asthma-management technique significantly associated with characteristic by chi-square test ( $p < 0.05$ )

††† Includes American Indian/Alaskan Native, Asian, and persons of multiple races.

§§§ Estimate has a relative standard error  $> 30\%$ . This estimate is considered statistically unreliable and should be interpreted with caution.

¶¶¶¶ Nonexclusive categories. “Medicaid” includes Medicaid and Children’s Health Insurance Program. “Other” includes Indian Health Service insurance, military insurance, other state-sponsored health plans, and other government programs.

\*\*\*\* Pairwise difference significant by  $t$  test ( $p < 0.05$ ): private versus none.

†††† Pairwise difference significant by  $t$  test ( $p < 0.05$ ): Medicare versus none (i.e., having a management plan or having taken a class) and Medicare versus Medicaid (i.e., having a management plan).

§§§§ Pairwise difference significant by  $t$  test ( $p < 0.05$ ): Medicaid versus none.

¶¶¶¶¶ Pairwise difference significant by  $t$  test ( $p < 0.05$ ): other versus none.

\*\*\*\* Pairwise difference significant by  $t$  test ( $p < 0.05$ ): private versus Medicare.

††††† Pairwise difference significant by  $t$  test ( $p < 0.05$ ): private versus none and private versus Medicare.

**Editorial Note:** The results of this study indicated that the prevalence of asthma self-management education among youths with current asthma was both higher and more consistent across all demographic groups when compared with adults with current asthma. Despite this finding, only 40% of youths had ever had an asthma management plan, and only 16% had taken a class on asthma management. For both youths and

adults, substantial opportunities exist for improving asthma care through additional patient education and provider training according to national guidelines (4).

In 1997, the NAEPP expert panel of the National Heart, Lung, and Blood Institute issued best-practice guidelines for asthma care in the United States (3,5). According to these guidelines, every patient with asthma should have a written asthma

management plan, including instructions for recognizing and responding to attacks. Patient and provider education for asthma self-management also should include information on methods for monitoring symptoms objectively using a peak-flow meter and for controlling exposure to environmental factors that can trigger asthma, such as tobacco smoke, cockroaches, cat and dog allergens, and dust mites (3,5).

The supplemental questions added to the 2003 NHIS reflect clinical activities recommended by NAEPP as essential components of asthma management (3). These clinical activities are the foundation of effective asthma care and the basis for *Healthy People 2010* respiratory health objectives (4). Tracking disease-management indicators with surveys such as NHIS is a useful method for assessing the application of current clinical guidelines in the United States. The results of this analysis are similar to those from other studies (8,9) that have suggested national clinical care asthma guidelines are not being implemented adequately among persons with current asthma.

The findings in this report are subject to at least two limitations. First, although these 2003 data are the most recent data available and can be used to establish a historical baseline for asthma self-management at the national level, their date of collection precludes drawing definitive conclusions about asthma self-management practices in 2007. Second, respondents might have recalled asthma education inaccurately, resulting in an overestimation or underestimation of the actual prevalence of asthma education.

This report provides a preliminary picture of the prevalence of asthma self-management education in the United States, suggesting that the majority of adults and youths with current asthma would benefit from additional information and training. These findings can be used in coordination with state and local surveillance data to better identify asthma-related health disparities, to support asthma-control measures, and to provide a baseline for future studies. Asthma-control programs should work to improve the ability of health-care providers to provide asthma education and should support services based on NAEPP standards for patients. National trends in asthma education should continue to be monitored periodically to determine progress toward *Healthy People 2010* objectives.

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#### Notice to Readers

### **World Rabies Day — September 8, 2007**

The first World Rabies Day will be observed on September 8, 2007, with the theme, “Working Together to Make Rabies History.” On this day, CDC and its global partners will celebrate successes in rabies prevention and control, while recognizing the challenges of global canine rabies elimination, human rabies prevention, and wildlife rabies control. Events are planned in at least 61 countries and will include educational presentations, animal rabies vaccination clinics, rabies awareness campaigns, and fundraising activities.

Worldwide, uncontrolled rabies in dogs continues to be the main source of human rabies mortality, accounting for an estimated 55,000 deaths each year. In the United States, dog-to-dog transmission of rabies has been eliminated. However, importation of dogs from rabies-zoonotic countries still represents a risk for reintroducing canine rabies into the United States. In addition, cases of rabies in U.S. wildlife have increased recently, with bats as the leading source of human rabies infections. In the United States, rabies remains a potential emerging threat through adaptation to new animal reservoirs, translocation of potentially infected animals, and inadequate vaccination coverage of domestic animals, particularly cats and dogs.

Around the world, the public health infrastructure, including local animal control programs, quarantine stations, veterinarians, and clinicians, will play a vital role in preserving the status of those countries already free from canine rabies and in advancing human rabies prevention worldwide. Additional information about World Rabies Day is available at <http://www.cdc.gov/rabies> or <http://www.worldrabiesday.org>.

**TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending September 1, 2007 (35th Week)\***

Disease	Current week	Cum 2007	5-year weekly average†	Total cases reported for previous years					States reporting cases during current week (No.)
				2006	2005	2004	2003	2002	
Anthrax	—	—	—	1	—	—	—	2	
Botulism:									
foodborne	—	12	1	20	19	16	20	28	
infant	—	53	2	97	85	87	76	69	
other (wound & unspecified)	2	17	1	48	31	30	33	21	CA (2)
Brucellosis	—	82	2	121	120	114	104	125	
Chancroid	—	19	1	33	17	30	54	67	
Cholera	—	1	—	9	8	5	2	2	
Cyclosporiasis§	3	70	3	136	543	171	75	156	VA (1), FL (2)
Diphtheria	—	—	—	—	—	—	1	1	
Domestic arboviral diseases§§:									
California serogroup	—	10	7	67	80	112	108	164	
eastern equine	—	2	1	8	21	6	14	10	
Powassan	—	—	—	1	1	1	—	1	
St. Louis	—	3	2	10	13	12	41	28	
western equine	—	—	—	—	—	—	—	—	
Ehrlichiosis§:									
human granulocytic	13	232	14	646	786	537	362	511	NY (12), VA (1)
human monocytic	6	284	12	578	506	338	321	216	NY (1), MO (1), NC (1), GA (1), TN (2)
human (other & unspecified)	2	83	3	231	112	59	44	23	MD (2)
<i>Haemophilus influenzae</i> **,									
invasive disease (age <5 yrs):									
serotype b	—	8	0	29	9	19	32	34	
nonserotype b	1	63	2	175	135	135	117	144	OH (1)
unknown serotype	—	168	3	179	217	177	227	153	
Hansen disease§	—	31	1	66	87	105	95	96	
Hantavirus pulmonary syndrome§	—	18	0	40	26	24	26	19	
Hemolytic uremic syndrome, postdiarrheal§	4	124	8	288	221	200	178	216	NC (1), UT (1), CA (2)
Hepatitis C viral, acute	1	420	20	802	652	713	1,102	1,835	KS (1)
HIV infection, pediatric (age <13 yrs)††	—	—	3	52	380	436	504	420	
Influenza-associated pediatric mortality§§§	—	71	0	43	45	—	N	N	
Listeriosis	8	396	21	875	896	753	696	665	NY (1), OH (1), IN (1), NC (1), FL (1), WA (2), CA (1)
Measles¶¶	—	24	1	55	66	37	56	44	
Meningococcal disease, invasive***:									
A, C, Y, & W-135	2	182	3	318	297	—	—	—	IN (1), TX (1)
serogroup B	—	88	1	193	156	—	—	—	
other serogroup	—	15	0	32	27	—	—	—	
unknown serogroup	4	426	9	651	765	—	—	—	OH (1), MI (1), OR (1), CA (1)
Mumps	5	548	11	6,584	314	258	231	270	OH (1), MD (1), FL (1), WA (1), CA (1)
Novel influenza A virus infections	—	—	—	N	N	N	N	N	
Plague	—	4	0	17	8	3	1	2	
Poliomyelitis, paralytic	—	—	—	—	1	—	—	—	
Poliovirus infection, nonparalytic§	—	—	—	N	N	N	N	N	
Psittacosis§	—	4	0	21	16	12	12	18	
Q fever§	—	107	2	169	136	70	71	61	
Rabies, human	—	—	0	3	2	7	2	3	
Rubella†††	—	10	0	11	11	10	7	18	
Rubella, congenital syndrome	—	—	—	1	1	—	1	1	
SARS-CoV§§§	—	—	—	—	—	—	8	N	
Smallpox§	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome§	1	74	1	125	129	132	161	118	IL (1)
Syphilis, congenital (age <1 yr)	1	251	8	380	329	353	413	412	NC (1)
Tetanus	1	10	1	41	27	34	20	25	FL (1)
Toxic-shock syndrome (staphylococcal)§	1	50	2	101	90	95	133	109	NC (1)
Trichinellosis	—	5	0	15	16	5	6	14	
Tularemia	1	76	4	95	154	134	129	90	MO (1)
Typhoid fever	3	182	10	353	324	322	356	321	NY (1), OH (1), MO (1)
Vancomycin-intermediate <i>Staphylococcus aureus</i> §	—	6	0	6	2	—	N	N	
Vancomycin-resistant <i>Staphylococcus aureus</i> §	—	—	—	1	3	1	N	N	
Vibriosis (noncholera <i>Vibrio</i> species infections)§	10	189	6	N	N	N	N	N	NY (1), FL (5), AZ (1), CA (3)
Yellow fever	—	—	—	—	—	—	—	1	

—: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts.

\* Incidence data for reporting years 2006 and 2007 are provisional, whereas data for 2002, 2003, 2004, and 2005 are finalized.

† Calculated by summing the incidence counts for the current week, the 2 weeks preceding the current week, and the 2 weeks following the current week, for a total of 5 preceding years. Additional information is available at <http://www.cdc.gov/epo/dphsi/phs/files/5yearweeklyaverage.pdf>.

§ Not notifiable in all states. Data from states where the condition is not notifiable are excluded from this table, except in 2007 for the domestic arboviral diseases and influenza-associated pediatric mortality, and in 2003 for SARS-CoV. Reporting exceptions are available at <http://www.cdc.gov/epo/dphsi/phs/infdis.htm>.

¶ Includes both neuroinvasive and nonneuroinvasive. Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases (ArboNET Surveillance). Data for West Nile virus are available in Table II.

\*\* Data for *H. influenzae* (all ages, all serotypes) are available in Table II.

†† Updated monthly from reports to the Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. Implementation of HIV reporting influences the number of cases reported. Updates of pediatric HIV data have been temporarily suspended until upgrading of the national HIV/AIDS surveillance data management system is completed. Data for HIV/AIDS, when available, are displayed in Table IV, which appears quarterly.

§§ Updated weekly from reports to the Influenza Division, National Center for Immunization and Respiratory Diseases. A total of 68 cases were reported for the 2006–07 flu season.

¶¶ The one measles case reported for the current week was indigenous.

\*\*\* Data for meningococcal disease (all serogroups) are available in Table II.

††† The one rubella case reported for the current week was unknown.

§§§ Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases.







**TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending September 1, 2007, and September 2, 2006 (35th Week)\***

Reporting area	Lyme disease					Malaria					Meningococcal disease, invasive† All serogroups				
	Current week	Previous 52 weeks		Cum 2007	Cum 2006	Current week	Previous 52 weeks		Cum 2007	Cum 2006	Current week	Previous 52 weeks		Cum 2007	Cum 2006
		Med	Max				Med	Max				Med	Max		
<b>United States</b>	237	235	981	10,972	13,705	7	22	105	680	951	6	19	87	711	813
<b>New England</b>	58	39	275	2,095	3,283	—	1	5	30	39	—	1	3	32	34
Connecticut	31	12	214	1,271	1,343	—	0	3	1	10	—	0	1	6	9
Maine§	19	3	40	165	91	—	0	2	6	3	—	0	3	5	3
Massachusetts	—	1	28	21	1,251	—	0	3	16	18	—	0	2	17	17
New Hampshire	2	6	67	530	524	—	0	4	6	7	—	0	1	—	3
Rhode Island§	5	0	93	30	1	—	0	1	—	—	—	0	1	1	—
Vermont§	1	1	10	78	73	—	0	1	1	1	—	0	1	3	2
<b>Mid. Atlantic</b>	123	133	487	5,747	6,961	2	5	18	156	230	—	2	8	98	131
New Jersey	—	26	67	961	1,992	—	0	5	—	67	—	0	2	11	16
New York (Upstate)	123	50	426	1,992	2,341	2	1	7	39	22	—	0	3	25	31
New York City	—	2	19	67	222	—	3	8	98	109	—	0	4	25	48
Pennsylvania	—	43	249	2,727	2,406	—	1	3	19	32	—	1	5	37	36
<b>E.N. Central</b>	7	6	34	210	1,515	2	2	10	72	108	3	3	9	93	118
Illinois	—	1	9	60	98	—	1	6	28	55	—	0	3	25	30
Indiana	4	0	6	31	20	1	0	2	8	9	1	0	4	18	18
Michigan	1	1	6	36	38	1	0	2	11	15	1	0	3	17	21
Ohio	2	0	4	13	35	—	0	2	17	21	1	1	3	25	33
Wisconsin	—	3	31	70	1,324	—	0	3	8	8	—	0	3	8	16
<b>W.N. Central</b>	—	4	195	279	332	1	0	12	23	31	—	1	5	40	46
Iowa	—	1	10	68	87	—	0	1	2	1	—	0	3	10	12
Kansas	—	0	2	9	3	—	0	1	2	5	—	0	1	1	2
Minnesota	—	1	188	180	230	—	0	12	11	14	—	0	3	12	10
Missouri	—	0	4	15	2	1	0	1	3	6	—	0	3	10	13
Nebraska§	—	0	2	5	9	—	0	1	4	3	—	0	1	2	6
North Dakota	—	0	7	2	—	—	0	1	—	1	—	0	3	2	1
South Dakota	—	0	0	—	1	—	0	1	1	1	—	0	1	3	2
<b>S. Atlantic</b>	43	48	158	2,435	1,498	1	5	12	168	247	—	3	11	115	137
Delaware	4	10	34	511	366	—	0	1	4	5	—	0	1	1	4
District of Columbia	—	0	7	13	33	—	0	2	3	3	—	0	1	—	1
Florida	3	1	5	43	14	—	1	7	40	39	—	1	7	43	52
Georgia	—	0	1	1	7	—	0	5	23	71	—	0	3	14	11
Maryland§	10	25	108	1,273	867	—	1	5	41	58	—	0	2	18	10
North Carolina	—	0	6	31	21	—	0	4	17	19	—	0	6	14	23
South Carolina§	—	0	2	15	12	—	0	1	5	8	—	0	2	11	16
Virginia§	26	10	60	500	171	1	1	3	33	42	—	0	2	12	15
West Virginia	—	0	14	48	7	—	0	1	2	2	—	0	2	2	5
<b>E.S. Central</b>	1	1	5	37	25	1	0	3	26	21	—	1	4	36	31
Alabama§	—	0	3	9	7	—	0	2	5	8	—	0	2	6	5
Kentucky	—	0	2	3	5	—	0	1	6	3	—	0	2	7	7
Mississippi	—	0	0	—	3	—	0	1	1	5	—	0	4	9	4
Tennessee§	1	0	4	25	10	1	0	2	14	5	—	0	2	14	15
<b>W.S. Central</b>	—	1	5	40	14	—	2	29	60	69	1	1	15	77	79
Arkansas§	—	0	0	—	—	—	0	2	—	2	—	0	2	8	9
Louisiana	—	0	1	2	—	—	0	2	13	5	—	0	4	24	31
Oklahoma	—	0	0	—	—	—	0	3	5	7	—	0	4	14	8
Texas§	—	1	5	38	14	—	1	25	42	55	1	0	11	31	31
<b>Mountain</b>	—	1	3	28	17	—	1	6	37	56	—	1	4	45	52
Arizona	—	0	1	2	6	—	0	3	6	19	—	0	2	9	13
Colorado	—	0	1	1	—	—	0	2	12	12	—	0	2	16	17
Idaho§	—	0	2	7	2	—	0	2	2	1	—	0	1	3	3
Montana§	—	0	1	2	—	—	0	1	3	2	—	0	1	1	3
Nevada§	—	0	2	7	2	—	0	1	2	2	—	0	1	4	4
New Mexico§	—	0	1	3	3	—	0	1	2	5	—	0	1	2	2
Utah	—	0	2	3	3	—	0	3	10	15	—	0	2	8	6
Wyoming§	—	0	1	3	1	—	0	0	—	—	—	0	1	2	4
<b>Pacific</b>	5	2	16	101	60	—	3	45	108	150	2	4	48	175	185
Alaska	—	0	1	4	2	—	0	1	2	22	—	0	1	1	3
California	5	2	10	94	52	—	2	7	76	112	1	3	10	126	144
Hawaii	N	0	0	N	N	—	0	1	2	8	—	0	1	4	6
Oregon§	—	0	1	3	6	—	0	3	12	8	1	0	3	27	32
Washington	—	0	8	—	—	—	0	43	16	—	—	0	43	17	—
American Samoa	U	0	0	U	U	U	0	0	U	U	U	0	0	—	—
C.N.M.I.	U	—	—	U	U	U	—	—	U	U	U	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	N	0	0	N	N	—	0	1	2	—	—	0	1	6	6
U.S. Virgin Islands	U	0	0	U	U	U	0	0	U	U	U	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.

U: Unavailable. —: Not reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.

\* Incidence data for reporting years 2006 and 2007 are provisional.

† Data for meningococcal disease, invasive caused by serogroups A, C, Y, &amp; W-135; serogroup B; other serogroup; and unknown serogroup are available in Table I.

§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).



**TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending September 1, 2007, and September 2, 2006 (35th Week)\***

Reporting area	Pertussis					Rabies, animal					Rocky Mountain spotted fever				
	Current week	Previous 52 weeks		Cum 2007	Cum 2006	Current week	Previous 52 weeks		Cum 2007	Cum 2006	Current week	Previous 52 weeks		Cum 2007	Cum 2006
		Med	Max				Med	Max				Med	Max		
<b>United States</b>	89	179	1,479	5,547	9,347	45	94	171	3,150	3,675	27	32	211	1,103	1,430
<b>New England</b>	—	27	77	770	1,071	16	12	22	400	285	—	0	10	—	9
Connecticut	—	2	6	40	71	9	5	11	164	124	—	0	0	—	—
Maine†	—	2	15	48	61	—	2	8	53	71	—	0	0	—	—
Massachusetts	—	22	46	613	678	—	0	0	—	—	—	0	1	—	8
New Hampshire	—	2	9	36	149	2	1	4	34	30	—	0	0	—	1
Rhode Island†	—	0	31	6	28	—	0	3	26	17	—	0	9	—	—
Vermont†	—	1	9	27	84	5	2	13	123	43	—	0	0	—	—
<b>Mid. Atlantic</b>	12	25	155	767	1,179	—	13	44	503	344	—	1	6	36	69
New Jersey	—	2	16	79	205	—	0	0	—	—	—	0	1	4	32
New York (Upstate)	12	14	146	415	499	—	—	—	—	—	—	0	1	3	—
New York City	—	2	6	76	65	—	1	5	32	18	—	0	3	15	19
Pennsylvania	—	7	20	197	410	—	12	44	471	326	—	0	3	14	18
<b>E.N. Central</b>	34	33	80	1,028	1,381	16	2	46	258	127	—	1	4	28	52
Illinois	—	4	23	98	351	7	1	15	83	39	—	0	3	16	24
Indiana	4	1	45	46	146	1	0	1	9	9	—	0	2	5	5
Michigan	—	8	39	180	322	3	1	25	113	39	—	0	1	3	2
Ohio	30	14	54	505	403	5	0	11	53	40	—	0	2	4	20
Wisconsin	—	4	24	199	159	—	0	0	—	—	—	0	0	—	1
<b>W.N. Central</b>	5	14	151	434	876	2	5	13	188	230	—	3	12	123	144
Iowa	—	4	16	106	212	1	0	3	24	49	—	0	1	7	5
Kansas	4	3	14	103	185	—	2	8	89	55	—	0	1	1	—
Minnesota	—	0	119	103	136	—	0	5	20	32	—	0	2	1	1
Missouri	—	2	10	45	222	1	0	4	29	47	—	2	12	103	117
Nebraska†	1	1	4	30	77	—	0	0	—	—	—	0	2	8	21
North Dakota	—	0	18	4	25	—	0	6	13	15	—	0	0	—	—
South Dakota	—	0	6	43	19	—	0	2	13	32	—	0	1	3	—
<b>S. Atlantic</b>	8	19	163	624	752	6	40	63	1,349	1,604	22	13	67	589	790
Delaware	1	0	2	8	3	—	0	0	—	—	—	0	2	8	18
District of Columbia	—	0	2	2	3	—	0	0	—	—	—	0	1	1	1
Florida	6	4	18	164	143	—	0	28	90	176	1	0	4	13	10
Georgia	—	1	5	22	62	—	4	23	152	191	2	0	5	18	37
Maryland†	—	2	8	74	102	—	6	12	199	297	—	1	7	42	53
North Carolina	—	2	112	213	141	6	9	19	339	349	19	6	61	390	570
South Carolina†	—	2	9	54	124	—	2	11	46	109	—	1	7	41	29
Virginia†	1	2	17	75	148	—	13	31	477	412	—	2	10	74	69
West Virginia	—	0	19	12	26	—	1	8	46	70	—	0	1	2	3
<b>E.S. Central</b>	1	5	24	221	241	—	3	11	111	173	5	5	27	178	251
Alabama†	—	1	18	48	55	—	0	8	—	55	1	1	9	50	62
Kentucky	—	0	3	5	51	—	0	3	15	17	—	0	2	4	1
Mississippi	—	1	23	104	25	—	0	0	—	4	—	0	2	6	3
Tennessee†	1	2	7	64	110	—	3	7	96	97	4	3	22	118	185
<b>W.S. Central</b>	9	20	226	624	543	—	2	35	68	630	—	1	168	120	78
Arkansas†	—	2	17	112	61	—	0	5	23	24	—	0	53	56	34
Louisiana	—	0	1	14	21	—	0	1	—	3	—	0	1	2	1
Oklahoma	—	0	36	4	18	—	0	22	45	51	—	0	108	45	28
Texas†	9	17	174	494	443	—	0	34	—	552	—	0	7	17	15
<b>Mountain</b>	13	24	61	748	1,906	1	3	28	128	127	—	0	4	24	35
Arizona	1	6	13	159	390	—	2	10	87	95	—	0	2	4	8
Colorado	7	6	17	200	595	—	0	0	—	—	—	0	1	1	4
Idaho†	1	1	6	33	60	—	0	24	—	—	—	0	3	4	8
Montana†	—	1	7	32	91	—	0	3	13	12	—	0	1	1	2
Nevada†	—	0	5	9	56	—	0	2	2	3	—	0	0	—	—
New Mexico†	—	2	8	41	68	—	0	2	8	7	—	0	1	4	7
Utah	4	8	47	256	585	1	0	2	10	6	—	0	0	—	—
Wyoming†	—	1	5	18	61	—	0	2	8	4	—	0	2	10	6
<b>Pacific</b>	7	12	547	331	1,398	4	4	13	145	155	—	0	1	5	2
Alaska	—	1	8	37	58	—	0	6	35	15	N	0	0	N	N
California	—	5	167	99	1,172	4	3	12	104	126	—	0	1	3	—
Hawaii	—	0	2	14	80	N	0	0	N	N	N	0	0	N	N
Oregon†	—	1	11	58	88	—	0	3	6	14	—	0	1	2	2
Washington	7	1	377	123	—	—	0	0	—	—	N	0	0	N	N
American Samoa	U	0	0	U	U	U	0	0	U	U	U	0	0	U	U
C.N.M.I.	U	—	—	U	U	U	—	—	U	U	U	—	—	U	U
Guam	—	0	2	—	51	—	0	0	—	—	N	0	0	N	N
Puerto Rico	—	0	1	—	1	—	1	5	37	62	N	0	0	N	N
U.S. Virgin Islands	U	0	0	U	U	U	0	0	U	U	U	0	0	U	U

C.N.M.I.: Commonwealth of Northern Mariana Islands.  
 U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.  
 \* Incidence data for reporting years 2006 and 2007 are provisional.  
 † Contains data reported through the National Electronic Disease Surveillance System (NEDSS).



TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending September 1, 2007, and September 2, 2006 (35th Week)\*

Reporting area	Streptococcal disease, invasive, group A					<i>Streptococcus pneumoniae</i> , invasive disease, nondrug resistant† Age <5 years				
	Current week	Previous 52 weeks		Cum 2007	Cum 2006	Current week	Previous 52 weeks		Cum 2007	Cum 2006
		Med	Max				Med	Max		
<b>United States</b>	41	94	261	3,615	3,940	2	30	110	1,061	894
<b>New England</b>	1	6	27	294	259	—	3	11	76	72
Connecticut	—	0	23	91	68	—	0	6	—	23
Maine <sup>§</sup>	—	0	3	21	15	—	0	1	1	—
Massachusetts	1	3	12	138	130	—	2	6	58	42
New Hampshire	—	0	4	29	30	—	0	2	7	6
Rhode Island <sup>§</sup>	—	0	12	—	5	—	0	3	8	1
Vermont <sup>§</sup>	—	0	2	15	11	—	0	1	2	—
<b>Mid. Atlantic</b>	5	17	41	682	725	—	5	27	171	126
New Jersey	—	2	9	89	122	—	1	4	21	47
New York (Upstate)	5	5	27	230	236	—	2	15	76	65
New York City	—	4	13	165	132	—	1	25	74	14
Pennsylvania	—	5	11	198	235	N	0	0	N	N
<b>E.N. Central</b>	4	16	32	631	774	—	5	14	162	238
Illinois	—	4	13	165	237	—	1	6	38	63
Indiana	—	2	17	100	90	—	0	10	15	42
Michigan	1	4	10	156	162	—	1	4	56	54
Ohio	3	4	14	182	198	—	1	7	44	47
Wisconsin	—	1	6	28	87	—	0	2	9	32
<b>W.N. Central</b>	1	5	32	242	259	—	2	8	74	73
Iowa	—	0	0	—	—	—	0	0	—	—
Kansas	—	0	3	28	45	—	0	1	1	11
Minnesota	—	0	29	124	121	—	1	6	51	43
Missouri	1	2	6	54	53	—	0	2	13	11
Nebraska <sup>§</sup>	—	0	3	18	22	—	0	2	8	5
North Dakota	—	0	2	11	9	—	0	2	1	3
South Dakota	—	0	2	7	9	—	0	0	—	—
<b>S. Atlantic</b>	16	21	52	909	870	1	3	14	197	59
Delaware	—	0	1	7	9	—	0	0	—	—
District of Columbia	—	0	3	8	9	—	0	1	—	1
Florida	7	6	16	220	203	1	0	5	43	—
Georgia	2	5	13	172	182	—	0	5	44	—
Maryland <sup>§</sup>	3	4	10	164	167	—	1	6	47	48
North Carolina	1	0	22	129	126	—	0	0	—	—
South Carolina <sup>§</sup>	—	1	7	75	53	—	0	3	27	—
Virginia <sup>§</sup>	3	2	11	113	100	—	0	4	29	—
West Virginia	—	0	3	21	21	—	0	4	7	10
<b>E.S. Central</b>	1	4	13	162	161	—	1	6	63	15
Alabama <sup>§</sup>	N	0	0	N	N	N	0	0	N	N
Kentucky	—	1	3	32	38	—	0	0	—	—
Mississippi	N	0	0	N	N	—	0	2	3	15
Tennessee <sup>§</sup>	1	3	13	130	123	—	0	6	60	—
<b>W.S. Central</b>	3	6	90	234	295	1	4	45	153	154
Arkansas <sup>§</sup>	—	0	2	17	23	—	0	2	7	18
Louisiana	—	0	4	16	13	—	0	4	24	18
Oklahoma	—	1	23	56	74	—	1	15	37	33
Texas <sup>§</sup>	3	3	64	145	185	1	2	27	85	85
<b>Mountain</b>	10	9	21	367	519	—	4	12	141	141
Arizona	2	4	11	117	271	—	2	7	84	80
Colorado	4	3	9	119	91	—	1	4	32	36
Idaho <sup>§</sup>	1	0	2	12	7	—	0	1	2	1
Montana <sup>§</sup>	N	0	0	N	N	N	0	0	N	N
Nevada <sup>§</sup>	—	0	1	2	—	—	0	1	1	2
New Mexico <sup>§</sup>	3	1	5	40	96	—	0	4	18	22
Utah	—	2	7	72	51	—	0	2	4	—
Wyoming <sup>§</sup>	—	0	1	5	3	—	0	0	—	—
<b>Pacific</b>	—	3	9	94	78	—	1	4	24	16
Alaska	—	0	3	26	N	—	0	2	22	—
California	N	0	0	N	N	N	0	0	N	N
Hawaii	—	2	9	68	78	—	0	2	2	16
Oregon <sup>§</sup>	N	0	0	N	N	N	0	0	N	N
Washington	N	0	0	N	N	N	0	0	N	N
American Samoa	U	0	0	U	U	U	0	0	U	U
C.N.M.I.	U	—	—	U	U	U	—	—	U	U
Guam	—	0	0	—	—	N	0	0	N	N
Puerto Rico	—	0	0	—	—	N	0	0	N	N
U.S. Virgin Islands	U	0	0	U	U	U	0	0	U	U

C.N.M.I.: Commonwealth of Northern Mariana Islands.

U: Unavailable. —: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.

\* Incidence data for reporting years 2006 and 2007 are provisional.

† Includes cases of invasive pneumococcal disease, in children aged <5 years, caused by *S. pneumoniae*, which is susceptible or for which susceptibility testing is not available (NNDS event code 11717).

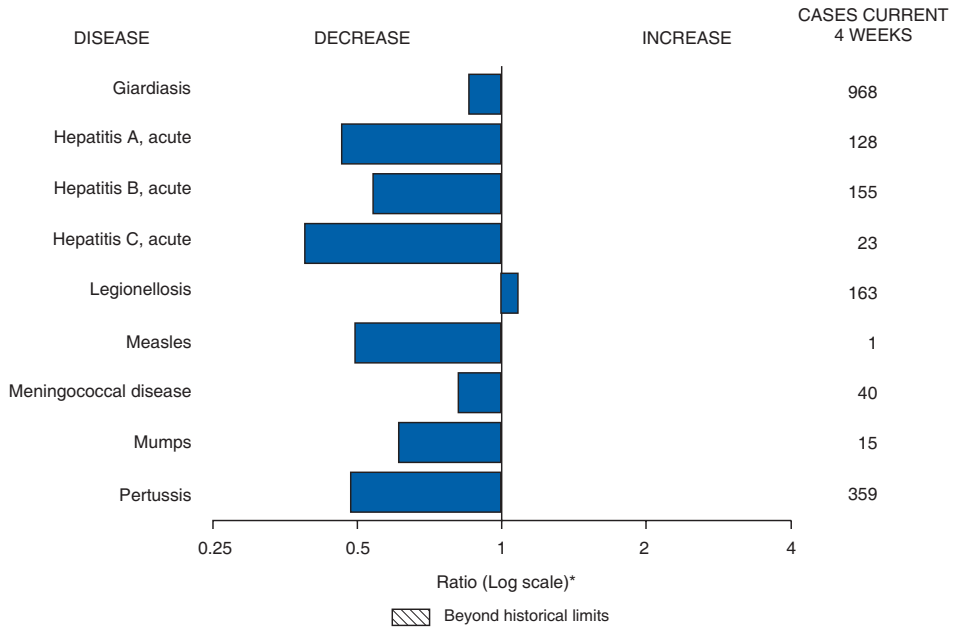
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).







**FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals September 1, 2007, with historical data**



\* Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

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