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Nonfatal, Unintentional Medication Exposures Among Young Children — United States, 2001–2003

Young children are vulnerable to inadvertent exposure to prescription and over-the-counter (OTC) medications, especially when these items are not stored securely. In 2002, according to death certificate data, 35 children aged ≤ 4 years died from unintentional medication poisonings in the United States (CDC, unpublished data, 2005). In 2003, according to reports to U.S. poison control centers, pharmaceuticals accounted for 1,336,209 (55.8%) of unintentional chemical or substance exposures (1). Of those pharmaceutical exposures, 568,939 (42.6%) involved children aged < 6 years. For this report, CDC analyzed 2001–2003 data from hospital emergency department (ED) visits reported by the National Electronic Injury Surveillance System–All Injury Program (NEISS-AIP). The results of this analysis indicated that, during 2001–2003, an estimated 53,517 children aged ≤ 4 years were treated annually in U.S. EDs for unintentional medication exposures. An estimated 72% of these exposures were in children aged 1–2 years. Children aged ≤ 4 years can reach items on a table, in a purse, or in a drawer, where medications are often stored; young children also tend to put objects they find in their mouths (2). Parents and others responsible for supervising children should store medications securely at all times, keep them out of the reach of children, and be vigilant in preventing access by children to daily-use containers such as pill boxes.

NEISS-AIP is operated by the Consumer Product Safety Commission and collects data on all types and causes of injuries in patients treated in hospital EDs (3). Data are collected from a nationally representative subsample of 66 of the 100 NEISS hospitals that were selected as a stratified probability sample of hospitals in the United States and its territories. NEISS-AIP provides data on approximately 500,000 injury-related and consumer-product-related cases each year.

Cases were defined as those involving children aged ≤ 4 years treated at a NEISS-AIP hospital ED for nonfatal, unintentional exposures to medications, including all types of prescription and OTC medications. Cases involving only illicit drugs or alcohol were excluded. Cases resulting from the adverse effects of therapeutic use of medications, medical errors (e.g., misprescribed by doctor or pharmacist), or drug exposure of infants from maternal drug use during pregnancy or breastfeeding also were excluded. A brief narrative abstracted from the medical record was used to code, where possible, the route of exposure (e.g., ingestion, inhalation, or external contact), likelihood of exposure (i.e., probable or possible [one case was classified as unclear]), source of medication (e.g., pill box or purse), intended user (e.g., grandparent or parent), and class of medication.

Each case was assigned a sample weight based on the inverse of the probability of selection (3); these weights were summed to provide national estimates of nonfatal medication exposures. Estimates were based on weighted data for 3,632 patients aged ≤ 4 years treated at NEISS-AIP hospital EDs for medication exposures during 2001–2003. Confidence intervals (CIs) were calculated using a direct variance estimation procedure that accounted for the sample weights and

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Notifiable Disease Morbidity and 122 Cities Mortality Data

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complex sample design. Rates were calculated using U.S. Census bridged-race population estimates for 2001–2003 (4). Because the sources and intended users of the medications were identified only for a small percentage of the cases and because most national estimates for individual classes of medications might be unstable (i.e., coefficient of variation >30%), NEISS-AIP data for these three case characteristics are unweighted and cannot be used as national estimates.

During 2001–2003, an estimated 53,517 (95% CI = 43,166–63,868) children aged ≤ 4 years were treated annually in EDs for nonfatal, unintentional medication exposures, an annual rate of 273.5 per 100,000 age-specific population (CI = 220.5–326.4) (Table 1). Children aged 1 year and 2 years had the highest rates (444.4 and 534.6, respectively) and accounted for 72.0% of medication exposure cases. Nearly one in 10 children (9.7%) were hospitalized or transferred for specialized care for their medication exposure. The majority of the cases occurred in the home (75.4%). Among the medication exposures, 85.6% were classified as probable; 98.9% of the exposures resulted from ingestion.

The source of the medication was not specified for 3,100 (85.4%) of the NEISS-AIP cases, and the intended user was not specified for 2,982 (82.1%). On the basis of unweighted data, the most common sources of medication exposure were pills left out or pill bottles left open, which was reported in 215 (5.9%) cases (Table 2). Other incidents involved medications administered in error by a parent or caregiver (3.5%) and children opening pill boxes (2.7%) or purses (3.0%). Among cases with intended users identified, the medications were intended most commonly for use by the child's grandparent (7.5%) or parent (6.6%). Exposures from OTC medications (42.2%) were slightly more common than from prescription medications (39.2%). Among the approximately 92% of cases for which the class of medication could be identified, the most common medications were central nervous system agents (e.g., acetaminophen or antidepressants) (26.9%), respiratory agents (e.g., cough and cold or anti-asthma agents) (11.6%), and musculoskeletal agents (e.g., nonsteroidal anti-inflammatory agents or muscle relaxants) (8.4%). Other common classes were cardiovascular agents (7.8%), dermatologic agents (e.g., topical antibacterial or analgesic agents) (5.3%), antihistamines (4.9%), and vitamins and therapeutic nutrients (4.5%). Prescription medications accounted for 67% of admissions to hospitals or transfers for specialized care. Among those agents specified, the most common medication classes involved in hospital admissions or transfers were anticonvulsant agents (9.6%), calcium-channel-blocking agents (6.8%), antidepressant and mood-stabilizing agents (6.2%), and oral hypoglycemic agents (6.2%).

TABLE 1. Estimated annual number,* percentage, and rate† of nonfatal, unintentional medication exposures among children aged ≤4 years treated in hospital emergency departments, by selected characteristics — United States, 2001–2003

Characteristic	No.‡	(%§)	Rate	95%CI¶
Age (yrs)				
<1	3,396	(6.3)	84.7	(60.0–109.4)
1	17,618	(32.9)	444.4	(347.1–541.8)
2	20,889	(39.0)	534.6	(422.3–646.9)
3	8,455	(15.8)	219.8	(175.8–263.7)
4	3,158	(5.9)	82.2	(64.0–100.5)
Sex				
Male	28,396	(53.1)	283.8	(226.9–340.7)
Female	25,120	(46.9)	262.7	(210.2–315.1)
Race/Ethnicity***				
White, non-Hispanic	30,661	(57.3)	—	—
Black††	6,944	(13.0)	—	—
Hispanic§§	3,792	(7.1)	—	—
Other, non-Hispanic	1,185	(2.2)	—	—
Unknown	10,934	(20.4)	—	—
Disposition				
Treated and released	46,139	(86.2)	235.8	(190.6–281.0)
Hospitalized/Transferred	5,174	(9.7)	26.4	(18.1–34.8)
Observation	1,379	(2.6)	7.0	(3.1–11.0)
AMA/LWBS¶¶	671***	(1.3)	—	—
Unknown¶¶	153***	(0.3)	—	—
Setting where injury occurred**				
Home	40,334	(75.4)	—	—
Public place	396	(0.7)	—	—
Other specified	202	(0.4)	—	—
Unknown	12,584	(23.5)	—	—
Exposure				
Probable	45,838	(85.6)	234.2	(189.8–278.6)
Possible†††	7,679	(14.4)	39.2	(25.5–52.9)
Type of exposure				
Ingestion	52,952	(98.9)	270.6	(218.1–323.0)
Inhalation	16***	(0.0)	—	—
External	125***	(0.2)	—	—
Unspecified	423***	(0.8)	—	—
No. of medications involved				
Single	49,976	(93.4)	255.4	(206.4–304.3)
Multiple	3,541	(6.6)	18.1	(12.4–23.8)
Total	53,517	—	273.5	(220.5–326.4)

* National estimate of nonfatal, unintentional medication exposures among children aged ≤4 years treated in hospital emergency departments, based on 3,632 cases reported by the National Electronic Injury Surveillance System All Injury Program.

† Per 100,000 age-specific population.

§ Might not sum to total because of rounding.

¶ Confidence interval.

** Rates not presented because of substantial percentage of unknown data.

†† Includes blacks who are Hispanic or non-Hispanic.

§§ Excludes black Hispanics.

¶¶ AMA: left against medical advice; LWBS: left without being seen by an attending physician.

*** Estimates might be unstable because the coefficient of variation is >30%; therefore, rates are not presented.

††† Includes one case that was classified as unclear.

TABLE 2. Unweighted number and percentage of children aged ≤4 years treated for nonfatal, unintentional medication exposures in hospital emergency departments, by selected characteristics — National Electronic Injury Surveillance System All Injury Program (NEISS-AIP), 2001–2003*

Characteristic	No.	(%)
Source of medication†		
Given to child in error	127	(3.5)
Pills left out/Bottle left open	215	(5.9)
Child opened pill box	99	(2.7)
Child opened purse	108	(3.0)
Unspecified	3,100	(85.4)
Intended user		
Parent	241	(6.6)
Grandparent	274	(7.5)
Sibling	68	(1.9)
Other relative	41	(1.1)
Other nonrelative	26	(0.7)
Unspecified	2,982	(82.1)
Type of medication		
Over the counter‡	1,533	(42.2)
Prescription	1,422	(39.2)
Unknown	392	(10.8)
Multiple types¶	285	(7.8)
Class of medication		
Central nervous system	976	(26.9)
Acetaminophen only	294	(8.1)
Antidepressant and mood stabilizer	177	(4.9)
Anticonvulsant	130	(3.6)
Opioid analgesic	98	(2.7)
Other central nervous system**	277	(7.6)
Respiratory	421	(11.6)
Cold and cough (including combinations)	273	(7.5)
Anti-asthma and bronchodilator	91	(2.5)
Opiate-containing antitussive (cough)	38	(1.1)
Other respiratory	19	(0.5)
Musculoskeletal	306	(8.4)
Nonsteroidal anti-inflammatory	255	(7.0)
Muscle relaxant	51	(1.4)
Cardiovascular	282	(7.8)
Calcium channel-blocking	52	(1.4)
Beta-blocking	51	(1.4)
Other antihypertension (including combinations)	81	(2.2)
Angiotensin-converting enzyme-inhibiting	33	(0.9)
Other cardiovascular	65	(1.8)
Dermatologic	193	(5.3)
Topical antibacterial	83	(2.3)
Topical analgesic	33	(0.9)
Other dermatologic	77	(2.1)
Antihistamine only	181	(4.9)
Vitamins and therapeutic nutrients	162	(4.5)
Gastrointestinal agents	114	(3.1)
Hormones and hormone-modifying agents	107	(3.0)
Oral hypoglycemic agents	48	(1.3)
Other hormone agents	59	(1.6)
Antimicrobial agents	56	(1.5)
Herbals	49	(1.4)
Other agents	170	(4.7)
Unknown agents	330	(9.1)
Multiple agents	285	(7.9)
Total	3,632	—

* Data from 3,632 cases reported by NEISS-AIP.

† Categories not mutually exclusive.

‡ Drugs available both over the counter and as prescriptions were classified as over the counter.

¶ A total of 73 (25.6%) patients were exposed to a combination of over-the-counter and prescription drugs only; the remainder were exposed to combinations of over-the-counter drugs, prescription drugs, and/or unknown drugs.

** Antipsychotics, benzodiazepines, anti-Parkinson agents, amphetamines and other stimulants, and antimigraine agents.

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Editorial Note: Data in this report indicate that, during 2001–2003, an estimated 53,517 children aged ≤ 4 years were treated in U.S. hospital EDs each year for unintentional exposure to prescription and OTC medications. Consistent with previous studies (5,6), most of these exposures occurred in the home among children aged 1–2 years. Certain exposures involved common household medications such as acetaminophen, non-steroidal anti-inflammatory agents, cold and cough preparations, and vitamin and mineral supplements. Some of these agents can be highly toxic (e.g., acetaminophen or opiod analgesics), and ingestion by young children can lead to death (6). Children aged ≤ 4 years treated in EDs for medication exposures were nearly four times as likely to be hospitalized or transferred for specialized care as children in this age group treated for all unintentional causes of injury (9.7% versus 2.5%) (7).

During the last 3 decades, emphasis on preventing unintended medication exposures has reduced the number of deaths from childhood poisonings (8). Multiple factors likely have contributed to this decline, including improved packaging, product substitutions and reformulations, education programs, accessibility of poisoning information, and treatment advances (8). Child-resistant packaging, mandated by the Poison Prevention Packaging Act of 1970, has been credited with reducing prescription medication deaths in children aged ≤ 4 years by 45% from 1974 to 1992 (9).

Despite the progress in reducing the number of fatal poisonings, unintentional medication exposures remain a serious threat to the health of young children. Data from this report indicate that, in 2002, approximately 1,500 ED visits and 150 hospital admissions or transfers from EDs occurred for each of the 35 fatalities reported among children aged ≤ 4 years. National data on fatal and nonfatal medication exposures should be used to set prevention priorities and develop interventions. Although requirements for child-resistant packaging are mandated by the Poison Prevention Packaging Act, this study determined that at least 12% of ED visits for medication exposures resulted from children gaining access to medications left in the open, in pill boxes, or in purses. Because medication users often transfer medications from their original child-resistant containers to other containers for daily use, manufacturers are encouraged to improve container designs and promote strategies that allow convenient access for the intended user while also protecting children.

The findings in this report are subject to at least three limitations. First, NEISS-AIP provides only national estimates of unintentional medication exposures and not state or local estimates. Second, NEISS-AIP provides data only for patients treated in hospital EDs and does not include children treated in outpatient settings or not treated at all. Finally, narratives abstracted from medical records provided information regarding the source of the medication and the intended user for only 15% and 18% of the cases, respectively; for the remaining cases, the source and intended user of the medication were unknown.

Continued promotion of established prevention measures can help reduce morbidity and mortality from unintentional medication exposures (Box). However, to help develop new prevention strategies and assess their effectiveness in reducing the most common and most severe incidents among young children, additional data on the incident circumstances, specific medications involved, and patient outcomes are needed. More complete incident information will be available through the recently implemented NEISS Cooperative Adverse Drug Event Surveillance project (NEISS-CADES), which collects

BOX. Prevention strategies to reduce unintentional medication exposures among young children

- Post the national telephone number for poison control centers (800-222-1222) on or near every home telephone.
- Store all medicines in secured cabinets out of reach of small children.
- Use child-resistant caps and always keep medication lids closed tightly after use. However, remember that even child-resistant containers are not childproof and should be stored in a secured cabinet.
- Whenever possible, store medicines in their original containers. Labels on original containers give important usage and safety information. Persons who transfer medications into non-child-resistant pill boxes or pill planners should be particularly vigilant about keeping them in areas not accessible to children.
- Discard any leftover or expired medicines by flushing them down the toilet.
- Avoid taking medicine in the presence of children because they tend to imitate adults.
- Never call medicine “candy.”
- Be aware of any medicines that visitors bring into the home. Make sure visitors do not leave medicines where children can easily find them (e.g., in an unattended purse or suitcase).

SOURCES: Adapted from recommendations of the Consumer Product Safety Commission, National Safety Council, Home Safety Council, American Academy of Pediatrics, Safe Kids Worldwide, and CDC.

detailed information (e.g., drug dosage, laboratory testing, and clinical treatment) on all types of adverse drug events, including unintentional drug ingestions by children (10).

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Overweight Among Students in Grades K–12 — Arkansas, 2003–04 and 2004–05 School Years

Prevalence of overweight among children nearly doubled from 1976–1980 to 1999–2002 in the United States (1). During 1999–2002, approximately 65% of adults aged ≥ 20 years were overweight or obese, according to the National Health and Nutrition Examination Survey (NHANES) (1). Among persons aged 6–19 years during the same period, 31% were overweight or at risk for overweight (1). In 2003, the Youth Risk Behavior Surveillance (YRBS) survey indicated that 27% of high school students were overweight or at risk for overweight (2). Among adolescents with a body mass index (BMI) at or above the 95th percentile, approximately 50% will become obese adults (3), and 70% will become obese or overweight adults (4). Although NHANES and YRBS provide

population-based, cross-sectional state and national samples, no studies reflect a national or statewide longitudinal cohort assessment of childhood and adolescent obesity. The American Academy of Pediatrics (AAP) (5) and the Institute of Medicine (6) recommend annual assessments of BMI as a strategy for preventing and combating childhood obesity. In 2003, Arkansas implemented a multifaceted statewide initiative to reduce and prevent overweight among children. A key aspect of this initiative (Act 1220*) is the mandated annual statewide BMI assessments of all Arkansas public school students with confidential reporting of results to parents. This report describes the results of this large-scale population screening, which indicated that, during the 2003–04 and 2004–05 school years, 38% of Arkansas students were overweight or at risk for overweight. This finding suggests a more severe problem than that reported for other states. Because rates of childhood and adolescent obesity in certain areas might be higher than anticipated, health policy decisions that address health outcomes and cost of care should be based on state-specific, population-based data.

Demographic data on public school students were provided to the Arkansas Center for Health Improvement (ACHI) by the Arkansas Department of Education (ADE). Schools conducted height and weight assessments during the academic year with standardized instruments (e.g., Tanita HD 314 digital scales and 7-foot board-mounted metal stadiometers) and measurement protocols developed by ACHI that ensured accuracy and maintained confidentiality. Schools reported individual students' height and weight on standardized assessment forms prepopulated by ACHI with a unique student identifier, grade, birth date, sex, race/ethnicity, and name. If a student could not be assessed, the reason for nonassessment was noted. Assessment forms were sent to ACHI for data entry, and BMI was calculated as weight in pounds/height in inches squared $\times 703$. On the basis of sex- and age-specific classifications for BMI percentiles, students were categorized as underweight (BMI < 5 th percentile), normal weight (BMI 5th percentile to < 85 th percentile), at risk for overweight (BMI 85th percentile to < 95 th percentile), or overweight (BMI ≥ 95 th percentile) (7). Results of the BMI assessments of public school students during 2003–04 (Year 1) were sent in summer 2004 as confidential child health reports to parents along with information on the health risks associated with overweight and AAP recommendations for action. Distribution of 2004–05 (Year 2) reports to parents was the responsibility of individual schools; ACHI is evaluating how and when schools accomplished this required reporting.

* Available at <http://www.arkleg.state.ar.us/ftproot/acts/2003/public/act1220.pdf>.

After schools performed BMI measurements, data forms were submitted for 94% (423,263 of 449,485) of public school students (grades K[†]–12) in Year 1 and 97% (440,572 of 454,464) in Year 2. Of the 423,263 data forms submitted in Year 1, approximately 82% had valid data for analyses, 1% had invalid data, and the remaining 17% were for students who were not assessed for BMI. Of the 440,572 data forms submitted in Year 2, approximately 84% had valid data for analysis, 1% had invalid data, and the remaining 16% were for students who were not assessed. The most common reason that students were not assessed for BMI was absence from school (6% in Year 1; 8% in Year 2). Parent or student refusal accounted for <6% of nonassessments in both years; other reasons, accounting for up to 5% of nonassessments, included a disability that prohibited measurement, student pregnancy, student was not attending that school, or “other” reason.

On the basis of assessments resulting in valid BMIs for 347,250 students in Year 1 and 367,879 in Year 2, nearly 21% of students were classified as overweight, 17% as at risk for overweight, 60% as normal weight, and 2% as underweight in both years. Prevalence of overweight and at risk for overweight was calculated by sex, three grade groups (K–4, 5–8, and 9–12), and race/ethnicity (Table). Among the students

[†] Kindergarten.

with valid BMI assessments, 332,288 in Year 1 and 364,173 in Year 2 had data that included sex, grade, and race/ethnicity. When examined by grade level, the highest prevalence for females was among 6th-grade blacks (49% in Year 1; 50% in Year 2); among males, the highest prevalence was among 4th-grade Hispanics (59%) in Year 1 and 5th-grade Hispanics (58%) in Year 2.

Males consistently had a slightly higher prevalence of overweight and at risk for overweight than females. The differences in prevalence across grades were similar for males and females during the elementary and early middle-school years, with rates highest during the 6th grade. During the high-school years, however, prevalence for females was 32%–33%, and prevalence for males was 37% by the 12th grade.

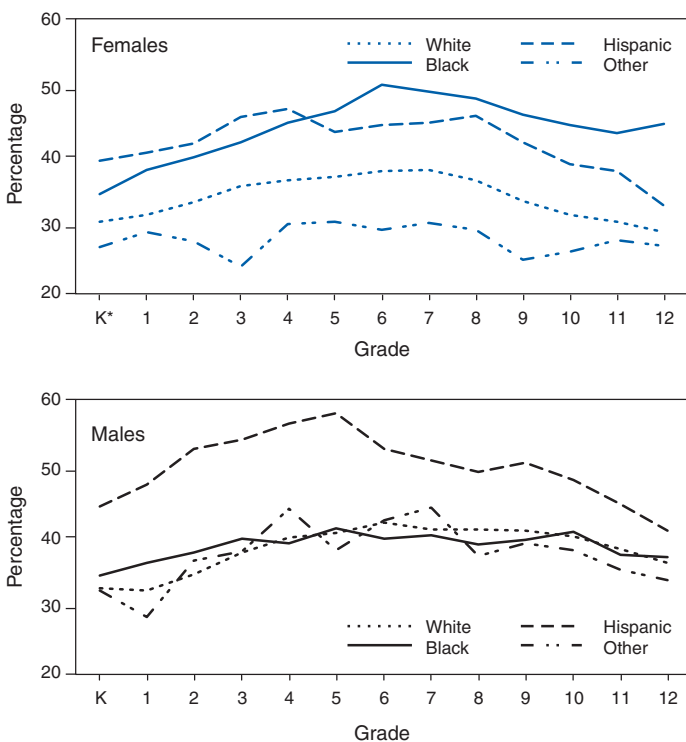
When analyzed by sex and grade or by sex, grade, and race/ethnicity, data were similar for subgroups each year. More Hispanic males were overweight in grades K–11 than males of other racial/ethnic populations (Figure). Among females, the prevalence of students overweight and at risk for overweight was similar among blacks and Hispanics. Percentages for these two populations were higher than for whites or those of other race in grades K–12. After the 5th grade, the prevalence for black females tended to stay constant, whereas the prevalence among Hispanic females began to decrease.

TABLE. Prevalence of overweight and at risk for overweight by sex, race/ethnicity, and grade group — Arkansas, 2003–04 and 2004–05 school years

Grade group/ Race/Ethnicity	2003–04 school year						2004–05 school year							
	No. of students measured	Overweight and at risk for overweight				No. of students measured	Overweight and at risk for overweight							
		Female		Male			Total		Female		Male		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
K*–4														
White	93,849	15,117 (33.5)	17,210 (35.3)	32,327 (34.4)	102,074	16,514 (33.5)	18,670 (35.3)	35,184 (34.5)						
Black	33,446	6,679 (40.1)	6,240 (37.2)	12,919 (38.6)	35,804	7,069 (39.8)	6,753 (37.4)	13,822 (38.6)						
Hispanic	8,593	1,757 (42.3)	2,260 (50.9)	4,017 (46.7)	11,298	2,321 (42.7)	2,973 (50.7)	5,294 (46.9)						
Other	2,001	290 (30.2)	350 (33.7)	640 (32.0)	2,910	391 (27.7)	532 (35.5)	923 (31.7)						
Total	137,889	23,843 (35.6)	26,060 (36.7)	49,903 (36.2)	152,086	26,295 (35.6)	28,928 (37.0)	55,223 (36.3)						
5–8														
White	77,379	13,968 (37.5)	16,755 (41.7)	30,723 (39.7)	81,182	14,515 (37.4)	17,475 (41.2)	31,990 (39.4)						
Black	26,056	6,356 (48.5)	5,195 (40.1)	11,551 (44.3)	27,511	6,713 (48.7)	5,504 (40.1)	12,217 (44.4)						
Hispanic	5,196	1,176 (46.2)	1,369 (51.7)	2,545 (49.0)	7,003	1,504 (44.7)	1,930 (53.0)	3,434 (49.0)						
Other	1,492	212 (29.4)	320 (41.5)	532 (35.7)	2,110	302 (30.0)	446 (40.4)	748 (35.5)						
Total	110,123	21,712 (40.5)	23,639 (41.8)	45,351 (41.2)	117,806	23,034 (40.5)	25,355 (41.6)	48,389 (41.1)						
9–12														
White	61,927	9,355 (31.7)	12,801 (39.4)	22,156 (35.8)	67,277	10,040 (31.5)	13,851 (39.2)	23,891 (35.5)						
Black	18,117	4,244 (45.8)	3,471 (39.2)	7,715 (42.6)	21,168	4,834 (44.9)	4,048 (39.0)	8,882 (42.0)						
Hispanic	3,005	551 (38.7)	680 (43.0)	1,231 (41.0)	4,031	749 (39.0)	1,000 (47.4)	1,749 (43.4)						
Other	1,227	140 (23.8)	237 (37.1)	377 (30.7)	1,805	229 (26.5)	348 (37.0)	577 (32.0)						
Total	84,276	14,290 (35.1)	17,189 (39.5)	31,479 (37.4)	94,281	15,852 (34.8)	19,247 (39.4)	35,099 (37.2)						
K–12														
White	233,155	38,440 (34.4)	46,766 (38.5)	85,206 (36.5)	250,533	41,069 (34.2)	49,996 (38.3)	91,065 (36.3)						
Black	77,619	17,279 (44.3)	14,906 (38.6)	32,185 (41.5)	84,483	18,616 (44.0)	16,305 (38.7)	34,921 (41.3)						
Hispanic	16,794	3,484 (42.9)	4,309 (49.7)	7,793 (46.4)	22,332	4,574 (42.7)	5,903 (50.8)	10,477 (46.9)						
Other	4,720	642 (28.3)	907 (37.0)	1,549 (32.8)	6,825	922 (28.1)	1,326 (37.5)	2,248 (32.9)						
Total	332,288	59,845 (37.1)	66,888 (39.1)	126,733 (38.1)	364,173	65,181 (37.0)	73,530 (39.1)	138,711 (38.1)						

* Kindergarten.

FIGURE. Percentage of students who were overweight and at risk for overweight, by sex, race/ethnicity, and grade — Arkansas, 2004–05 school year



* Kindergarten.

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Editorial Note: The impact of obesity on society through increased morbidity, mortality, and cost of medical care has been well documented (4–6). Among children and adolescents, overweight or obesity is linked to emotional and social problems and to serious medical conditions, such as type 2 diabetes, hypertension, dyslipidemia, and depression (6).

The goals of Act 1220 in Arkansas are to 1) change the environment in which children go to school and learn health habits every day, 2) engage the community to support parents and build a system that encourages health, and 3) mobilize resources and establish support structures through enhanced awareness of childhood and adolescent obesity (8). Specific requirements of the legislation include 1) elimination of all vending machines in public elementary schools, 2) professional education on nutrition for all cafeteria workers, 3) public disclosure of “pouring contracts” (i.e., contracts between schools and soft drink bottlers reflecting compensation for exclusive rights to sell products on school grounds), 4) creation of school nutrition and physical activity advisory committees in all school districts, 5) formation of a statewide Child

Health Advisory Committee (CHAC), and 6) annual state-wide assessment and reporting to parents of BMI for all public school students. In this first statewide assessment of overweight in children and adolescents, Arkansas has documented substantially higher proportions of overweight and at risk for overweight children and adolescents than those described in previous national reports (1,2).

In both assessment years, the percentage of childhood and adolescent overweight and at risk for overweight (38%) in Arkansas was approximately 23% higher than that reported in 2002 by NHANES (31%) (1) and 38–39% higher than that reported in 2003 national YRBS results for high school students (27%) (2). These differences might reflect differences between Arkansas and the nation as a whole, sampling variation for NHANES and YRBS, or a continued progression of the epidemic of childhood obesity. The NHANES estimates are from a nationwide sample of children assessed during 1999–2002; the Arkansas results are from serial assessments during school years 2003–04 and 2004–05. Results from the self-reported 2003 YRBS data reveal lower prevalence rates than either NHANES or the Arkansas study, which used actual height and weight measurements to calculate BMI.

The findings in this report are subject to at least two limitations. First, this study reflects the classification of Arkansas public school students by BMI percentile. Although nearly 93% of Arkansas children attend public schools, differences between public- and private/home-schooled students (e.g., socioeconomic or other demographic characteristics) might exist that could be linked to likelihood of obesity. Second, missing data for those students who were absent from school or opted out of the measurement present a potential bias in results, although both of these groups accounted for less than 12%–14% of nonassessments in the years reported. Regardless of these limitations, the consistency in the data for Year 1 and Year 2 indicate that a substantial proportion of Arkansas youth are overweight.

In addition to the statewide BMI assessments, state legislation also required community- and school-based actions described in this report. CHAC, formed in 2003, was charged with developing school nutrition and physical activity standards and recommending policies to the Arkansas Board of Education (ABE) and Board of Health. Evidence-based and “best practice” recommendations made to ABE covered foods sold in cafeterias, access to and offering of competitive foods (non-USDA school lunch program foods), professional development for food service staff, physical education (PE) staff qualifications, and PE/physical activity requirements for students. In September 2005, ABE adopted rules closely matching CHAC recommendations, which will further enhance school and state efforts to prevent and combat

childhood obesity (9). Additional support for obesity-prevention and treatment activities is provided by the Arkansas Academy of Pediatrics, the Arkansas Academy of Family Physicians, and the Arkansas Medical Society, which have cooperated in continuing education programs, journal publications, and mailings of guidelines on managing pediatric overweight.

Ongoing data collection for the 2005–06 school year (Year 3) will enable Arkansas to create a large-scale longitudinal dataset examining childhood and adolescent obesity. Annual evaluations of Act 1220 activities are being conducted (10). Reports on the prevalence of students who are overweight and at risk for overweight at the school and district level might enable communities to correlate changes in prevalence with community-based or statewide interventions (8). In addition, by measuring all students, individual reporting can inform parents of their children's potential health risks.

Acknowledgments

The findings in this report are based, in part, on contributions by the American Diabetes Association; the Robert Wood Johnson Foundation; the Arkansas Center for Health Improvement; and the Division of Health, Arkansas Department of Health and Human Services.

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Multiple Outbreaks of Gastrointestinal Illness Among School Children Associated with Consumption of Flour Tortillas — Massachusetts, 2003–2004

Ten outbreaks of gastrointestinal illness among school children at nine different schools were reported during February 2003–May 2004 to the Massachusetts Department of Public Health (MDPH). These outbreaks occurred among children who ate lunch provided by the schools and were characterized by short incubation periods and short durations of illness. The clinical and epidemiologic characteristics of the outbreaks were similar to those of previously reported outbreaks of vomiting associated with burritos served at multiple schools in the United States in 1997–1998 (1,2). Epidemiologic investigation of the 1997–1998 outbreaks implicated burritos made with flour tortillas as the suspect vehicle; no etiologic agent was identified, but symptoms suggested either a biotoxin or chemical agent. This report describes epidemiologic and laboratory findings from three of the 10 outbreaks in Massachusetts. Consumption of flour tortillas from a single manufacturer was significantly associated with illness. Preliminary results indicated elevated levels, relative to common industry practices, of potassium bromate and calcium propionate in the implicated tortillas. School officials should be aware of the need for rapid action during outbreaks with short incubation periods and short durations and should notify local and state health officials immediately to ensure rapid response and collection of epidemiologic information, clinical specimens, and food samples.

Middlesex and Suffolk Counties, September 2003

In September 2003, MDPH received a report that multiple students sought medical attention from the school nurse after eating lunch at school A. The lunch was prepared by a caterer and served at three schools that day. Ill students were identified at two of the three schools (schools A and B). An investigation was conducted among 59 students in grades 6–7 from school A and 63 students in grades 5–6 from school B. Illness was defined as having at least one gastrointestinal symptom (nausea, vomiting, abdominal cramps, or diarrhea) and one neurologic symptom (headache, dizziness, tingling, or burning in mouth) within 24 hours of lunch consumption. Predominant symptoms at school A were headache (87%), nausea (80%), abdominal cramps (67%), and dizziness (53%) and at school B were abdominal cramps (88%), nausea (69%), headache (69%), and dizziness (69%). Each student was

administered a questionnaire about consumption of items from the school lunch menu. The menu included chicken fajitas served with flour tortillas.

Fifteen (25%) of 59 students surveyed at school A and 16 (25%) of 63 students surveyed at school B became ill after eating the lunch. Median onset of illness was 14 minutes (range: 1–330 minutes) after lunch consumption at school B and 35 minutes (range: 5–1,440 minutes) at school A. Median duration of illness ranged from 5 hours (school B; range: 1–96 hours) to 7 hours (school A; range: 1–72 hours). At school A, univariate analyses identified the flour tortilla component of the chicken fajita as the only food item associated with illness (100% of ill students reported having eaten tortillas; relative risk [RR] = 6.6; $p = 0.05$). At school B, univariate analyses identified the flour tortilla component of the chicken fajita as the only food item significantly associated with illness (94% of ill students reported having eaten tortillas; RR = 6.5; $p = 0.02$). A positive dose-response relationship was noted with consumption of the chicken fajita (Mantel-Haenszel chi-square = 8.14, $p = 0.004$) at school B (i.e., the more chicken fajita the child ate, the more likely the child was to become ill). The flour tortillas used in the chicken fajitas at schools A and B were traced to Manufacturer A in Chicago, Illinois.

Suffolk County, May 2004

In May 2004, MDPH investigated an outbreak of gastrointestinal illness among students who ate lunch at school C. An investigation was performed among 187 students in grades 1–6. Illness was defined as at least one gastrointestinal symptom (nausea, vomiting, abdominal cramps, or diarrhea) and one neurologic symptom (headache, dizziness, tingling, or burning in mouth) within 24 hours of consuming the meal. The predominant symptoms were nausea (89%), headache (83%), abdominal cramps (61%), fatigue (56%), dizziness (47%), and vomiting (42%). Students in grade 1 and grades 3–6 were interviewed by MDPH epidemiologists using pictures of food items served for lunch. The menu included chicken fajitas served with flour tortillas.

Thirty-six (19%) of 187 students surveyed at school C became ill after eating the lunch. Forty-nine percent of the ill students reported symptom onset within 30 minutes of consuming lunch. Univariate analyses identified both chicken fajita with flour tortilla (47% of ill students reported having eaten tortillas; RR = 3.1; 95% confidence interval [CI] = 1.8–5.2) and orange juice (19% of ill students reported having consumed orange juice; RR = 2.4; CI = 1.3–4.3) as food items significantly associated with illness. Traceback of the flour tortillas identified manufacturer A as the source.

Environmental Findings

The Massachusetts Food Protection Program, in cooperation with local boards of health and the New England District Office of the Food and Drug Administration (FDA), conducted environmental investigations and tracebacks of ingredients used in the implicated foods for each school food-service operation. No contributing factors at the food preparation or serving sites were identified. Labels and invoices were obtained during the tracebacks of foods and ingredients used in the school lunches that triggered the outbreaks. The only common food source identified was manufacturer A, which produced all of the tortillas implicated in the outbreaks. Schools received the commercially packaged tortillas under refrigeration, in different sizes, under various brand names, from three distributors in Massachusetts and Connecticut. The packaged tortillas were kept under refrigeration until use and did not undergo further processing at the schools.

In October 2003, staff from the regional office of the Chicago District Office of FDA, the Illinois Department of Public Health, the Chicago Department of Public Health, and CDC inspected the facilities of manufacturer A. FDA noted several deficiencies at the plant, including improper storage, use, and labeling of chemicals; food ingredients and additives in unlabeled containers; food contact surfaces not protected from environmental contamination; and a lack of backflow protection from a piping system that discharged waste water. Limited recordkeeping impeded verification of employee practices and history relating to cleaning and maintenance of equipment. Tortilla packages were inconsistently marked with a manufacturing code date based on a 45–60 day shelf-life. The recipe for the product was obtained; calcium propionate and bromated flour were among the ingredients listed. FDA collected and analyzed samples of ingredients and finished products.

Laboratory Findings

Tortilla samples from schools A, B, and C submitted to FDA tested negative for heavy metals, T-2 toxin, deoxynivalenol, aflatoxins, amanitin, ricin, mold, yeast, staphylococcal enterotoxins, and both *Bacillus cereus* diarrheal (heat labile) and emetic (heat stable) enterotoxins. Unopened tortilla samples collected from one school, manufacturer A, and local retail outlets were evaluated for potential toxicity using a sequential solvent extraction and separation scheme, with each fraction subjected to a toxicologic screening using *Bacillus megaterium* (ATTC 25848) and brine shrimp (*Artemia* spp). Preliminary results indicated low toxicity in organic fractions and high toxicity in acid-base and enzymic-digestion fractions of both

outbreak and control tortillas. Substantial levels of the food-processing additives calcium propionate (2%–3%, five to 10 times the expected amount, based on common industry practices) and potassium bromate (1–2 mg/kg, more than 50 times the level normally found in loaf breads, but similar to levels occasionally detected in buns and rolls) were found in the outbreak samples. Elevated levels of calcium propionate and potassium bromate were not identified in the control samples obtained from local retail stores.

Urine specimens were collected from five ill students from school A within 24 hours of the suspect meal and again 1 week later and submitted to the National Center for Environmental Health at CDC. Urine specimens were negative for alkylphenols (representing exposure to surfactants found in cleaning products) and bromides.

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Editorial Note: The outbreaks described in this report were characterized by short incubation periods and short durations of illness, with headache, nausea, abdominal cramps, and dizziness as predominant symptoms. These outbreaks were similar to previously reported outbreaks of vomiting associated with burritos served in lunches at schools in the United States in 1997–1998 (1,2). The clinical characteristics reported in all of these outbreaks are consistent with exposure to an as yet unidentified pre-formed toxin or chemical agent. In such outbreaks, rapidly obtaining epidemiologic data and clinical and food samples is essential to determining illness etiology. School officials should be aware that illness outbreaks of short incubation involving neurologic and gastrointestinal symptoms might have resulted from chemical ingestion and should contact public health authorities immediately when this syndrome is observed. Health officials should obtain food samples for testing and, when possible, obtain urine specimens from ill and well children within 24 hours of exposure.

In addition to the three outbreaks described in this report, seven similar outbreaks occurred in Massachusetts during February 2003–May 2004. Flour tortillas were served before all seven outbreaks; manufacturer A was the source of the flour tortillas in six outbreaks. The last reported outbreak was in Suffolk County in May 2004.

Further chemical analyses are necessary to determine the cause of these outbreaks. Testing by FDA did not reveal *Bacillus cereus* diarrheal or emetic toxin, gastrointestinal mushroom toxins, or other biotoxins. Certain biotoxins, such as staphylococcal and clostridial enterotoxins, are unlikely to occur in association with tortillas; submitted specimens tested negative for these toxins. No heavy metals or seafood toxins were identified in the school lunches. Several other chemicals were considered as possible causes of the outbreaks, including unlabeled cleaning agents used in the factory. Although detergent contamination of the food was possible, the absence of urinary alkyl phenols reduces the likelihood that such contamination occurred.

Testing did reveal elevated levels of calcium propionate and potassium bromate in the implicated tortillas. However, these findings do not establish that potassium bromate and calcium propionate were factors in the etiology of these outbreaks. Calcium propionate has long been used in bakery products as a mold inhibitor and is generally regarded as safe for ingestion at low levels; however, ingestion of larger-than-usual amounts (based on common industry practices) might decrease the gastric emptying rate and cause gastrointestinal irritation, especially in younger children (3). Potassium bromate is used as a flour improver to strengthen dough and enable higher rising. Under proper baking conditions, potassium bromate levels are <20 µg/kg in finished bread products. However, if too much potassium bromate is added, or if the product is not cooked long enough or at adequate temperatures (tortillas are baked for a short period of time at temperatures lower than other baking products), more residual additive might remain. Foods contaminated with much higher levels of potassium bromate can cause acute irritation to the gastrointestinal tract, resulting in nausea, vomiting, abdominal pain, and diarrhea; poisoning episodes in children involving hair-treatment preparations containing potassium bromate have caused acute renal failure and irreversible hearing loss (4,5). The time to peak serum bromate concentration after oral administration is 15 minutes in rat studies (5). Similarly, a 30-minute latency period for bromate in humans has been reported (4); this correlates with the latency period observed in these outbreaks. Bromides were not identified in urine specimens from students involved in these outbreaks, although the results might have been affected by delayed collection of specimens or poor correlation between urine bromides and ingested bromate dose (4). Manufacturer A was alerted by FDA that calcium propionate and potassium bromate were present in the tortillas at higher than typical use levels and was advised to reduce the amounts used in the manufacture of these products. Manufacturer A changed the recipe and lowered the

amount of calcium propionate and potassium bromate used in its product.

MDPH received notification of outbreaks in schools soon after the episodes occurred and was able to conduct complete epidemiologic investigations. Rapid identification and reporting of outbreaks enabled epidemiologists to collect the appropriate urine and food specimens for chemical analyses. These investigations highlight the need for collaboration with school officials, as well as interagency collaboration at local, state, and federal levels, for rapid response and collection of epidemiologic information, clinical specimens, and food samples. Local and state health officials are also encouraged to contact the Rapid Onset of Gastroenteritis with Unknown Etiology (ROGUE) workgroup at CDC (National Center for Infectious Diseases, Foodborne and Diarrheal Diseases Branch, and the National Center for Environmental Health, Division of Environmental Hazards and Health Effects) to obtain epidemiologic assistance and specialized laboratory analysis (telephone 770-488-3410 or 404-639-2206).

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Update: Influenza Activity — United States, December 25–31, 2005

During December 25–31, 2005,* the number of states reporting widespread influenza activity† increased to seven.

* Provisional data reported as of January 6. Additional information about influenza activity is updated each Friday and is available from CDC at <http://www.cdc.gov/flu>.

† Levels of activity are 1) *widespread*: outbreaks of influenza or increases in influenza-like illness (ILI) cases and recent laboratory-confirmed influenza in at least half the regions of a state; 2) *regional*: outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least two but less than half the regions of a state; 3) *local*: outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in a single region of a state; 4) *sporadic*: small numbers of laboratory-confirmed influenza cases or a single influenza outbreak reported but no increase in cases of ILI; and 5) *no activity*.

Three states reported regional activity, nine reported local activity, and 27 reported sporadic activity (Figure 1).§

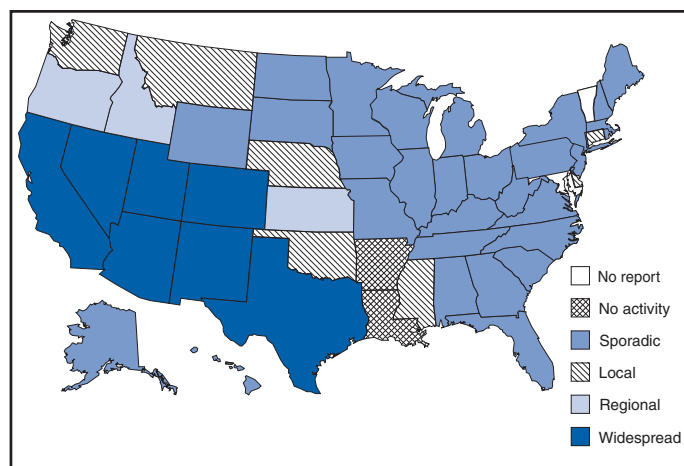
The percentage of specimens testing positive for influenza increased in the United States overall. Since October 2, 2005, the largest numbers of specimens testing positive for influenza have been reported from the Mountain (432 positives) and Pacific (302) regions, accounting for 35.9% and 25.1%, respectively, of positive tests reported during the 2005–06 influenza season. The percentage of outpatient visits for influenza-like illness (ILI)† increased during the week ending December 31 and is above the national baseline.** The percentage of deaths attributed to pneumonia and influenza (P&I) was below the epidemic threshold for the week ending December 31.

§ *Widespread*: Arizona, California, Colorado, Nevada, New Mexico, Texas, and Utah; *regional*: Idaho, Kansas, and Oregon; *local*: Connecticut, Delaware, Mississippi, Montana, Nebraska, Ohio, Oklahoma, Pennsylvania, and Washington; *sporadic*: Alabama, Alaska, Florida, Georgia, Hawaii, Illinois, Indiana, Iowa, Kentucky, Maine, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Rhode Island, South Carolina, South Dakota, Tennessee, Virginia, West Virginia, Wisconsin, and Wyoming; *no activity*: Arkansas and Louisiana; *no report*: Maryland and Vermont.

† Temperature of $\geq 100.0^{\circ}\text{F}$ ($\geq 37.8^{\circ}\text{C}$) and cough and/or sore throat in the absence of a known cause other than influenza

** The national baseline was calculated as the mean percentage of visits for ILI during noninfluenza weeks for the preceding three seasons, plus two standard deviations. Noninfluenza weeks are those in which <10% of laboratory specimens are positive for influenza. Wide variability in regional data precludes calculating region-specific baselines; therefore, applying the national baseline to regional data is inappropriate.

FIGURE 1. Estimated influenza activity levels reported by state epidemiologists, by state and level of activity* — United States, December 25–31, 2005



* Levels of activity are 1) *widespread*: outbreaks of influenza or increases in influenza-like illness (ILI) cases and recent laboratory-confirmed influenza in at least half the regions of a state; 2) *regional*: outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least two but less than half the regions of a state; 3) *local*: outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in a single region of a state; 4) *sporadic*: small numbers of laboratory-confirmed influenza cases or a single influenza outbreak reported but no increase in cases of ILI; and 5) *no activity*.

Laboratory Surveillance

During December 25–31, World Health Organization (WHO) collaborating laboratories and National Respiratory and Enteric Virus Surveillance System (NREVSS) laboratories in the United States reported testing 1,677 specimens for influenza viruses, of which 169 (10.1%) were positive. Of these, 117 were influenza A (H3N2) viruses, two were influenza A (H1N1) viruses, 48 were other influenza A viruses, and two were influenza B viruses.

Since October 2, 2005, WHO and NREVSS laboratories have tested 35,006 specimens for influenza viruses, of which 1,203 (3.4%) were positive. Of these, 1,153 (95.8%) were influenza A viruses, and 50 (4.2%) were influenza B viruses. Of the 1,153 influenza A viruses, 608 (52.7%) have been subtyped; 602 (99.0%) were influenza A (H3N2) viruses, and six (1.0%) were influenza A (H1N1) viruses.

P&I Mortality and ILI Surveillance

During the week ending December 31, P&I accounted for 6.8% of all deaths reported through the 122 Cities Mortality Reporting System. This percentage is below the epidemic threshold^{††} of 7.9% (Figure 2).

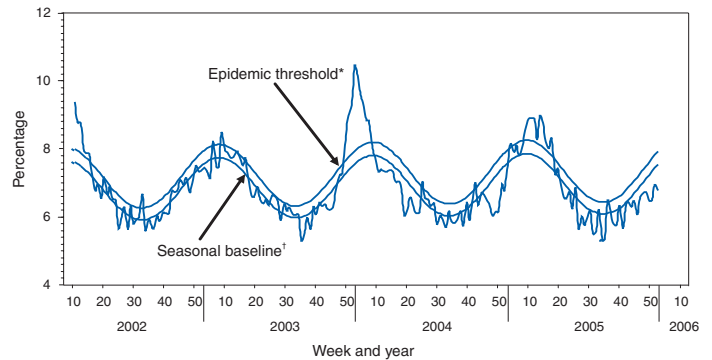
The percentage of patient visits for ILI was 3.3%, which is above the national baseline of 2.2% (Figure 3). The percentage of patient visits for ILI increased in seven surveillance regions and ranged from 1.6% in the New England region to 6.7% in the West South Central region.

Pediatric Deaths and Hospitalizations

During October 2–December 31, CDC received reports of five influenza-associated deaths of U.S. residents aged <18 years. Three of the deaths occurred during the current influenza season and two occurred during the 2004–05 influenza season.

During October 1–December 24, the preliminary influenza-associated hospitalization rate for children aged 0–4 years reported by the Emerging Infections Program (EIP)^{§§} was 0.17 per 10,000 population. EIP also monitors hospitalizations in

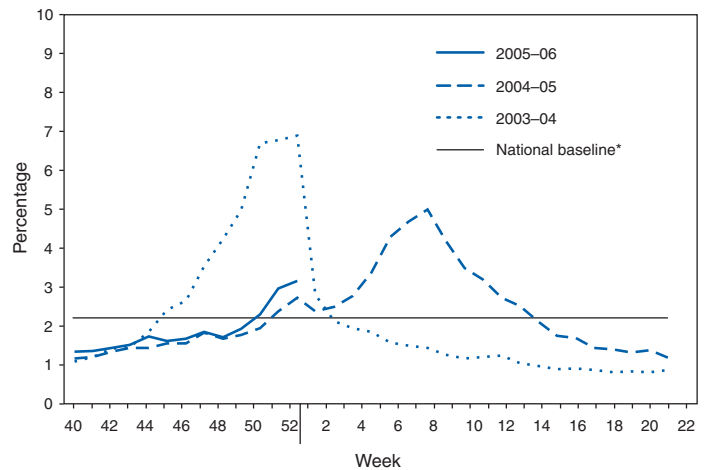
FIGURE 2. Percentage of deaths attributed to pneumonia and influenza (P&I) reported by the 122 Cities Mortality Reporting System, by week and year — United States, 2002–2005



* The epidemic threshold is 1.645 standard deviations above the seasonal baseline percentage.

† The seasonal baseline is projected using a robust regression procedure that applies a periodic regression model to the observed percentage of deaths from P&I during the preceding 5 years.

FIGURE 3. Percentage of visits for influenza-like illness (ILI) reported by the Sentinel Provider Surveillance Network, by week — United States, 2003–04, 2004–05, and 2005–06 influenza seasons



* The national baseline was calculated as the mean percentage of visits for ILI during noninfluenza weeks for the preceding three seasons, plus two standard deviations. Noninfluenza weeks are those in which <10% of laboratory specimens are positive for influenza. Wide variability in regional data precludes calculating region-specific baselines; therefore, applying the national baseline to regional data is inappropriate.

^{††} The expected seasonal baseline proportion of P&I deaths reported by the 122 Cities Mortality Reporting System is projected using a robust regression procedure in which a periodic regression model is applied to the observed percentage of deaths from P&I that occurred during the preceding 5 years. The epidemic threshold is 1.645 standard deviations above the seasonal baseline.

^{§§} The EIP Influenza Project conducts surveillance in 60 counties associated with the following 12 metropolitan areas: San Francisco, California; Denver, Colorado; New Haven, Connecticut; Atlanta, Georgia; Baltimore, Maryland; Minneapolis/St. Paul, Minnesota; Albuquerque, New Mexico; Las Cruces, New Mexico; Albany, New York; Rochester, New York; Portland, Oregon; and Nashville, Tennessee.

children aged 5–17 years. The preliminary influenza-associated hospitalization rate for this age group reported by EIP was 0.01 per 10,000 population. During October 30–December 24, the New Vaccine Surveillance Network^{¶¶}

^{¶¶} The New Vaccine Surveillance Network conducts surveillance in Monroe County, New York; Hamilton County, Ohio; and Davidson County, Tennessee.

reported no laboratory-confirmed influenza-associated hospitalizations among children aged 0–4 years.

Human Cases of Avian Influenza A (H5N1)

No human case of avian influenza A (H5N1) virus infection has ever been identified in the United States. From December 2003 through January 10, 2006, a total of 147 laboratory-confirmed human cases of avian influenza A (H5N1) infections were reported to WHO.*** Of these, 78 (53%) were fatal (Table). Cases were reported from

Cambodia, China, Indonesia, Thailand, Turkey, and Viet Nam. Since December 30, four new cases and two deaths in Turkey and one new case and two deaths in China were reported. Cases reported from Turkey are the first human cases reported outside of China or Southeast Asia. The majority of cases appear to have been acquired from direct contact with infected poultry. No evidence of sustained human-to-human transmission of H5N1 has been detected, although rare cases of human-to-human transmission likely have occurred (1).

Reference

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*** Available at http://www.who.int/csr/disease/avian_influenza/en.

TABLE. Number of laboratory-confirmed human cases and deaths from avian influenza A (H5N1) infection reported to the World Health Organization — worldwide, 2003–2006*

Year of onset	Cambodia		China		Indonesia		Thailand		Turkey		Viet Nam		Total	
	No.	Deaths	No.	Deaths	No.	Deaths	No.	Deaths	No.	Deaths	No.	Deaths	No.	Deaths
2003	0	0	0	0	0	0	0	0	0	0	3	3	3	3
2004	0	0	0	0	0	0	17	12	0	0	29	20	46	32
2005	4	4	7	5	16	11	5	2	0	0	61	19	93	41
2006	0	0	1	0	0	0	0	0	4	2	0	0	5	2
Total	4	4	8	5	16	11	22	14	4	2	93	42	147	78

* As of January 10, 2006.

Notice to Readers

Changes in Presentation of Data from the National Notifiable Diseases Surveillance System — January 13, 2006

The National Notifiable Diseases Surveillance System (NNDSS) monitors and disseminates data voluntarily reported without personal identifiers on notifiable diseases in the United States (1). The system is maintained by CDC, in collaboration with the Council of State and Territorial Epidemiologists (CSTE), which annually recommends additions and deletions to the list of nationally notifiable diseases* and national public health surveillance standard case definitions.† Case-level data are reported to NNDSS by the 50 states, the District of Columbia, New York City, and five U.S. territories (1).

In collaboration with CSTE and stakeholders (e.g., state health departments), CDC is introducing in this issue of *MMWR* new formats for presentation of weekly provisional NNDSS data (i.e., Tables I and II) to help health officials monitor data and facilitate detection of local or national trends in diseases. In addition, a new quarterly table, Table IV, will

be published for the first time in the April 7, 2006, issue and each quarter thereafter. Figure I and Table III remain unchanged. The process to revise formats for the new tables began in 2003; in June 2004, CSTE approved a position statement regarding the proposed revisions§ at its annual meeting in Boise, Idaho. In June 2005, CDC provided final drafts of the new formats and an updated implementation plan to all state epidemiologists.

Interpreting weekly incidence data, given surveillance limitations, is complex (2). Provisional data are subject to reporting delays and corrections. Reporting methods differ by state and disease program and are subject to changes in state-specific surveillance policies and procedures. As a result, NNDSS data might not always reflect a true change in the incidence of a disease, but rather a reporting artifact. Despite these limitations, surveillance data can be useful in monitoring disease trends.

The previous Table I (Summary of provisional cases of selected notifiable diseases, United States, cumulative) presented nationwide data on diseases with <300 cases per year or diseases that were notifiable in fewer than 25 states. Incidence was displayed as cumulative year-to-date data for the current and preceding calendar years. The new Table I

* Available at <http://www.cdc.gov/epo/dphsi/nndsshis.htm>.

† Available at <http://www.cdc.gov/epo/dphsi/casedef/index.htm>.

§ Available at <http://www.cste.org/ps/2004pdf/04-cc-01-final.pdf>.

presents nationwide data on diseases with fewer than 1,000 cases reported during the preceding year.[§] The table also presents the number of cases during the current week of report, the list of states reporting those cases, the current cumulative year-to-date number of cases, the total cases in the preceding 5 years, and the 5-year weekly average.

The previous Table II (Provisional cases of selected notifiable diseases, United States) presented state and regional incidence for diseases with ≥ 300 cases per year or diseases that were notifiable in 25 states or more. Incidence was displayed as cumulative year-to-date data for the current and preceding calendar years. The new Table II presents state and regional data on diseases with $\geq 1,000$ cases reported during the preceding year.** This new Table II also presents the number of cases during the current week of report, the cumulative year-to-date number of cases for the current and preceding calendar years, and the median and maximum number of weekly cases reported during the preceding 52 weeks.

Quarterly Table IV, to be published for the first time in the April 7 issue, will present data on cases of human immunodeficiency virus (HIV)/acquired immunodeficiency syndrome (AIDS), AIDS, and tuberculosis. These data will be presented only on a quarterly basis because of the limited value of weekly reports to the public health community as a result of differences in reporting patterns for these diseases and because long-term variations in the number of cases are more important

than weekly variations. (Pediatric HIV infection data will continue to be updated monthly and displayed in the new Table I). Table IV will present the number of cases for the current quarter, the minimum and maximum quarterly number reported during the preceding 4 quarters, and cumulative year-to-date number of cases for the current and preceding calendar years.

In addition, in the new Table II, three nationally notifiable Enterohemorrhagic *Escherichia coli* (EHEC) diseases have been replaced by Shiga toxin-producing *Escherichia coli* (STEC). The number of STEC cases for the current year will be compared with EHEC data from the preceding year.

Finally, NNDSS publication criteria, which are based on information regarding case-confirmation status, have been revised to align more closely with case status criteria in national public health surveillance case definitions. This revision should help make data more comparable across states. The newly revised publication criteria are reflected for the first time in the provisional weekly NNDSS data in this issue of *MMWR*. The revised publication criteria are posted on the NNDSS website^{††} or can be requested by e-mail, soib@cdc.gov.

References

1. CDC. Summary of notifiable diseases—United States, 2003. *MMWR* 2005;52(54):1–85.
2. CDC. Update on *MMWR* Table II: AIDS surveillance data and provisional nationally notifiable disease data. *MMWR* 2004;53:346.

[§] Diseases in Table I are not notifiable in all states.

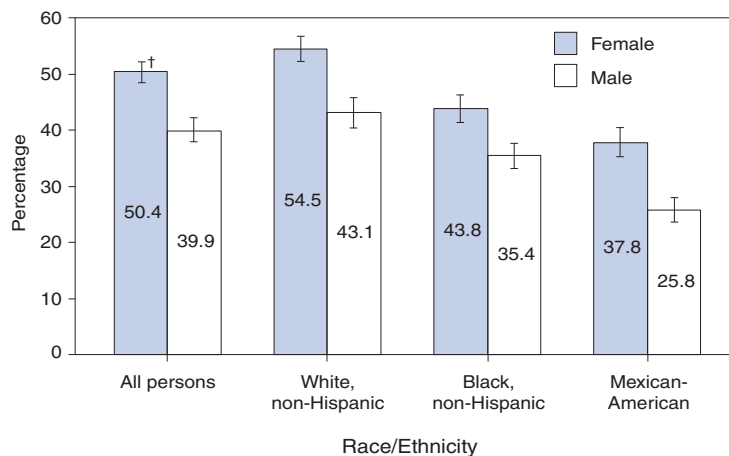
** Diseases in Table II are not notifiable in all states and also exclude those diseases presented in the new quarterly Table IV.

^{††} Available at <http://www.cdc.gov/epo/dphsi/phs/files/nndsseventcodelistjanuary2006.pdf>.

QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

Percentage* of Persons Reporting Use of At Least One Prescription Drug During the Preceding Month, by Sex and Race/Ethnicity — United States, 1999–2002



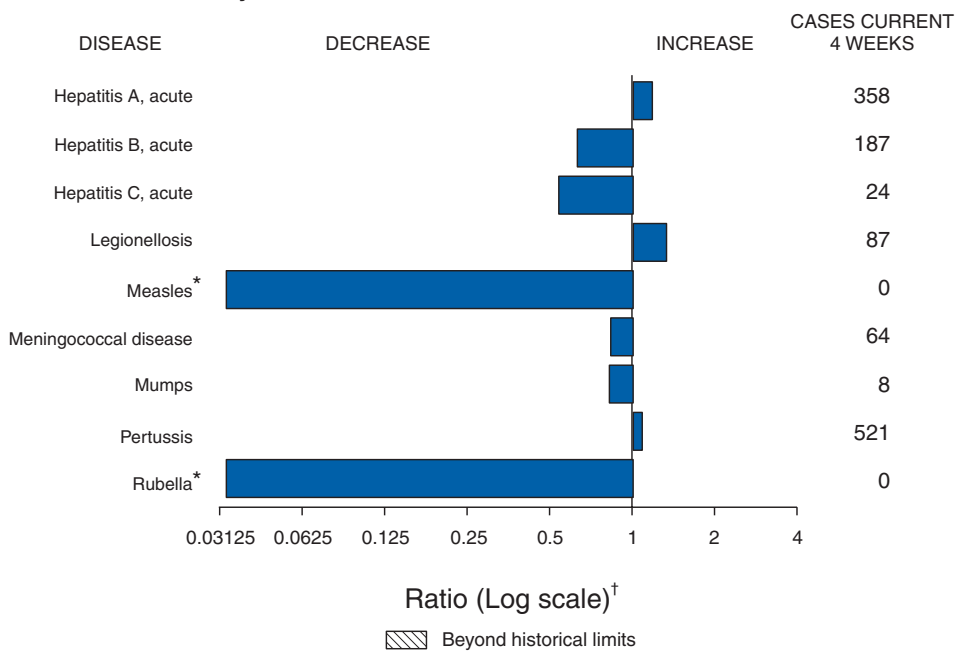
* Age-adjusted to the 2000 U.S. standard population using four age groups: <18 years, 18–44 years, 45–64 years, and ≥65 years.

† 95% confidence interval.

During 1999–2002, approximately 50% of females and 40% of males reported using at least one prescription drug during the preceding month, with non-Hispanic whites more likely to do so than non-Hispanic blacks and Mexican-Americans. In each racial/ethnic population, females were more likely than males to have used at least one prescription drug during the preceding month.

SOURCES: National Center for Health Statistics. Health, United States, 2005. Table 91. Hyattsville, MD: National Center for Health Statistics; 2005. Available at <http://www.cdc.gov/nchs/hus.htm>; National Health and Nutrition Examination Survey, 1999–2002. Available at <http://www.cdc.gov/nchs/nhanes.htm>.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals January 7, 2006, with historical data



* No measles or rubella cases were reported for the current 4-week period yielding a ratio for week 1 of zero (0).

† 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.

TABLE 1. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending January 7, 2006 (1st week)*

Disease	Current week	Cum 2006	5-year weekly average	Total cases reported for previous years					States reporting cases during current week (No.)
				2005	2004	2003	2002	2001	
Anthrax	—	—	—	—	—	—	2	23	
Botulism:									
foodborne	—	—	0	14	16	20	28	39	
infant	—	—	1	85	87	76	69	97	
other (wound & unspecified)	1	1	0	28	30	33	21	19	WI (1)
Brucellosis	—	—	1	106	114	104	125	136	
Chancroid	—	—	1	25	30	54	67	38	
Cholera	—	—	0	13	5	2	2	3	
Cyclosporiasis†	1	1	1	731	171	75	156	147	NJ (1)
Diphtheria	—	—	—	1	—	1	1	2	
Domestic arboviral diseases§:									
California serogroup	—	—	—	65	112	108	164	128	
eastern equine	—	—	—	21	6	14	10	9	
Powassan	—	—	—	—	1	—	1	N	
St. Louis	—	—	—	9	12	41	28	79	
western equine	—	—	—	—	—	—	—	—	
Ehrlichiosis†:									
human granulocytic	—	—	1	700	537	362	511	261	
human monocytic	8	8	1	468	338	321	216	142	MN (2), NE (6)
human (other & unspecified)	—	—	0	112	59	44	23	6	
<i>Haemophilus influenzae</i> ¶:									
invasive disease (age <5 yrs):									
serotype b	—	—	0	7	19	32	34	—	
nonserotype b	—	—	2	109	135	117	144	—	
unknown serotype	1	1	3	190	177	227	153	—	GA (1)
Hansen disease†	1	1	1	88	105	95	96	79	WI (1)
Hantavirus pulmonary syndrome†	—	—	0	26	24	26	19	8	
Hemolytic uremic syndrome, postdiarrheal†	1	1	1	189	200	178	216	202	NJ (1)
Hepatitis C viral, acute	2	2	28	711	713	1,102	1,835	3,976	FL (1), NJ (1)
HIV infection, pediatric (age <13 yrs)†**	—	—	3	255	436	504	420	543	
Influenza-associated pediatric mortality†,††,§§	—	—	1	50	—	N	N	N	
Listeriosis	4	4	8	802	753	696	665	613	CT (1), GA (2), WI (1)
Measles	—	—¶¶	1	62	37	56	44	116	
Meningococcal disease,*** invasive:									
A, C, Y, & W-135	—	—	7	258	—	—	—	—	
serogroup B	—	—	4	142	—	—	—	—	
other serogroup	—	—	1	18	—	—	—	—	
Mumps	—	—	3	269	258	231	270	266	
Plague	—	—	—	7	3	1	2	2	
Poliomyelitis, paralytic	—	—	—	2	—	—	—	—	
Psittacosis†	—	—	0	21	12	12	18	25	
Q fever†	—	—	1	136	70	71	61	26	
Rabies, human	—	—	—	4	7	2	3	1	
Rubella	—	—	0	16	10	7	18	23	
Rubella, congenital syndrome	—	—	—	1	—	1	1	3	
SARS-CoV†,††	—	—	—	—	—	8	N	N	
Smallpox†	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome†	—	—	3	100	132	161	118	77	
<i>Streptococcus pneumoniae</i> †:									
invasive disease (age <5 yrs)	1	1	11	952	1,162	845	513	498	GA (1)
Syphilis, congenital (age <1 yr)	1	1	8	281	353	413	412	441	UT (1)
Tetanus	—	—	0	20	34	20	25	37	
Toxic-shock syndrome (other than streptococcal)†	—	—	2	98	95	133	109	127	
Trichinellosis	—	—	0	16	5	6	14	22	
Tularemia†	—	—	0	131	134	129	90	129	
Typhoid fever	1	1	4	273	322	356	321	368	NH (1)
Vancomycin-intermediate <i>Staphylococcus aureus</i> †	—	—	—	2	—	N	N	N	
Vancomycin-resistant <i>Staphylococcus aureus</i> †	—	—	—	—	1	N	N	N	
Yellow fever	—	—	—	—	—	—	1	—	

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

* Incidence data for reporting years 2004, 2005, and 2006 are provisional, whereas data for 2001, 2002, and 2003 are finalized.

† Not notifiable in all states.

§ Includes both neuroinvasive and non-neuroinvasive. Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Infectious Diseases (ArboNET Surveillance).

¶ 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, STD, and TB Prevention. Implementation of HIV reporting influences the number of cases reported. Data for HIV/AIDS are available in Table IV quarterly.

†† Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases.

§§ Of the 50 cases reported, six were reported since October 2, 2005 (40th week). Of these six, only four occurred during the current 2005–06 season.

¶¶ No measles cases were reported for the current week.

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

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending January 7, 2006, and January 8, 2005 (1st Week)*

Reporting area	Hepatitis (viral, acute), by type										Legionellosis				
	A					B					Current week	Previous 52 weeks		Cum 2006	Cum 2005
	Current week	Med	Max	Cum 2006	Cum 2005	Current week	Med	Max	Cum 2006	Cum 2005		Med	Max		
United States	44	77	167	44	65	10	100	139	10	94	8	35	109	8	19
New England	—	9	22	—	11	1	4	12	1	3	—	1	10	—	—
Connecticut	—	1	3	—	3	—	0	5	—	—	—	0	8	—	—
Maine	—	0	1	—	—	—	0	2	—	—	—	0	1	—	—
Massachusetts	—	6	13	—	8	1	3	10	1	3	—	1	4	—	—
New Hampshire	—	1	12	—	—	—	0	3	—	—	—	0	1	—	—
Rhode Island	—	0	4	—	—	—	0	2	—	—	—	0	6	—	—
Vermont†	—	0	1	—	—	—	0	1	—	—	—	0	3	—	—
Mid. Atlantic	1	13	24	1	6	1	14	37	1	29	2	10	52	2	6
New Jersey	—	3	10	—	4	—	6	26	—	20	—	1	12	—	2
New York (Upstate)	—	2	8	—	—	—	2	7	—	—	—	3	25	—	—
New York City	—	5	12	—	1	—	2	7	—	2	—	1	20	—	—
Pennsylvania	1	2	6	1	1	1	4	9	1	7	2	5	17	2	4
E.N. Central	1	7	16	1	8	1	10	25	1	6	1	6	23	1	5
Illinois	—	1	9	—	3	—	2	7	—	1	—	0	3	—	—
Indiana	—	1	10	—	—	—	0	11	—	—	—	0	5	—	—
Michigan	—	2	11	—	3	—	4	7	—	4	1	2	6	1	4
Ohio	1	1	7	1	1	1	2	8	1	1	—	3	19	—	—
Wisconsin	—	1	4	—	1	—	0	6	—	—	—	0	2	—	1
W.N. Central	1	1	31	1	1	—	5	13	—	4	—	1	12	—	—
Iowa	—	0	2	—	—	—	0	2	—	—	—	0	1	—	—
Kansas	—	0	2	—	—	—	0	3	—	—	—	0	1	—	—
Minnesota	—	0	31	—	—	—	0	6	—	—	—	0	10	—	—
Missouri	1	0	5	1	1	—	3	7	—	3	—	0	4	—	—
Nebraska†	—	0	3	—	—	—	0	2	—	1	—	0	1	—	—
North Dakota	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
South Dakota	—	0	1	—	—	—	0	1	—	—	—	0	6	—	—
S. Atlantic	7	12	33	7	10	5	25	43	5	33	5	9	19	5	1
Delaware	—	0	1	—	—	—	1	6	—	1	—	0	4	—	—
District of Columbia	—	0	2	—	—	—	0	4	—	—	—	0	2	—	—
Florida	7	5	18	7	6	4	9	21	4	10	2	2	6	2	—
Georgia	—	2	6	—	3	—	3	10	—	6	—	1	3	—	—
Maryland	—	2	6	—	1	1	3	8	1	5	1	2	9	1	—
North Carolina	—	0	18	—	—	—	0	13	—	10	2	0	3	2	1
South Carolina†	—	1	3	—	—	—	2	9	—	1	—	0	2	—	—
Virginia†	—	1	6	—	—	—	2	10	—	—	—	0	4	—	—
West Virginia	—	0	2	—	—	—	0	11	—	—	—	0	3	—	—
E.S. Central	—	4	16	—	1	1	6	20	1	5	—	1	6	—	—
Alabama†	—	0	6	—	—	1	1	7	1	1	—	0	2	—	—
Kentucky	—	0	3	—	—	—	1	5	—	—	—	0	3	—	—
Mississippi	—	0	4	—	—	—	1	4	—	1	—	0	1	—	—
Tennessee†	—	2	13	—	1	—	2	13	—	3	—	0	4	—	—
W.S. Central	—	5	13	—	4	—	11	23	—	2	—	0	4	—	—
Arkansas	—	0	3	—	—	—	1	4	—	—	—	0	1	—	—
Louisiana	—	1	5	—	3	—	1	5	—	—	—	0	1	—	—
Oklahoma	—	0	1	—	—	—	0	5	—	—	—	0	3	—	—
Texas†	—	3	10	—	1	—	7	21	—	2	—	0	3	—	—
Mountain	—	6	21	—	8	—	10	38	—	2	—	1	8	—	1
Arizona	—	3	20	—	5	—	6	34	—	—	—	0	3	—	—
Colorado	—	1	5	—	—	—	1	4	—	—	—	0	3	—	—
Idaho†	—	0	3	—	—	—	0	2	—	—	—	0	2	—	—
Montana	—	0	2	—	1	—	0	2	—	—	—	0	1	—	—
Nevada†	—	0	2	—	—	—	0	2	—	1	—	0	2	—	—
New Mexico†	—	0	3	—	2	—	0	2	—	1	—	0	1	—	—
Utah	—	0	3	—	—	—	1	5	—	—	—	0	2	—	—
Wyoming	—	0	0	—	—	—	0	1	—	—	—	0	1	—	1
Pacific	34	14	145	34	16	1	10	24	1	10	—	1	6	—	6
Alaska	—	0	2	—	—	—	0	1	—	—	—	0	1	—	—
California	34	12	145	34	14	1	6	15	1	6	—	1	6	—	6
Hawaii	—	0	2	—	1	—	0	1	—	1	—	0	1	—	—
Oregon†	—	1	4	—	1	—	2	5	—	3	—	0	0	N	N
Washington	—	1	5	—	—	—	1	8	—	—	—	0	0	—	—
American Samoa	U	0	1	U	—	U	0	0	U	—	U	0	0	U	U
C.N.M.I.	U	0	0	U	U	U	0	0	U	U	U	0	0	U	U
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	1	6	—	—	—	1	6	—	—	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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 2005 and 2006 are provisional.

† Contains data reported through the National Electronic Disease Surveillance System (NEDSS). Because of a technical problem with hardware, data from these states are not included this week.

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending January 7, 2006, and January 8, 2005 (1st Week)*

Reporting area	Lyme disease					Malaria				
	Current week	Previous 52 weeks		Cum 2006	Cum 2005	Current week	Previous 52 weeks		Cum 2006	Cum 2005
		Med	Max				Med	Max		
United States	14	256	1,302	14	121	4	22	44	4	18
New England	—	40	198	—	8	—	1	12	—	1
Connecticut	—	9	154	—	—	—	0	10	—	—
Maine	—	2	25	—	1	—	0	1	—	—
Massachusetts	—	11	130	—	7	—	0	4	—	1
New Hampshire	—	4	17	—	—	—	0	1	—	—
Rhode Island	—	0	12	—	—	—	0	1	—	—
Vermont†	—	0	5	—	—	—	0	2	—	—
Mid. Atlantic	5	178	918	5	88	1	6	14	1	4
New Jersey	—	38	301	—	45	—	1	6	—	1
New York (Upstate)	2	48	302	2	—	—	1	4	—	—
New York City	—	0	0	—	—	—	3	8	—	3
Pennsylvania	3	56	450	3	43	1	1	2	1	—
E.N. Central	—	11	150	—	5	—	2	6	—	—
Illinois	—	0	0	—	—	—	0	3	—	—
Indiana	—	0	4	—	—	—	0	1	—	—
Michigan	—	0	7	—	1	—	0	2	—	—
Ohio	—	1	5	—	3	—	0	3	—	—
Wisconsin	—	10	145	—	1	—	0	2	—	—
W.N. Central	—	13	99	—	2	1	1	5	1	—
Iowa	—	1	8	—	2	—	0	1	—	—
Kansas	—	0	3	—	—	—	0	1	—	—
Minnesota	—	9	96	—	—	—	0	3	—	—
Missouri	—	0	2	—	—	1	0	3	1	—
Nebraska†	—	0	1	—	—	—	0	2	—	—
North Dakota	—	0	0	—	—	—	0	0	—	—
South Dakota	—	0	1	—	—	—	0	0	—	—
S. Atlantic	9	31	125	9	18	1	6	15	1	3
Delaware	—	9	37	—	11	—	0	1	—	—
District of Columbia	—	0	2	—	—	—	0	2	—	—
Florida	—	1	8	—	1	1	1	6	1	—
Georgia	—	0	1	—	—	—	0	5	—	2
Maryland	7	17	84	7	6	—	1	9	—	1
North Carolina	2	0	5	2	—	—	0	8	—	—
South Carolina†	—	0	3	—	—	—	0	2	—	—
Virginia†	—	3	20	—	—	—	0	4	—	—
West Virginia	—	0	6	—	—	—	0	2	—	—
E.S. Central	—	1	4	—	—	—	0	2	—	—
Alabama†	—	0	1	—	—	—	0	1	—	—
Kentucky	—	0	1	—	—	—	0	2	—	—
Mississippi	—	0	0	—	—	—	0	0	—	—
Tennessee†	—	0	4	—	—	—	0	2	—	—
W.S. Central	—	1	8	—	—	—	1	8	—	—
Arkansas	—	0	2	—	—	—	0	2	—	—
Louisiana	—	0	2	—	—	—	0	1	—	—
Oklahoma	—	0	0	—	—	—	0	6	—	—
Texas†	—	0	7	—	—	—	1	8	—	—
Mountain	—	0	4	—	—	—	1	6	—	2
Arizona	—	0	4	—	—	—	0	4	—	1
Colorado	—	0	1	—	—	—	0	3	—	—
Idaho†	—	0	1	—	—	—	0	0	—	—
Montana	—	0	0	—	—	—	0	0	—	—
Nevada†	—	0	1	—	—	—	0	1	—	—
New Mexico†	—	0	1	—	—	—	0	1	—	—
Utah	—	0	1	—	—	—	0	2	—	1
Wyoming	—	0	1	—	—	—	0	1	—	—
Pacific	—	2	12	—	—	1	4	12	1	8
Alaska	—	0	1	—	—	—	0	1	—	—
California	—	2	12	—	—	1	3	9	1	7
Hawaii	N	0	0	N	N	—	0	4	—	—
Oregon†	—	0	2	—	—	—	0	2	—	1
Washington	—	0	3	—	—	—	0	4	—	—
American Samoa	U	0	0	U	U	U	0	0	U	U
C.N.M.I.	U	0	0	U	U	U	0	0	U	U
Guam	—	0	0	—	—	—	0	0	—	—
Puerto Rico	N	0	0	N	N	—	0	1	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—

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 2005 and 2006 are provisional.

† Contains data reported through the National Electronic Disease Surveillance System (NEDSS). Because of a technical problem with hardware, data from these states are not included this week.

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending January 7, 2006, and January 8, 2005 (1st Week)*

Reporting area	West Nile virus disease†									
	Neuroinvasive					Non-neuroinvasive				
	Current week	Previous 52 weeks		Cum 2006	Cum 2005	Current week	Previous 52 weeks		Cum 2006	Cum 2005
	Med	Max				Med	Max			
United States	—	0	0	—	—	—	0	0	—	1
New England	—	0	0	—	—	—	0	0	—	—
Connecticut	—	0	0	—	—	—	0	0	—	—
Maine	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	0	0	—	—	—	0	0	—	—
New Hampshire	—	0	0	—	—	—	0	0	—	—
Rhode Island	—	0	0	—	—	—	0	0	—	—
Vermont§	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	—	0	0	—	—	—	0	0	—	—
New Jersey	—	0	0	—	—	—	0	0	—	—
New York (Upstate)	—	0	0	—	—	—	0	0	—	—
New York City	—	0	0	—	—	—	0	0	—	—
Pennsylvania	—	0	0	—	—	—	0	0	—	—
E.N. Central	—	0	0	—	—	—	0	0	—	—
Illinois	—	0	0	—	—	—	0	0	—	—
Indiana	—	0	0	—	—	—	0	0	—	—
Michigan	—	0	0	—	—	—	0	0	—	—
Ohio	—	0	0	—	—	—	0	0	—	—
Wisconsin	—	0	0	—	—	—	0	0	—	—
W.N. Central	—	0	0	—	—	—	0	0	—	—
Iowa	—	0	0	—	—	—	0	0	—	—
Kansas	—	0	0	—	—	N	0	0	N	N
Minnesota	—	0	0	—	—	—	0	0	—	—
Missouri	—	0	0	—	—	—	0	0	—	—
Nebraska§	—	0	0	—	—	—	0	0	—	—
North Dakota	—	0	0	—	—	—	0	0	—	—
South Dakota	—	0	0	—	—	—	0	0	—	—
S. Atlantic	—	0	0	—	—	—	0	0	—	—
Delaware	—	0	0	—	—	—	0	0	—	—
District of Columbia	—	0	0	—	—	—	0	0	—	—
Florida	—	0	0	—	—	—	0	0	—	—
Georgia	—	0	0	—	—	—	0	0	—	—
Maryland	—	0	0	—	—	—	0	0	—	—
North Carolina	—	0	0	—	—	—	0	0	—	—
South Carolina§	—	0	0	—	—	—	0	0	—	—
Virginia§	—	0	0	—	—	—	0	0	—	—
West Virginia	—	0	0	—	—	N	0	0	N	N
E.S. Central	—	0	0	—	—	—	0	0	—	—
Alabama§	—	0	0	—	—	—	0	0	—	—
Kentucky	—	0	0	—	—	—	0	0	—	—
Mississippi	—	0	0	—	—	—	0	0	—	—
Tennessee§	—	0	0	—	—	—	0	0	—	—
W.S. Central	—	0	0	—	—	—	0	0	—	1
Arkansas	—	0	0	—	—	—	0	0	—	—
Louisiana	—	0	0	—	—	—	0	0	—	1
Oklahoma	—	0	0	—	—	—	0	0	—	—
Texas§	—	0	0	—	—	—	0	0	—	—
Mountain	—	0	0	—	—	—	0	0	—	—
Arizona	—	0	0	—	—	—	0	0	—	—
Colorado	—	0	0	—	—	—	0	0	—	—
Idaho§	—	0	0	—	—	—	0	0	—	—
Montana	—	0	0	—	—	—	0	0	—	—
Nevada§	—	0	0	—	—	—	0	0	—	—
New Mexico§	—	0	0	—	—	—	0	0	—	—
Utah	—	0	0	—	—	—	0	0	—	—
Wyoming	—	0	0	—	—	—	0	0	—	—
Pacific	—	0	0	—	—	—	0	0	—	—
Alaska	—	0	0	—	—	—	0	0	—	—
California	—	0	0	—	—	—	0	0	—	—
Hawaii	—	0	0	—	—	—	0	0	—	—
Oregon§	—	0	0	—	—	—	0	0	—	—
Washington	—	0	0	—	—	—	0	0	—	—
American Samoa	U	0	0	U	U	U	0	0	U	U
C.N.M.I.	U	0	0	U	U	U	0	0	U	U
Guam	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—

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 2005 and 2006 are provisional.

† Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Infectious Diseases (ArboNet Surveillance).

§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS). Because of a technical problem with hardware, data from these states are not included this week.

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