

Nonfatal Traumatic Brain Injuries Related to Sports and Recreation Activities Among Persons Aged ≤ 19 Years — United States, 2001–2009

Traumatic brain injuries (TBIs) from participation in sports and recreation activities have received increased public awareness, with many states and the federal government considering or implementing laws directing the response to suspected brain injury (1,2). Whereas public health programs promote the many benefits of sports and recreation activities, those benefits are tempered by the risk for injury. During 2001–2005, an estimated 207,830 emergency department (ED) visits for concussions and other TBIs related to sports and recreation activities were reported annually, with 65% of TBIs occurring among children aged 5–18 years (3). Compared with adults, younger persons are at increased risk for TBIs with increased severity and prolonged recovery (4). To assess and characterize TBIs from sports and recreation activities among children and adolescents, CDC analyzed data from the National Electronic Injury Surveillance System–All Injury Program (NEISS-AIP) for the period 2001–2009. This report summarizes the results of that analysis, which indicated that an estimated 173,285 persons aged ≤ 19 years were treated in EDs annually for nonfatal TBIs related to sports and recreation activities. From 2001 to 2009, the number of annual TBI-related ED visits increased significantly, from 153,375 to 248,418, with the highest rates among males aged 10–19 years. By increasing awareness of TBI risks from sports and recreation, employing proper technique and protective equipment, and quickly responding to injuries, the incidence, severity, and long-term negative health effects of TBIs among children and adolescents can be reduced.

NEISS-AIP is operated by the U.S. Consumer Product Safety Commission and contains data on initial visits for all injuries in patients treated in U.S. hospital EDs. NEISS-AIP data are drawn from a nationally representative subsample of 66 of 100 NEISS hospitals that are selected as a stratified probability sample of hospitals in the United States and its territories that have a minimum of six beds and a 24-hour

ED (5). NEISS-AIP provides data on approximately 500,000 injury-related cases each year.

For this analysis, sports and recreation-related injuries included those injuries among children and adolescents aged ≤ 19 years that occurred during organized and unorganized sports and recreation activities (e.g., bicycling, skating, or playground activities). Each case was initially classified into one of 39 mutually exclusive sports and recreation-related groups on the basis of an algorithm using both the consumer products involved (e.g., bicycles, swing sets, or in-line skating equipment) and the narrative description of the incident obtained from the medical record. For the analysis, 30 of the categories were examined separately and the remaining nine were combined into the “other specified” category. Persons with sports and recreation-related injuries were classified as having a TBI if the primary body part injured was the head and the principal diagnosis was either concussion or internal organ injury. Sports and recreation-related cases were excluded if the injury was violence-related (e.g., intentional self-harm, assault,

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or legal intervention). Additionally, data regarding persons who were dead on arrival or who died in the ED were excluded.

Each case of sports and recreation–related injury was assigned a sample weight based on the inverse probability of selection; these weights were added to provide national estimates of sports and recreation–related injuries. National estimates were based on weighted data for 453,655 ED visits for all sports and recreation–related injuries (of which 36,230 were TBIs) during 2001–2009. Confidence intervals were calculated using a direct variance estimation procedure that accounted for the sample weights and complex sample design (5). Significance of trends over time was assessed using weighted least squares regression analysis.

During 2001–2009, an estimated 2,651,581 children aged ≤19 years were treated annually for sports and recreation–related injuries. Approximately 6.5%, or 173,285 of these injuries, were TBIs (Table 1). Approximately 71.0% of all sports and recreation–related TBI ED visits were among males; 70.5% were among persons aged 10–19 years. An estimated 2.5% of children and adolescents with sports and recreation–related injuries were hospitalized or transferred to other facilities, compared with an estimated 6.6% of those with sports and recreation–related TBIs. From 2001 to 2009, the estimated number of sports and recreation–related TBI visits to EDs increased 62%, from 153,375 to 248,418, and the estimated rate of TBI visits increased 57%, from 190 per 100,000 population to 298. During this same period, the estimated number of ED visits for TBIs that resulted in

What is already known on this topic?

Risk for traumatic brain injury (TBI) is inherent to participation in sports and recreation activities; compared with adults, children and adolescents have an increased risk for TBIs with increased severity and prolonged recovery.

What is added by this report?

From 2001 to 2009, the estimated number of sports and recreation–related TBI visits to emergency departments (EDs) increased from 153,375 to 248,418, and the estimated rate of TBI visits increased from 190 per 100,000 population to 298. The two most common sports and recreation activities associated with ED treatment for TBI were bicycling and playing football.

What are the implications for public health practice?

To minimize TBI in sports and recreation activities, prevention strategies should be implemented, including practicing skills, strength and conditioning, and sportsmanship, and using protective equipment (e.g., bicycle helmets). Secondary strategies include knowing the signs and symptoms of TBI, responding to suspected TBI appropriately, and permitting return to activity only after evaluation and clearance by an experienced health-care provider.

hospitalization ranged from 9,300 to 14,000 annually but did not show a significant trend over time.

Overall, the activities associated with the greatest estimated number of TBI-related ED visits were bicycling, football, playground activities, basketball, and soccer (Table 2). Activities for which TBI accounted for >10% of the injury

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TABLE 1. Estimated annual number and rate* of emergency department visits for all nonfatal injuries and nonfatal traumatic brain injuries (TBIs) related to sports and recreation activities among persons aged ≤19 years, by selected characteristics — National Electronic Injury Surveillance System—All Injury Program, United States, 2001–2009

| Characteristic | TBIs | | | All visits for sports and recreation-related injuries | | | % of all visits for injuries that were TBIs |
|----------------------------|----------------|------------|------------------|---|--------------|----------------------|---|
| | No.† | Rate | 95% CI | No.† | Rate | 95% CI | |
| Age group (yrs) | | | | | | | |
| ≤4 | 14,406 | 71 | (48–93) | 158,876 | 778 | (642–914) | 9.1 |
| 5–9 | 36,756 | 184 | (136–231) | 529,481 | 2,646 | (2,232–3,060) | 6.9 |
| 10–14 | 60,272 | 291 | (226–357) | 1,084,041 | 5,242 | (4,391–6,092) | 5.6 |
| 15–19 | 61,851 | 294 | (226–361) | 879,184 | 4,177 | (3,561–4,793) | 7.0 |
| Sex | | | | | | | |
| Male | 122,970 | 292 | (225–360) | 1,810,260 | 4,302 | (3,664–4,940) | 6.8 |
| Female | 50,310 | 126 | (96–155) | 840,838 | 2,098 | (1,757–2,439) | 6.0 |
| Disposition | | | | | | | |
| Treated and released | 159,010 | 194 | (148–239) | 2,569,161 | 3,127 | (2,645–3,610) | 6.2 |
| Hospitalized/Transferred | 11,477 | 14 | (9–19) | 67,277 | 82 | (66–98) | 17.1 |
| Observed | 1,954 | 2 | (1–4) | 4,946 | 6 | (4–9) | 39.5 |
| Other/Unknown [§] | 844 | 1 | (0.6–1.5) | 10,196 | 12 | (9–16) | 8.3 |
| Year | | | | | | | |
| 2001 | 153,375 | 190 | (137–242) | 2,784,375 | 3,440 | (3,057–3,823) | 5.5 |
| 2002 | 143,744 | 177 | (134–220) | 2,669,721 | 3,287 | (2,756–3,818) | 5.4 |
| 2003 | 152,882 | 188 | (138–237) | 2,647,990 | 3,250 | (2,673–3,826) | 5.8 |
| 2004 | 148,651 | 182 | (133–230) | 2,619,490 | 3,202 | (2,623–3,780) | 5.7 |
| 2005 | 162,371 | 198 | (148–248) | 2,592,682 | 3,159 | (2,621–3,697) | 6.3 |
| 2006 | 172,463 | 209 | (158–261) | 2,659,199 | 3,228 | (2,672–3,783) | 6.5 |
| 2007 | 184,424 | 223 | (168–277) | 2,637,890 | 3,184 | (2,621–3,746) | 7.0 |
| 2008 | 193,235 | 232 | (180–284) | 2,615,004 | 3,143 | (2,611–3,675) | 7.4 |
| 2009 | 248,418 | 298 | (216–379) | 2,637,881 | 3,162 | (2,590–3,734) | 9.4 |
| Total | 173,285 | 211 | (162–260) | 2,651,581 | 3,228 | (2,737–3,719) | 6.5 |

Abbreviation: CI = confidence interval.

* Per 100,000 population.

† Numbers might not sum to totals because of rounding.

§ Includes patients who left against medical advice or without being examined by attending physician, or those with unknown disposition.

ED visits for that activity included horseback riding (15.3%), ice skating (11.4%), golfing (11.0%), all-terrain vehicle riding (10.6%), and tobogganing/sledding (10.2%).

Activities associated with the greatest estimated number of sports and recreation-related TBI ED visits varied by age group and sex (Table 3). For males and females aged ≤9 years, TBIs most commonly occurred during playground activities or when bicycling. For persons aged 10–19 years, males sustained TBIs most often while playing football or bicycling, whereas females sustained TBIs most often while playing soccer or basketball, or while bicycling.

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Editorial Note

The findings in this report indicate that, from 2001 to 2009, the number of sports and recreation-related ED visits for TBI among persons aged ≤19 years increased 62% and the rate of TBI visits increased 57%. These increases might reflect an increased participation in sports and recreation, an increased incidence of TBI among participants, and/or an increased awareness of the importance of early diagnosis of TBI. Because the number of ED visits for TBIs that resulted in hospitalization did not trend upward significantly, increased awareness likely contributed to the increasing number of ED visits for TBI. Additionally, this report highlights that the rates of sports and recreation-related TBI visits were higher among persons aged 10–19 years than among younger persons. This finding might be associated with age-related increases in participation in higher-risk activities (e.g., competitive contact sports) or increases in participants' weight and speed, leading to greater momentum and force of impact (6).

TABLE 2. Estimated annual number of emergency department visits for all nonfatal injuries and nonfatal traumatic brain injuries (TBIs) related to sports and recreation activities among persons aged ≤19 years, by type of activity — National Electronic Injury Surveillance System—All Injury Program, United States, 2001–2009

| Activity | TBIs | | All visits for sports and recreation–related injuries | | % of all visits for injuries that were TBIs |
|------------------------------------|----------------|-----------------|---|------------------|---|
| | No.* | 95% CI (±) | No.* | 95% CI (±) | |
| Bicycling | 26,212 | (6,809) | 323,571 | (48,566) | 8.1 |
| Football | 25,376 | (4,845) | 351,562 | (47,448) | 7.2 |
| Playground | 16,706 | (5,198) | 210,979 | (37,050) | 7.9 |
| Basketball | 13,987 | (3,077) | 375,601 | (47,607) | 3.7 |
| Soccer | 10,436 | (3,736) | 135,988 | (39,167) | 7.7 |
| Baseball | 9,634 | (2,401) | 121,309 | (22,175) | 7.9 |
| All-terrain vehicle riding | 6,337 | (3,481) | 59,533 | (14,061) | 10.6 |
| Skateboarding | 6,004 | (2,455) | 101,577 | (31,907) | 5.9 |
| Swimming | 4,557 | (1,699) | 62,745 | (14,500) | 7.3 |
| Hockey† | 4,427 | (2,749) | 45,450 | (24,405) | 9.7 |
| Miscellaneous ball games§ | 4,065 | (1,477) | 66,543 | (15,306) | 6.1 |
| Horseback riding | 3,638 | (1,266) | 23,842 | (5,169) | 15.3 |
| Moped/Dirt bike riding¶ | 3,370 | (978) | 39,363 | (9,209) | 8.6 |
| Scooter riding | 3,336 | (779) | 54,561 | (11,784) | 6.1 |
| Gymnastics** | 3,319 | (948) | 71,248 | (13,881) | 4.7 |
| Combative sports†† | 2,981 | (786) | 50,639 | (10,941) | 5.9 |
| Softball | 2,735 | (756) | 49,345 | (10,002) | 5.5 |
| Exercising | 2,406 | (825) | 77,069 | (11,731) | 3.1 |
| Tobogganing/Sledding | 2,377 | (948) | 23,306 | (8,383) | 10.2 |
| Trampoline | 2,323 | (823) | 86,584 | (17,540) | 2.7 |
| Golf§§ | 1,887 | (609) | 17,078 | (3,510) | 11.0 |
| Ice skating | 1,673 | (631) | 14,608 | (4,241) | 11.4 |
| Volleyball | 1,396 | (483) | 34,513 | (7,568) | 4.0 |
| Amusement attractions¶¶ | 1,266 | (470) | 15,781 | (3,844) | 8.0 |
| Roller skating/Unspecified skating | 1,126 | (316) | 34,717 | (8,280) | 3.2 |
| Go-cart riding | 875 | (308) | 11,078 | (2,280) | 7.9 |
| In-line skating | 853 | (335) | 25,350 | (7,515) | 3.4 |
| Track and field | 449 | (171) | 15,553 | (3,003) | 2.9 |
| Racquet sports*** | 323 | (125) | 9,306 | (1,984) | 3.5 |
| Bowling | 153 | (74) | 6,574 | (1,524) | 2.3 |
| Other specified††† | 9,059 | (4,630) | 136,210 | (44,511) | 6.7 |
| Total | 173,285 | (40,284) | 2,651,581 | (403,378) | 6.5 |

Abbreviation: CI = confidence interval.

* Estimates might not sum to totals because of rounding.

† Includes ice hockey, field hockey, roller hockey, and street hockey.

§ Includes lacrosse, rugby, handball, and tetherball.

¶ Includes other two-wheeled, powered, off-road vehicles and dune buggies.

** Includes cheerleading and dancing.

†† Includes boxing, wrestling, martial arts, and fencing.

§§ Includes injuries related to golf carts.

¶¶ Includes rides and water slides (not swimming pool slides).

*** Includes tennis, badminton, and squash.

††† Includes water skiing, surfing, personal watercraft, snow skiing, snowmobiling, snowboarding, camping, fishing, archery, darts, table tennis, nonpowder/BB guns, and billiards.

Risk for TBI is inherent to physical activity and can occur during any activity at any age. To minimize TBI in sports and recreation activities, primary and secondary prevention strategies should be implemented. Primary prevention strategies include: 1) using protective equipment (e.g., a bicycle helmet) that is appropriate for the activity or position, fits correctly, is well maintained, and is used consistently and correctly; 2) coaching appropriate sport-specific skills with an emphasis on safe practices and proper technique; 3) adhering to rules of play with good sportsmanship and strict officiating; and 4) attention to strength and conditioning (7). Secondary

prevention strategies include increasing awareness of the signs and symptoms of TBI and recognizing and responding quickly and appropriately to suspected TBI.

Participants suspected of having a TBI should be removed from play, never returned to play the same day, and allowed to return only after evaluation and clearance by a health-care provider who is experienced in diagnosing and managing TBI (4). Return to play is a critical decision because children and adolescents are at increased risk for both repeat concussion during sports and recreation–related activities and for long-term sequelae, delayed recovery, and cumulative consequences

TABLE 3. Five most common activities associated with emergency department visits for nonfatal traumatic brain injuries related to sports or recreation activities, by age group and sex — National Electronic Injury Surveillance System—All Injury Program, United States, 2001–2009

| Sex/Rank | Age group (yrs) | | | | |
|----------------|-----------------------------|-----------------------------|---------------------------------|--|---------------------------------|
| | ≤4 No. (%) | 5–9 No. (%) | 10–14 No. (%) | 15–19 No. (%) | ≤19 total No. (%) |
| Male | | | | | |
| 1 | Playground 3,187 (35.3*) | Bicycling 5,997 (23.6) | Football 8,988 (20.7) | Football 13,667 (30.3) | Football 24,431 (19.9) |
| 2 | Bicycling 1,608 (17.8) | Playground 4,790 (18.9) | Bicycling 8,302 (19.1) | Bicycling 4,377 (9.7) | Bicycling 20,285 (16.5) |
| 3 | Baseball 656 (7.3) | Baseball 2,227 (8.8) | Basketball 4,009 (9.2) | Basketball 4,049 (9.0) | Playground 9,568 (7.8) |
| 4 | Scooter riding 460 (5.1) | Football 1,657 (6.5) | Baseball 3,061 (7.0) | Soccer 3,013 (6.7) | Basketball 9,372 (7.6) |
| 5 | Swimming 429 (4.8) | Basketball 1,133 (4.5) | Skateboarding 2,613 (6.0) | ATV riding 2,546 (5.6) | Baseball 8,030 (6.5) |
| Other | 2,680 (29.7) | 9,558 (37.7) | 16,476 (37.9) | 17,488 (38.7) | 51,284 (41.7) |
| Total | 9,020 | 25,362 | 43,449 | 45,140 | 122,970 |
| Rate† (95% CI) | 86 (61–112) | 248 (182–313) | 410 (316–504) | 417 (323–512) | 292 (225–360) |
| Female | | | | | |
| 1 | Playground 2,297 (47.8) | Playground 3,455 (30.3) | Bicycling 2,051 (12.2) | Soccer 2,678 (16.0) | Playground 7,136 (14.2) |
| 2 | Bicycling 775 (14.4) | Bicycling 2,361 (20.7) | Basketball 1,863 (11.1) | Basketball 2,446 (14.6) | Bicycling 5,928 (11.8) |
| 3 | Baseball 321 (6.0) | Baseball 541 (4.7) | Soccer 1,843 (11.0) | Gymnastics [§] 1,513 (9.1) | Soccer 4,767 (9.5) |
| 4 | Trampoline 261¶ (4.8) | Scooter riding 525 (4.6) | Horseback riding 1,301 (7.7) | Softball 1,171 (7.0) | Basketball 4,615 (9.2) |
| 5 | Swimming 257 (4.8) | Swimming 504 (4.4) | Playground 1,041 (6.2) | Horseback riding 1,028 (6.2) | Horseback riding 2,853 (5.7) |
| Other | 1,275 (23.7) | 4,006 (35.2) | 8,724 (51.9) | 7,872 (47.1) | 25,011 (49.7) |
| Total | 5,386 | 11,391 | 16,824 | 16,709 | 50,310 |
| Rate† (95% CI) | 54 (34–74) | 117 (87–146) | 167 (130–203) | 163 (122–204) | 126 (96–155) |

Abbreviations: ATV = all-terrain vehicle; CI = confidence interval.

* Percentages might not sum to 100% because of rounding.

† Per 100,000 population.

§ Includes cheerleading and dancing.

¶ Estimate might be unstable because the coefficient of variation is >30%.

of multiple TBIs (e.g., increased severity of future TBIs and increased risk for depression and dementia) (8,9).

To promote the prevention of, recognition of, and appropriate responses to TBI, CDC has developed the Heads Up initiative, a program that provides concussion and mild TBI education to specific audiences such as health-care providers, coaches, athletic trainers, school nurses, teachers, counselors, parents, and student athletes. The newest addition to this initiative is Heads Up to Clinicians: Addressing Concussion in Sports Among Kids and Teens, an online course for health-care professionals that was developed with support from the CDC Foundation and the National Football League.* This course, which offers free continuing education credits, addresses the appropriate diagnosis, management, and referral of TBI, and education about TBI that is critical for helping young athletes

with concussion achieve optimal recovery and reduce or avoid significant sequelae.

The findings in this report are subject to at least five limitations. First, injury rates for specific activities could not be calculated because of a lack of national participation and exposure data. Therefore, the estimates cannot be used to calculate the relative risks for TBI associated with any particular sport or activity. Second, NEISS-AIP only includes injuries recorded by hospital EDs and excludes persons who sought care in other settings or who did not seek care. Therefore, this report underestimates the actual burden of TBI from sports and recreation among children and adolescents. Third, NEISS-AIP includes only the principal diagnosis and primary body part injured and therefore cannot capture TBIs that were secondary diagnoses. For example, skull fractures, which commonly involve TBI, are listed as fractures of the head, and not as

* Available at <http://preventingconcussions.org>.

TBIs, resulting in underestimation of the number of sports and recreation–related TBI ED visits. Fourth, NEISS-AIP narrative descriptions do not provide detailed information about injury circumstances (e.g., whether the activity was organized, whether the injury occurred during training or competition, or whether protective equipment was used), so NEISS-AIP cannot be used to assess the impact of these factors. Finally, the available data do not allow for assessment of whether the increased number of ED visits from 2001 to 2009 resulted from an increase in incidence or an increase in awareness of TBI and concussion, or from shifts in location of medical care, or other reasons.

The frequency of TBIs and the wide variety of activities associated with them underscore the need to prevent, recognize, and respond to sports and recreation–related TBIs. Additional information and resources regarding TBI and the Heads Up initiative, including tool kits and on-line trainings, are available at <http://www.cdc.gov/concussion>.

References

1. Schatz P, Moser RS. Current issues in pediatric sports concussion. *Clin Neuropsychol* 2011;25:1042–57.
2. Zhao L, Han W, Steiner C. Sports related concussions, 2008. Statistical brief no. 114. Rockville, MD: Agency for Healthcare Research and Quality, Healthcare Cost and Utilization Project; 2011. Available at <http://www.hcup-us.ahrq.gov/reports/statbriefs/sb114.jsp>. Accessed October 5, 2011.
3. CDC. Nonfatal traumatic brain injuries from sports and recreation activities—United States, 2001–2005. *MMWR* 2007;56:733–7.
4. McCrory P, Meeuwisse W, Johnston K, et al. Consensus statement on concussion in sport—the 3rd International Conference on Concussion in Sport, held in Zurich, November 2008. *J Clin Neurosci* 2009;16:755–63.
5. Schroeder T, Ault K, eds. The NEISS sample (design and implementation): 1997 to present. Bethesda, MD: US Consumer Product Safety Commission; 2001. Available at <http://www.cpsc.gov/neiss/2001d011-6b6.pdf>. Accessed October 4, 2011.
6. Proctor MR, Cantu RC. Head and neck injuries in young athletes. *Clin Sports Med* 2000;19:693–715.
7. CDC. Concussion in sports: what can I do to prevent concussions? Atlanta, GA: US Department of Health and Human Services, CDC; 2011. Available at <http://www.cdc.gov/concussion/sports/prevention.html>. Accessed October 3, 2011.
8. Buzzini SR, Guskiewicz KM. Sport-related concussion in the young athlete. *Curr Opin Pediatr* 2006;18:376–82.
9. Langlois JA, Rutland-Brown W, Wald MM. The epidemiology and impact of traumatic brain injury. *J Head Trauma Rehabil* 2006;21:375–8.

Acute Illness and Injury from Swimming Pool Disinfectants and Other Chemicals — United States, 2002–2008

Swimming pools require disinfectants and other chemicals to maintain water quality and prevent swimmers from acquiring infections (1). When these chemicals are stored or used improperly or when they are handled or applied by persons not using appropriate personal protective equipment (PPE), illness or injury can result (2). To assess the frequency of illness and injury related to pool chemicals, CDC analyzed data for the period 2002–2008 from six states participating in the Sentinel Event Notification System for Occupational Risk (SENSOR)–Pesticides surveillance program and from the National Electronic Injury Surveillance System (NEISS). This report describes the results of that analysis, which identified 584 cases of illness or injury associated with pool chemicals in the six SENSOR–Pesticides states and indicated an estimated national total of 28,071 cases (based on 688 NEISS cases) during that period. For the 77% of state cases and 49% of NEISS cases that had sufficient information to determine factors contributing to illness or injury, the most common contributing factors included mixing incompatible products, spills and splashes of chemicals, lack of appropriate PPE use, and dust clouds or fumes generated by opening a chemical container. Adhering to existing CDC recommendations can prevent some of the reported illnesses and injuries, but additional measures (e.g., improving package design to limit the release of dust clouds and fumes when a container is opened, making containers child-proof, and making product labels easier to understand) might reduce them further.

In the six SENSOR–Pesticides states (California, Iowa, Louisiana, Michigan, North Carolina, and Texas),* a case of poisoning associated with pool disinfectants was defined as two or more acute adverse health effects resulting from exposure to any pool disinfectant. Cases were categorized by certainty of exposure, reported health effects, and consistency of health effects with known toxicology of the chemical (3)

* Currently, 12 states conduct surveillance of pesticide-related illness and injury, and these states comprise the SENSOR–Pesticides program. Of these states, only California, Louisiana, Michigan, and Texas collected data on illnesses and injuries related to disinfectants for the period 2002–2008. The North Carolina Department of Health and Human Services Division of Public Health began collecting data on illnesses and injuries related to disinfectants in 2008. The Iowa Department of Public Health has a collaborative relationship with the poison control centers in Iowa and was able to identify pesticide poisoning cases associated with swimming pool disinfectants for the period 2005–2008. The California Department of Public Health provided data for the period 2006–2008 (14 cases), and the California Department of Pesticide Regulation provided data for the period 2002–2008 (292 cases). The numbers of cases contributed by each state were as follows: California, 306; Louisiana, 138; Texas, 57; Michigan, 43; North Carolina, 25; and Iowa, 15.

(Table 1). State cases categorized as definite, probable, possible, and suspicious and California Department of Pesticide Regulation cases categorized as definite, probable, and possible were included in the analysis. NEISS cases[†] were those involving exposure to swimming pool chemicals (product code 938). State cases were excluded if the event occurred during crop farming activities. Neither state nor NEISS cases were included if the illness or injury was not directly caused by pool chemicals.[§] Data were analyzed for demographic characteristics, event location, health effects, outcomes (e.g., hospitalization), and factors contributing to illness or injury. Data from the SENSOR–Pesticides states also were analyzed for reporting source, illness or injury severity,[¶] chemical toxicity,** active ingredients, work-relatedness, and time lost from work.

For the period 2002–2008, a total of 584 cases were identified in the six SENSOR–Pesticides states (Table 2); most cases occurred in California (306 [52%]). Most cases reported by the states (65%) were identified through poison control centers, followed by cases identified from workers' compensation claims (28%). The number of cases from NEISS for the period 2002–2008 was 688, which yields a weighted national estimate of 28,071 cases (Table 2). A substantial

[†] NEISS is a probability sample of emergency departments based on a sampling frame of 100 emergency departments in the United States and its territories. Each case is assigned a weight based on the sample design. The national estimate is the sum of weights.

[§] NEISS cases that did not meet the case definition for inclusion in this analysis did not directly involve the pool chemical, did not have acute symptoms related to pool chemicals, or involved intentional exposure (e.g., drug use). Examples of cases that were excluded include a case in a person who injured his back while lifting a bucket of pool chlorine, a case in a person who sprained their ankle when they fell into the pool while adding pool chemicals to the pool water, cases in persons who had symptoms because they were drowning, cases in persons who lived in a home where chlorine, fertilizer, or muriatic acid was stored but did not have any symptoms, and cases in other persons whose illnesses or injuries did not directly involve pool chemicals or for whom no symptoms after exposure were reported. A total of 55 NEISS cases with product code 938 occurred during 2002–2008 that did not meet the case definition for this analysis. If these cases were included, the national estimate for illnesses and injuries associated with pool chemicals during that period would be 30,235 cases.

[¶] Severity of illness or injury of cases was categorized into four groups using standardized criteria for state-based surveillance programs. In low-severity cases, illness or injury usually resolves without treatment and <3 days are lost from work. In moderate-severity cases, illness or injury is non-life-threatening but requires medical treatment and <6 days are lost from work. In high-severity cases, illness or injury is life-threatening and requires hospitalization and >5 days are lost from work. The category for fatal poisonings is death.

** The toxicity category of a pesticide is determined by the Environmental Protection Agency under guidance from Code of Federal Regulations Title 40 Part 156. Pesticides in category I have the greatest toxicity, and pesticides in category IV have the least toxicity.

TABLE 1. Case classification matrix for acute illnesses and injuries associated with pool disinfectants — six Sentinel Event Notification System for Occupational Risk (SENSOR)–Pesticides states, 2002–2008

| Classification criteria [†] | Classification category* | | | | |
|--------------------------------------|--------------------------|----------|----------|------------|--------|
| | Definite | Probable | Possible | Suspicious | |
| Exposure | 1 | 1 | 2 | 2 | 1 or 2 |
| Health effects | 1 | 2 | 1 | 2 | 1 or 2 |
| Causal relationship | 1 | 1 | 1 | 1 | 4 |

Source: CDC. Case definition for acute pesticide-related illness and injury cases reportable to the national public health surveillance system. Cincinnati, OH: US Department of Health and Human Services, CDC, National Institute for Occupational Safety and Health; 2005. Available at http://www.cdc.gov/niosh/topics/pesticides/pdfs/casedef2003_revapr2005.pdf.

* Case classifications are slightly different between the SENSOR-Pesticides program and the California Department of Pesticide Regulation (CDPR) Pesticide Illness Surveillance system. CDPR classifies cases as definite, probable, and possible based on the relationship between exposure and health effects: definite = both physical (e.g., disinfectant residue on clothing) and medical evidence document exposure and consequent health effects; probable = limited or circumstantial evidence supports a relationship to pesticide exposure; and possible = evidence neither supports nor contradicts a relationship. Additional information available at <http://www.cdpr.ca.gov/docs/whs/pisp/brochure.pdf>.

[†] Cases are classified as definite, probable, possible, or suspicious based on scores for exposure, health effects, and causal relationship. Exposure score: 1 = laboratory, clinical, or environmental evidence for exposure; 2 = evidence of exposure based solely on written or oral report from the patient, a witness, or applicator. Health effects scores: 1 = two or more new postexposure signs or laboratory findings reported by a licensed health professional; 2 = two or more postexposure symptoms reported by the patient. Causal relationship scores: 1 = the observed health effects are consistent with the known toxicology of the disinfectant; 4 = insufficient toxicologic information available to determine the causal relationship.

proportion of cases were in children aged <15 years (25% of state cases and 34% of NEISS cases). Cases were most frequently poisonings at private residences (48% of state cases and 56% of NEISS cases) followed by nonmanufacturing facilities, which included hotels, health clubs, and other facilities (28% of state cases and 14% of NEISS cases). Symptoms most frequently reported were respiratory symptoms, such as cough, upper respiratory irritation, and dyspnea (65% of state cases and 24% of NEISS cases), eye injuries (33% of state cases and 42% of NEISS cases), and skin injuries (18% of state cases and 19% of NEISS cases). In the six SENSOR-Pesticides states, the active ingredients most frequently associated with acute illness or injury were sodium hypochlorite (31%), triazine compounds (22%), and calcium hypochlorite (16%). Most of the disinfectants were toxicity category I (87%). The majority of state cases (85%) involved low-severity illnesses or injuries. Forty percent of state cases were work-related, 9% of which involved loss of 1 or more days from work. A small proportion of cases involved hospitalization (2% of state cases and 4% of NEISS cases).

Factors most frequently associated with illness or injury included mixing incompatible products (21% of state cases and 6% of NEISS cases), spills and splashes of pool chemicals (18% of state cases and 33% of NEISS cases), and dust clouds

What is already known on this topic?

Swimming pools require frequent application of disinfectants and other pool chemicals, and exposure to these chemicals can cause illness and injury.

What is added by this report?

During 2002–2008, an estimated 28,071 cases of illness or injury associated with pool disinfectants and other pool chemicals occurred nationally (an average of 4,010 cases per year). Most cases occurred at private residences. In the six states participating in the Sentinel Event Notification System for Occupational Risk (SENSOR)–Pesticides surveillance program, 40% of cases were work-related, 9% of which involved loss of 1 or more days from work. The most frequently identified causes of illness or injury were mixing incompatible chemicals, spills and splashes of pool chemicals, lack of appropriate personal protective equipment (PPE) use, lack of proper training and supervision, and dust clouds or fumes generated by opening a pool chemical container.

What are the implications for public health practice?

Some of the identified illnesses and injuries resulted from failure to follow CDC recommendations to prevent illnesses and injuries associated with pool chemicals. Additional measures to reduce exposures to pool chemicals that are suggested by these findings include altering pool chemical container design and modifying labels to make them easier to understand, including using pictograms to depict appropriate PPE use.

or fumes generated by opening a chemical container (15% of state and NEISS cases) (Table 3). Factors that contributed to worker illness or injury included spills and splashes of liquid or dust (33%), lack of appropriate PPE use (24%), and equipment failure (19%). Among state and NEISS cases, 9% occurred when a child gained access to chemicals not securely stored, and 6% of state cases and 2% of NEISS cases involved other improper storage. Of cases that involved storage within reach of a child, 14% of state cases involved children aged 4–11 years who opened containers.

Five high-severity cases were identified by the six SENSOR-Pesticides states. One case occurred in a man aged 39 years in Louisiana with no pertinent medical history. He was in a public recreational swimming pool when chlorine was added to shock chlorinate it. He inhaled fumes and developed nausea, headache, cough, upper respiratory irritation, dyspnea, wheezing, hypoxia, and tachycardia. He was diagnosed with chlorine inhalation and ingestion, and was hospitalized for 4 days. The second case occurred in a boy aged 5 years in Louisiana who stuck his face in a bucket of pool shock treatment (65% calcium hypochlorite). Cyanosis and dyspnea were documented, and the boy was admitted to the critical-care unit, where he was hospitalized for 4 days. The third case involved a previously healthy woman aged 61

TABLE 2. Number and percentage of acute illnesses and injuries associated with pool chemicals, by selected characteristics — six Sentinel Event Notification System for Occupational Risk (SENSOR)–Pesticides states and the National Electronic Injury Surveillance System (NEISS), 2002–2008*

| Characteristic | SENSOR states | | NEISS | | |
|----------------------------|---------------|------------------|------------|----------------------------|------------------|
| | No. | (%) [†] | No. | U.S. estimate [§] | (%) [†] |
| Total cases | 584 | (100) | 688 | 28,071 | — |
| Year of exposure | | | | | |
| 2002 | 103 | (18) | 95 | 3,753 | (13) |
| 2003 | 49 | (8) | 116 | 4,813 | (17) |
| 2004 | 42 | (7) | 64 | 3,111 | (11) |
| 2005 | 45 | (8) | 121 | 4,015 | (14) |
| 2006 | 97 | (17) | 79 | 3,507 | (12) |
| 2007 | 99 | (17) | 109 | 4,508 | (16) |
| 2008 | 149 | (26) | 104 | 4,364 | (16) |
| Age group (yrs) | | | | | |
| 0–5 | 43 | (7) | 109 | 3,619 | (13) |
| 6–14 | 106 | (18) | 186 | 5,960 | (21) |
| 15–24 | 121 | (21) | 89 | 3,580 | (13) |
| 25–44 | 175 | (30) | 171 | 8,389 | (30) |
| ≥45 | 125 | (21) | 133 | 6,523 | (23) |
| Unknown | 14 | (2) | — | — | — |
| Sex | | | | | |
| Male | 360 | (62) | 388 | 15,986 | (57) |
| Female | 218 | (37) | 300 | 12,086 | (43) |
| Unknown | 6 | (1) | — | — | — |
| Status | | | | | |
| Definite | 89 | (15) | — | — | — |
| Probable | 246 | (42) | — | — | — |
| Possible | 246 | (42) | — | — | — |
| Suspicious | 3 | (1) | — | — | — |
| Work-related | | | | | |
| Yes | 233 | (40) | — | — | — |
| Lost time from work | | | | | |
| Yes | 51 | (9) | — | — | — |
| Reporting source | | | | | |
| Physician report | 32 | (5) | — | — | — |
| Poison control center | 377 | (65) | — | — | — |
| Workers' compensation | 165 | (28) | — | — | — |
| State health department | 4 | (1) | — | — | — |
| Other | 6 | (1) | — | — | — |
| Event location | | | | | |
| Agriculture [¶] | 1 | (<1) | — | — | — |
| Private residence | 281 | (48) | 339 | 15,699 | (56) |
| Institutions | 29 | (5) | 3 | 115 | (<1) |
| Manufacturing facility | 2 | (<1) | — | — | — |
| Nonmanufacturing facility | 161 | (28) | 145 | 4,021 | (14) |
| Other | 68 | (12) | — | — | — |
| Unknown/Missing | 42 | (7) | 201 | 8,236 | (29) |
| Toxicity** | | | | | |
| I-Danger | 510 | (87) | — | — | — |
| II-Warning | 5 | (1) | — | — | — |
| III-Caution | 6 | (1) | — | — | — |
| Missing/Unknown | 63 | (11) | — | — | — |

TABLE 2. (Continued) Number and percentage of acute illnesses and injuries associated with pool chemicals, by selected characteristics — six Sentinel Event Notification System for Occupational Risk (SENSOR)–Pesticides states and the National Electronic Injury Surveillance System (NEISS), 2002–2008*

| Characteristic | SENSOR states | | NEISS | | |
|--|---------------|------------------|-------|----------------------------|------------------|
| | No. | (%) [†] | No. | U.S. estimate [§] | (%) [†] |
| Active ingredient^{†† §§} | | | | | |
| Sodium hypochlorite | 189 | (31) | — | — | — |
| Triazines | 133 | (22) | — | — | — |
| Calcium hypochlorite | 99 | (16) | — | — | — |
| Chlorine | 72 | (12) | — | — | — |
| Other | 111 | (18) | — | — | — |
| Illness severity | | | | | |
| Fatal | — | — | — | — | — |
| High | 5 | (1) | — | — | — |
| Moderate | 78 | (13) | — | — | — |
| Low | 499 | (85) | — | — | — |
| Missing/Unknown | 2 | (<1) | — | — | — |
| Body part/System affected^{†† ¶¶} | | | | | |
| Respiratory | 379 | (65) | 193 | 6,846 | (24) |
| Eye | 194 | (33) | 271 | 11,813 | (42) |
| Skin | 103 | (18) | 125 | 5,216 | (19) |
| Neurologic | 94 | (16) | 24 | 732 | (3) |
| Gastrointestinal | 95 | (16) | 59 | 1,686 | (6) |
| Cardiovascular | 28 | (5) | 6 | 256 | (1) |
| Other | 18 | (3) | 6 | 333 | (1) |
| Unknown | — | — | 57 | 2,592 | (9) |
| Hospitalization | | | | | |
| Yes | 14 | (2) | 32 | 1,062 | (4) |

* Case classifications are slightly different between the SENSOR-Pesticides program and the California Department of Pesticide Regulation (CDPR) Pesticide Illness Surveillance system. CDPR classifies cases as definite, probable, and possible based on the relationship between exposure and health effects: definite = both physical (e.g., disinfectant residue on clothing) and medical evidence document exposure and consequent health effects; probable = limited or circumstantial evidence supports a relationship to pesticide exposure; and possible = evidence neither supports nor contradicts a relationship. Additional information available at <http://www.cdpr.ca.gov/docs/whs/pisp/brochure.pdf>.

[†] Percentages might not sum to 100 because of rounding.

[§] Weighted national estimate.

[¶] The injury occurred when a horse ranch maintenance worker applied chlorine to a pool for horses.

** Toxicity categories are classified by the Environmental Protection Agency based on established criteria, with I being the most toxic and IV the least.

^{††} The total might exceed the number of cases because multiple active ingredients or body parts/systems might have been involved in a single case.

^{§§} Information was not available to identify active ingredients in 19 cases in the six SENSOR-Pesticides states.

^{¶¶} Symptoms were derived from narratives of the illness or injury included in the NEISS dataset and were coded using SENSOR criteria. Narratives that lacked specific symptoms were coded as "Unknown."

TABLE 3. Number and percentage of acute illnesses and injuries associated with pool chemicals, by contributing factor — six Sentinel Event Notification System for Occupational Risk (SENSOR)–Pesticides states and the National Electronic Injury Surveillance System (NEISS), 2002–2008*

| Contributing factor [†] | SENSOR states | | | | | | NEISS [§] | | |
|---|---------------|------|---------|------|------------|------|--------------------|-----------------|------|
| | Total | | Workers | | Nonworkers | | No.¶ | U.S. estimate** | (%) |
| | No.¶ | (%) | No.¶ | (%) | No.¶ | (%) | | | |
| One or more contributing factors identified ^{††} | 451 | — | 183 | — | 267 | — | 335 | 14,412 | — |
| Mixing incompatible products | 94 | (21) | 21 | (11) | 73 | (27) | 21 | 832 | (6) |
| Spill or splash of liquid or dust | 80 | (18) | 61 | (33) | 19 | (7) | 90 | 4,728 | (33) |
| Required PPE not worn/PPE inadequate | 75 | (17) | 44 | (24) | 31 | (12) | — | — | — |
| Not properly trained or supervised | 68 | (15) | 19 | (10) | 49 | (18) | — | — | — |
| Application equipment failure | 50 | (11) | 35 | (19) | 15 | (6) | 19 | 301 | (2) |
| Dust cloud or fumes generated upon opening container | 68 | (15) | 13 | (7) | 55 | (21) | 39 | 2,164 | (15) |
| Stored within reach of child | 42 | (9) | — | — | 42 | (16) | 41 | 1,359 | (9) |
| Other improper storage | 29 | (6) | 13 | (7) | 16 | (6) | 9 | 343 | (2) |
| Exposure to fumes/dust during application | 30 | (7) | 10 | (5) | 20 | (7) | 31 | 1,636 | (11) |
| Illegal pesticide used/Illegal dumping | 12 | (3) | 12 | (7) | — | — | — | — | — |
| Inadequate ventilation | 12 | (3) | 5 | (3) | 7 | (3) | 41 | 946 | (7) |
| Decontamination not adequate or timely | 8 | (2) | 7 | (4) | 1 | (<1) | 8 | 329 | (2) |
| Early reentry | 5 | (1) | 2 | (1) | 3 | (1) | 25 | 1,369 | (10) |
| Persons in treated area | 8 | (2) | 2 | (1) | 6 | (2) | 10 | 479 | (3) |
| Excessive application | 10 | (2) | 4 | (2) | 6 | (2) | 23 | 817 | (6) |
| Label violation not otherwise specified | 8 | (2) | 3 | (2) | 5 | (2) | 1 | 77 | (1) |
| Person poisoned but no label violation identified | 8 | (2) | 6 | (3) | 2 | (1) | — | — | — |

Abbreviation: PPE = personal protective equipment.

* Case classifications are slightly different between the SENSOR-Pesticides program and the California Department of Pesticide Regulation (CDPR) Pesticide Illness Surveillance system. CDPR classifies cases as definite, probable, and possible based on the relationship between exposure and health effects: definite = both physical (e.g., disinfectant residue on clothing) and medical evidence document exposure and consequent health effects; probable = limited or circumstantial evidence supports a relationship to pesticide exposure; and possible = evidence neither supports nor contradicts a relationship. Additional information available at <http://www.cdpr.ca.gov/docs/whs/pisp/brochure.pdf>.

[†] For 133 cases (23%) in the six SENSOR-Pesticides states and 353 (51%) cases in NEISS, information was not available to determine contributing factors.

[§] Because there was no product-identifying information available in NEISS, label information about directions for use and required PPE could not be determined.

[¶] A case can have multiple contributing factors that resulted in illness or injury; thus, the sum of the categories exceed the total number of cases with sufficient information to determine contributing factors, and the total percentage exceeds 100%.

** Weighted national estimate.

^{††} The denominator for the proportions was the total cases that had sufficient information to determine contributing factors.

years in California who mixed two pool chemicals, calcium hypochlorite and cyanuric acid, in her kitchen sink. The chemicals reacted and created fumes in the poorly ventilated kitchen. She reported cough, upper respiratory irritation, and dyspnea, and was treated with oxygen. The next day, she was wheezing and was diagnosed with pulmonary edema and hospitalized for 6 days. The fourth case occurred in a woman aged 42 years in Iowa who had asthma. She inhaled dust while applying chlorinating granules, resulting in cough, dyspnea, and lower respiratory pain and irritation. She received a diagnosis of asthma exacerbation caused by chemical exposure and was admitted to an intensive-care unit, where she was hospitalized for 4 days. The fifth case occurred in a woman aged 54 years in Michigan who had allergies. She was exposed to chlorine fumes when an excessive amount of chlorine was added to a pool in which she was swimming. She had cough, dyspnea, wheezing, and vomiting. She received a diagnosis of chemical pneumonitis and was hospitalized for 7 days.

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Editorial Note

Chlorine-based disinfectants are the most commonly used disinfectants for treating swimming pool water. A total of 36 pool chemical-associated events were reported in New York during 1983–2007, of which 31 events were attributed to

chlorine gas exposure, which most often resulted from mixing sodium hypochlorite solutions (e.g., household chlorine bleach) with acid (4). In England and Wales, 13 events involving pool chemicals were reported during June–October 2007, of which 10 events involved sodium hypochlorite and nine events resulted from equipment failure or mixing incompatible chemicals (5). Several individual cases of illness or injury attributed to pool disinfectants have been reported and include respiratory illness and eye and skin injury (6,7).

The findings in this report are subject to at least five limitations. First, illnesses and injuries related to pool chemicals likely are underreported. Case identification by states relies on a passive surveillance system, so cases in persons experiencing minor symptoms who do not seek medical treatment or advice from poison control centers are not reported. Also, cases reported in NEISS only involve persons who sought treatment in a hospital emergency department. Second, cases might have been excluded because insufficient information was provided to meet the case definition. Third, symptoms for illness or injury associated with pool chemicals are nonspecific and not pathognomonic, so false-positives might have occurred. Fourth, some cases that were not work-related might have been missed in Iowa, Louisiana, Michigan, North Carolina, and Texas because CDC's National Institute for Occupational Safety and Health advises these states to prioritize work-related cases when staffing limitations preclude follow-up of all cases. Finally, the NEISS dataset had limited information, which for some cases precluded the identification of symptoms and contributing factors. Furthermore, no product-identifying information was available in NEISS. Thus, whether illnesses and injuries were caused by nondisinfectant pool chemicals or whether noncompliance with product labels contributed to the reported illnesses and injuries could not be determined. However, most NEISS cases are thought to be disinfectant-related, based on the pool chemical–associated events reported in New York and England and Wales (4,5). Pool disinfectant byproducts, such as chloramines, are responsible for many illnesses and injuries reported (8–10). No cases from the six SENSOR-Pesticides states were attributed to chloramines; however, chloramines might have contributed to some NEISS injuries, but their involvement could not be discerned given the limited product and event information.

Current CDC recommendations to reduce illness and injury from pool chemicals, including disinfectants, are

available at <http://www.cdc.gov/healthywater/swimming/pools/preventing-pool-chemical-injuries.html>. These recommendations address contributing factors related to application equipment failure, storage within reach of a child and other improper storage, illegal dumping, and inadequate PPE used by workers. In addition to the existing CDC recommendations, the findings described in this report suggest that pool chemical manufacturers should design containers so that dust clouds or fumes are minimized when containers are opened and should make the containers child-proof. Label information on appropriate PPE usage should be easy to find and understand; the addition of pictograms depicting appropriate PPE might increase the likelihood of correct use. Instructions for consumers to point the container away from their face while opening might also reduce illness and injury from pool chemicals.

References

1. World Health Organization. Guidelines for safe recreational waters. Volume 2: swimming pools and similar recreational-water environments. Geneva, Switzerland: World Health Organization; 2006. Available at http://www.who.int/water_sanitation_health/bathing/bathing2. Accessed September 26, 2011.
2. CDC. Healthy swimming/recreational water: recommendations for preventing pool chemical-associated injuries. US Department of Health and Human Services, CDC; 2011. Available at <http://www.cdc.gov/healthywater/swimming/pools/preventing-pool-chemical-injuries.html>. Accessed September 26, 2011.
3. Calvert GM, Mehler LN, Alsop J, De Vries A, Besbelli N. Surveillance of pesticide-related illness and injury in humans. In: Krieger R, ed. Hayes' handbook of pesticide toxicology. 3rd ed. London, England: Academic Press; 2010:1313–69.
4. CDC. Pool chemical–associated health events in public and residential settings—United States, 1983–2007. *MMWR* 2009;58:489–93.
5. Thomas HL, Murray V. Review of acute chemical incidents involving exposure to chlorine associated with swimming pools in England and Wales, June–October 2007. *J Public Health (Oxf)* 2008;30:391–7.
6. Vohra R, Clark RF. Chlorine-related inhalation injury from a swimming pool disinfectant in a 9-year-old girl. *Pediatr Emerg Care* 2006;22:254–7.
7. Martinez TT, Long C. Explosion risk from swimming pool chlorinators and review of chlorine toxicity. *J Toxicol Clin Toxicol* 1995; 33:349–54.
8. CDC. Ocular and respiratory illness associated with an indoor swimming pool—Nebraska, 2006. *MMWR* 2007;56:929–32.
9. Dang B, Chen L, Mueller C, et al. Ocular and respiratory symptoms among lifeguards at a hotel indoor waterpark resort. *J Occup Environ Med* 2010;52:207–13.
10. Bowen AB, Kile JC, Otto C, et al. Outbreaks of short-incubation ocular and respiratory illness following exposure to indoor swimming pools. *Environ Health Perspect* 2007;115:267–71.

Health Plan Implementation of U.S. Preventive Services Task Force A and B Recommendations — Colorado, 2010

The Patient Protection and Affordable Care Act (PPACA) is aimed at expanding access to health care and lowering cost barriers to seeking and receiving care, particularly high-value preventive care. The legislation requires Medicare and all qualified commercial health plans (except grandfathered individual and employer-sponsored plans) to cover routine preventive services graded A and B by the U.S. Preventive Services Task Force (USPSTF) at no cost to the consumer, along with recommended immunizations and additional preventive care and screenings for women (1). In 2009, Colorado passed a law with similar USPSTF A and B service coverage requirements (2). To determine how Colorado health plans had interpreted the state and federal law, the Colorado Department of Public Health and Environment (CDPHE) interviewed representatives of commercial health plans serving Colorado residents. The results of those interviews indicated that different health plans interpreted certain USPSTF recommendations differently, including tobacco screening and pharmacotherapy, colorectal cancer screening, and obesity screening and counseling. One health plan communicated the scope, eligibility criteria, and content of the new preventive services coverage to its members or providers. The differences in interpretation of the USPSTF recommendations and limited communication to consumers or health-care providers in Colorado might be repeated in other states. To ensure optimal consumer and health-care provider utilization of preventive service benefits, the preventive services supported by USPSTF A and B recommendations should be clearly defined in health plan benefit language, with processes put in place for consistent implementation and eligibility criteria communicated to both consumers and providers. The experience in Colorado shows that public health organizations can play a key role in successfully implementing PPACA prevention services provisions.

During June–July 2010, CDPHE staff members used a standardized survey protocol to interview seven of the eight local medical directors or quality improvement directors of each of the major commercial health plans in Colorado about their coverage of USPSTF recommended services. USPSTF reviews the most current evidence of effectiveness of clinical preventive health-care services and grades the strength of the evidence. USPSTF recommends that primary-care practitioners and health systems offer or provide their clients preventive services when there is high certainty that the net benefit is substantial (grade A recommendation) or when there is high certainty that the net

benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial (grade B recommendation) (3). The survey questions focused only on those USPSTF recommendations pertaining to chronic disease prevention, screening, and management. The survey inquired about cardiovascular disease and cancer screening, obesity screening and intervention, and tobacco screening and cessation. Medical directors were questioned about benefit availability across each coverage type provided by the health plan (i.e., individual versus group market) and limits on coverage (i.e., age, frequency, annual or lifetime limits). In addition, directors were questioned regarding how they had communicated these benefit changes to their consumers and providers.

The vast majority of A and B recommendations addressed in the survey were interpreted consistently across all health plans. However, health plans interpreted and designed their coverage around some A and B recommendations differently. One USPSTF A recommendation encourages clinicians to ask all adult patients about tobacco use and provide tobacco cessation interventions for adults who use tobacco products (4). Colorado health plans reported some restrictions and variability in the provided coverage for tobacco screening and pharmacotherapy. Three of the eight plans restricted reimbursement for tobacco use screening to primary-care providers. One plan restricted the frequency that providers could be reimbursed for screening to the annual visit plus one other visit per year. Only one health plan offered all Food and Drug Administration–approved tobacco cessation medications with no restrictions. The most consistent areas of pharmacotherapy benefit limitation were with varenicline and bupropion SR. Two plans did not cover these medications, and five plans offered the medications with restrictions, such as frequency (annual or lifetime limits), step therapy requirements, copays, deductibles, or coinsurance.

In addition to the different interpretations regarding tobacco cessation and counseling, the benefit design for colorectal cancer screening reflected different interpretations of how coverage for such benefits should be structured. USPSTF advises, as an A recommendation, screening for colorectal cancer using fecal occult blood testing, sigmoidoscopy, or colonoscopy in adults beginning at age 50 years and continuing until age 75 years (4). Not all health plans consistently interpreted colonoscopies as a preventive benefit rather than a diagnostic service when performed either as a primary screening or secondary screening after an abnormal fecal occult blood test. Four health plans

What is already known on this topic?

The Patient Protection and Affordable Care Act requires commercial health plans to cover services recommended for routine use (A and B recommendations) by the U.S. Preventive Services Task Force (USPSTF) at no cost to the consumer.

What is added by this report?

Interviews conducted by the Colorado Department of Public Health and Environment with representatives of seven of eight health plans operating in the state determined that USPSTF recommendations are not written in health plan language and certain A and B recommendations are not being uniformly interpreted by health plan administrators. This can create confusion for the consumer and health-care provider and might result in underuse of the recommended services.

What are the implications for public health practice?

Public health organizations can assist health plans in interpreting federal health-care reform regulations and can work with health plans to define minimum baseline standards for all USPSTF recommended services required by the Patient Protection and Affordable Care Act.

defined a colonoscopy after an abnormal fecal occult blood test as diagnostic rather than preventive, making colonoscopy subject to all applicable copays and deductibles. Three of the health plans indicated that the cost to the patient would depend on whether the clinician coded the service as preventive or diagnostic. One plan indicated that colonoscopies were covered with no cost sharing only so long as consumers used the preferred facility within their plan.

Obesity screening and counseling was the last area where plans reported the greatest variations in eligibility requirements and in how provided services would be covered. USPSTF recommends that clinicians screen all adult patients for obesity and offer intensive counseling and behavioral interventions to promote sustained weight loss for obese adults. In addition, USPSTF recommends that clinicians screen children aged ≥ 6 years for obesity and offer or refer them to comprehensive, intensive behavioral interventions for weight control (4). Both are B recommendations. All health plans identified the lack of specific Current Procedural Terminology (CPT) codes for obesity screening as a barrier. Two health plans indicated no restrictions on the type of clinician that could be reimbursed for screening and counseling for obesity and also reported no limits on how often clients could be screened or counseled. Two health plans indicated that the counseling CPT code could be used only by a registered dietitian. One health plan responded that the consumer could receive two counseling sessions within the year unless a determination of medical necessity such as an obesity-related comorbidity (e.g., diabetes or cardiovascular

disease) was made. One plan indicated use of an authorized but unlisted CPT code. To request reimbursement, providers would have to call the health plan directly for the CPT code to bill and, when the claim form was submitted, the claim was subject to an automatic review by health plan staff, increasing the likelihood of denial.

When asked whether health plans had communicated the new, no-cost, covered benefits to consumers or health-care providers, one plan indicated such communication occurred via e-mail and letters. The rest indicated that they had not promoted the benefit plan changes to their members.

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Editorial Note

Health-care reform advances individual and population prevention goals by requiring coverage of services supported by evidence. Variance in health plan interpretation of the USPSTF recommendations coupled with health-care provider uncertainty regarding coverage and coding and lack of clarity among consumers regarding benefits might affect their use of services and impinge on optimal health outcomes.

Although USPSTF provides clinical guidance on how to implement recommendations within health-care provider practices, it does not define the recommendations in language that can be applied readily to the delivery of health insurance benefits (4). To ensure optimal consumer and health-care provider utilization of preventive benefits, implementation of these benefits must be consistent across health plans and understood by both health-care providers and consumers. The A and B recommendations should be translated clearly into health plan benefit language, and processes should be put in place for consistent implementation; public health agencies can assist in this effort. CDPHE has taken the lead in identifying gaps in preventive services and addressing these inconsistencies through collaboration with the major commercial and public health plans in Colorado.

Colorado has formed a prevention council, where health plan representatives can share best practices and come to agreement on minimum benefit standards for the A and B recommendations. Colorado has had previous success in working with health plans on tobacco cessation coverage and counseling and was able to gain agreement on minimum benefits. Creating constructive relationships with health plans

will be critical to successful implementation of federal health-care reform. Public health agencies also can provide useful data regarding the return on investment from many public health initiatives and can connect health plans with population-based strategies to increase preventive service use.

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References

1. Patient Protection and Affordable Care Act. Available at <http://www.gpo.gov/fdsys/pkg/PLAW-111publ148/content-detail.html>. Accessed September 30, 2011.
2. Colorado General Assembly. House Bill 09-1204: first regular session, 67th General Assembly (Colo. 2009). Available at http://www.state.co.us/gov_dir/leg_dir/olls/sl2009a/sl_344.htm. Accessed October 3, 2011.
3. US Preventive Services Task Force. Methods and processes. Rockville, MD: US Preventive Services Task Force; 2011. Available at <http://www.uspreventiveservicestaskforce.org/methods.htm>. Accessed September 30, 2011.
4. US Preventive Services Task Force. USPSTF A and B recommendations. Rockville, MD: US Preventive Services Task Force; 2010. Available at <http://www.uspreventiveservicestaskforce.org/uspstf/uspsabrecs.htm>. Accessed September 30, 2011.

Vital Signs: Alcohol-Impaired Driving Among Adults — United States, 2010

On October 4, 2011, this report was posted as an MMWR Early Release on the MMWR website (<http://www.cdc.gov/mmwr>).

Abstract

Background: Alcohol-impaired driving crashes account for nearly 11,000 crash fatalities, or about one third of all crash fatalities in the United States.

Methods: CDC analyzed data from the 2010 Behavioral Risk Factor Surveillance System survey to obtain the prevalence, episodes, and rates of alcohol-impaired driving (defined as driving “when you’ve had perhaps too much to drink” in the past 30 days) among U.S. adults aged ≥ 18 years who responded to the survey by landline telephone.

Results: In 2010, an estimated 4 million U.S. adult respondents reported at least one episode of alcohol-impaired driving, for an estimated total of approximately 112 million alcohol-impaired driving episodes or 479 episodes per 1,000 adult population. From a peak in 2006, such episodes decreased 30% through 2010. Men accounted for 81% of all episodes with young men aged 21–34 years accounting for 32% of all episodes. Additionally, 85% of alcohol-impaired driving episodes were reported by persons who also reported binge drinking, and the 4.5% of the adult population who reported binge drinking at least four times per month accounted for 55% of all alcohol-impaired driving episodes. Episode rates were nearly four times higher among persons who reported not always wearing seatbelts compared with persons who reported always wearing seatbelts.

Conclusions: Rates of self-reported alcohol-impaired driving have declined substantially in recent years. However, rates remain disproportionately high among young men, binge drinkers, and those who do not always wear a seat belt.

Implications for Public Health: States and communities should continue current evidence-based strategies, such as sobriety checkpoints and enforcement of 0.08 g/dL blood alcohol concentration laws to deter the public from driving while impaired. Additionally, all states should consider requiring ignition interlocks on the vehicles of all persons convicted of alcohol-impaired driving. States without primary seatbelt laws should consider enacting them to reduce fatalities in alcohol-impaired driving crashes.

Introduction

Approximately one third of all motor vehicle crash fatalities involve alcohol-impaired driving. In 2009, a total of 10,839 persons died in crashes in which at least one driver had a blood alcohol concentration (BAC) of ≥ 0.08 g/dL, the illegal level for adult drivers in the United States (1). A 0.08 g/dL BAC corresponds to four drinks in 1 hour for a 160-pound (73 kg) man and three drinks in 2 hours for a 120-pound (55 kg) woman (2).

Methods

For this report, CDC used data from the 2010 Behavioral Risk Factor Surveillance System (BRFSS) survey to provide estimates of the prevalence, episodes, and rates of alcohol-impaired driving among adults aged ≥ 18 years by selected characteristics, state, and Census region. BRFSS is a state-based, landline, random-digit-dialed telephone survey that collects information on health-related behaviors from a representative sample of civilian, noninstitutionalized adults aged ≥ 18 years. Data from the 2010 BRFSS survey included all 50 states and the District of Columbia

(DC). The median Council of American Survey and Research Organizations (CASRO) response rate for the 2010 BRFSS survey was 55% (3).

One question on alcohol-impaired driving is included periodically on the BRFSS survey of each state. Respondents who report having had at least one alcoholic beverage in the past 30 days are asked, “During the past 30 days, how many times have you driven when you’ve had perhaps too much to drink?” Annual estimates of alcohol-impaired driving episodes per respondent were calculated by multiplying the reported episodes in the preceding 30 days by 12. These numbers of episodes were summed to obtain state and national estimates of alcohol-impaired driving episodes. Annual rates of alcohol-impaired driving episodes then were calculated by dividing the annual number of alcohol-impaired driving episodes by the respective weighted population estimate from BRFSS for 2010. Annual alcohol-impaired driving episodes for 2004, 2006, and 2008, which had not been described previously, were produced, and estimates of alcohol-impaired driving episodes for the

years 1993, 1995, 1997, 1999, and 2002 were obtained from an earlier study (4) and used to report the alcohol-impaired driving trend over time.

Alcohol-impaired driving prevalence in 2010 was stratified by sex and reported by age, race/ethnicity, education level, marital status, household income, number of binge drinking episodes per month, seatbelt use, and Census region. Binge drinking was defined as consuming ≥ 5 drinks on one occasion for men and consuming ≥ 4 drinks on one occasion for women. Seat belt use was dichotomized as always wear or less than always wear. All data were weighted according to age-, race/ethnicity-, and sex-specific state population counts and to the respondent's probability of selection to produce population-based estimates. T-tests were used to determine differences between subgroups, with differences considered statistically significant at $p < 0.05$.

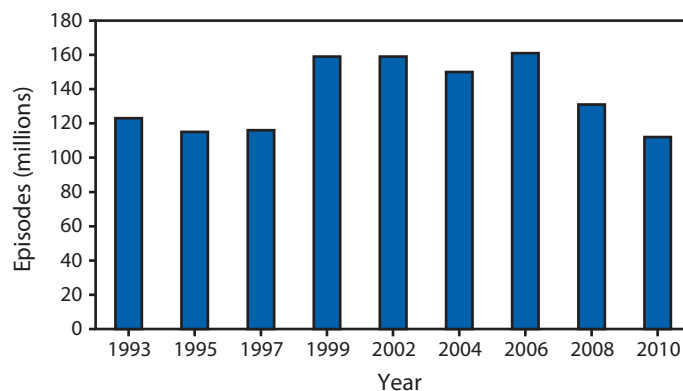
Results

In 2010, 1.8% of respondents reported at least one episode of alcohol-impaired driving in the past 30 days. These four million adults reported an estimated 112,116,000 episodes of alcohol-impaired driving in the United States for the year. This is the lowest percentage of drinking drivers and lowest number of episodes reported since 1993, the first year for which published national BRFSS estimates are available. Since the peak in 2006, alcohol-impaired driving episodes have declined 30%, from 161 million to 112 million (Figure 1). Sixty percent of those who reported driving while impaired indicated one episode in the past 30 days; however, some respondents reported that they drove while impaired daily. Men accounted for 81% of 2010 alcohol-impaired driving episodes. Young men aged 21–34 years, who represented 11% of the U.S. adult population, reported 32% of all 2010 episodes.

Binge drinking was strongly associated with alcohol-impaired driving; 85% of all alcohol-impaired driving episodes were reported by persons who also reported binge drinking. Frequent binge drinkers contributed disproportionately to the alcohol-impaired driving rates; the 4.5% of the adult population who reported binge drinking ≥ 4 times per month accounted for 55% of all alcohol-impaired driving episodes (Table 1).

Persons who reported not always using seatbelts had alcohol-impaired driving rates nearly four times higher than persons who reported always using seatbelts. Among respondents who reported driving while impaired, seatbelt use varied significantly by the type of state seatbelt law in effect; 76% of persons living in states with a primary seatbelt law (which allows police to stop drivers and ticket them solely because occupants are unbelted) reported always wearing a seatbelt, whereas 58% of their counterparts living in states with a secondary law (which

FIGURE 1. Number of self-reported episodes of alcohol-impaired driving among adults — Behavioral Risk Factor Surveillance System, United States, 1993–2010



only allows police to issue seat belt tickets if drivers were stopped from some other violation) or no seatbelt law (New Hampshire) reported always wearing a seatbelt.

The Midwest Census region had the highest annual rate of alcohol-impaired driving episodes at 643 per 1,000 population, which was significantly higher than the rates in all other regions (Figure 2). Excluding 12 states and DC with small sample sizes and potentially unstable rates, four of the seven states with rates of alcohol-impaired driving that were significantly higher than the U.S. rate overall were in the Midwest (Table 2). The Midwest also had the highest prevalence of binge drinking at 16.5%, which was significantly higher than the prevalence in the Northeast (15.1%), West (14.3%), or South (12.6%).

Conclusions and Comment

Since 2006, self-reported alcohol-impaired driving episodes have declined 30%, reaching a low of an estimated 112 million episodes in 2010. Neither self-reported alcohol consumption nor binge drinking in the past 30 days, as reported by BRFSS, declined significantly over this period. Reasons for the decline in alcohol-impaired driving are not well understood, but possible factors include less discretionary driving as a result of the current economic downturn (5) and possible changes in drinking location to places where driving is not required such as at home (6).

Alcohol-impaired driving fatalities declined 20% from 13,491 to 10,839 from 2006 to 2009, the most recent year for which fatality data are available (7). However, the proportion of all motor vehicle fatalities that involve at least one alcohol-impaired driver has remained stable at about 33%, because non-alcohol-impaired driving fatalities have declined at the same rate as alcohol-impaired fatalities (7). This study indicated that alcohol-impaired driving rates remain disproportionately high among young men, binge drinkers, persons who do not always wear a seatbelt, and persons living in the Midwest.

TABLE 1. Percentage of adults reporting alcohol-impaired driving episodes in preceding 30 days and rate of episodes, by sex and selected characteristics — Behavioral Risk Factor Surveillance System, United States, 2010

| Characteristic | Total | | | Men | | | Women | | |
|------------------------------------|--|-----------------------------------|---------------|--|-----------------------------------|---------------|--|-----------------------------------|---------------|
| | % respondents reporting alcohol-impaired driving in past 30 days | Episode rate per 1,000 population | (95% CI) | % respondents reporting alcohol-impaired driving in past 30 days | Episode rate per 1,000 population | (95% CI) | % respondents reporting alcohol-impaired driving in past 30 days | Episode rate per 1,000 population | (95% CI) |
| Total | 1.8 | 479 | (425–533) | 2.8 | 800 | (691–908) | 0.8 | 175 | (152–197) |
| Age (yrs) | | | | | | | | | |
| 18–20 | 2.2 | 626 | (314–939) | 3.0 | 919 | (408–1,430) | —* | — | — |
| 21–24 | 3.6 | 1,037 | (578–1,496) | 4.5 | 1,543 | (651–2,434) | 2.8 | 517 | (360–675) |
| 25–34 | 2.6 | 811 | (566–1,056) | 4.2 | 1,379 | (890–1,868) | 1.1 | 256 | (179–334) |
| 35–54 | 1.9 | 460 | (410–509) | 3.0 | 733 | (641–824) | 0.9 | 191 | (154–229) |
| ≥55 | 0.8 | 231 | (202–260) | 1.4 | 425 | (366–484) | 0.3 | 69 | (47–91) |
| Race/ethnicity | | | | | | | | | |
| White, non-Hispanic | 1.9 | 473 | (435–510) | 3.0 | 779 | (705–853) | 0.9 | 185 | (164–207) |
| Black, non-Hispanic | 1.2 | 331 | (242–420) | 2.0 | 570 | (383–756) | 0.6 | 140 | (83–197) |
| Hispanic | 1.7 | 580 | (346–814) | 2.7 | 1,002 | (540–1,464) | 0.6 | 165 | (76–254) |
| Other, non-Hispanic | — | — | — | — | — | — | — | — | — |
| Education | | | | | | | | | |
| Less than high school | — | — | — | — | — | — | — | — | — |
| High school graduate | 1.6 | 472 | (396–548) | 2.6 | 800 | (659–941) | 0.6 | 151 | (92–209) |
| Some college | 1.9 | 501 | (427–575) | 3.1 | 868 | (713–1,024) | 0.9 | 196 | (157–235) |
| College graduate | 1.9 | 422 | (376–467) | 2.9 | 645 | (558–731) | 1.0 | 196 | (167–225) |
| Marital status | | | | | | | | | |
| Married | 1.4 | 332 | (297–368) | 2.2 | 538 | (473–603) | 0.6 | 119 | (93–146) |
| Unmarried couple | 2.6 | 684 | (406–962) | 3.8 | 1,134 | (594–1,673) | 1.4 | 217 | (139–295) |
| Previously married | 1.6 | 581 | (416–746) | 3.5 | 1,358 | (871–1,846) | 0.7 | 203 | (144–262) |
| Never married | 2.9 | 852 | (629–1,075) | 3.9 | 1,257 | (862–1,651) | 1.7 | 338 | (273–403) |
| Annual household income(\$) | | | | | | | | | |
| <25,000 | 1.3 | 418 | (329–507) | 2.3 | 782 | (588–976) | 0.5 | 126 | (87–165) |
| 25,000–49,999 | 1.8 | 543 | (410–676) | 2.8 | 918 | (651–1,186) | 0.8 | 189 | (135–243) |
| 50,000–74,999 | 1.9 | 598 | (335–862) | 2.8 | 977 | (460–1,494) | 1.1 | 209 | (156–261) |
| ≥75,000 | 2.3 | 527 | (469–586) | 3.3 | 776 | (675–878) | 1.2 | 232 | (190–274) |
| Binge drinking | | | | | | | | | |
| None per month | 0.8 | 168 | (144–192) | 1.0 | 216 | (176–256) | 0.6 | 119 | (94–144) |
| 1 time per month | 5.1 | 1,030 | (714–1,346) | 6.3 | 1,390 | (880–1,901) | 3.2 | 463 | (353–574) |
| 2–3 times per month | 9.6 | 2,041 | (1,728–2,355) | 11.3 | 2,372 | (1,982–2,763) | 6.6 | 1,408 | (884–1,932) |
| ≥4 times per month | 15.8 | 5,814 | (4,768–6,860) | 17.4 | 6,746 | (5,358–8,134) | 11.4 | 3,103 | (2,504–3,703) |
| Seatbelt use | | | | | | | | | |
| Less than always | 3.8 | 1,387 | (1,034–1,740) | 5.1 | 1,963 | (1,412–2,514) | 1.6 | 384 | (269–498) |
| Always | 1.5 | 357 | (322–392) | 2.3 | 587 | (516–658) | 0.7 | 159 | (136–182) |

Abbreviation: CI = confidence interval.

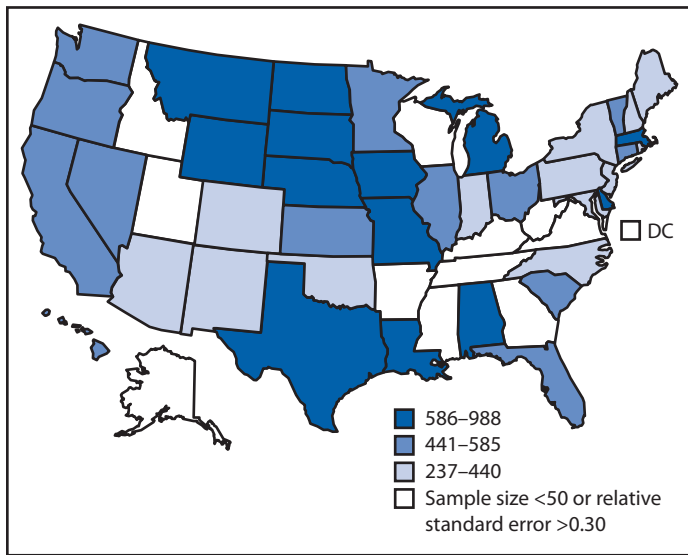
* Sample size <50 or relative standard error >0.30.

Effective strategies to reduce alcohol-impaired driving are underutilized in the United States (8). Examples include sobriety checkpoints, enforcement of 0.08 BAC laws and minimum legal drinking age laws, multicomponent community-based programs, and ignition interlock programs for all convicted alcohol-impaired driving offenders (9). Given the strong association between binge drinking and alcohol-impaired driving, programs to reduce alcohol impaired driving should consider adding effective strategies to reduce excessive drinking. These strategies include increasing alcohol taxes, regulating alcohol outlet density, and dram shop liability laws, which hold alcohol retailers (both on premises and off

premises) legally responsible for harms caused by serving alcohol to minors or visibly intoxicated patrons (10).

Two thirds of all fatalities in alcohol-impaired driving crashes in the United States occur among alcohol-impaired drivers themselves (1). In 2009, seatbelt status was known for 93% of fatally injured alcohol-impaired passenger vehicle drivers; of those drivers, 72% were unbelted. In the states with secondary seatbelt laws, 81% of fatally injured alcohol-impaired passenger vehicle drivers were unbelted (Tonja Lindsey, National Highway Traffic Safety Administration, personal communication, 2011). In this report, always using seatbelts was 18 percentage points higher among alcohol-impaired drivers in states with primary

FIGURE 2. Rates of self-reported alcohol-impaired driving episodes* among adults — Behavioral Risk Factor Surveillance System, United States, 2010



* Per 1,000 population.

seatbelt laws compared with those from states with secondary laws. This finding is important because seatbelts are 48%–61% effective in preventing driver fatalities in crashes (11).

The findings in this report confirm those from the most recent National Roadside Survey, which in 2007 found that only a small percentage of adult drivers are alcohol-impaired. That survey showed that 2.2% of drivers on the road on Friday afternoon or Friday or Saturday night had a BAC of ≥ 0.08 g/dL (12). Additionally, the findings in this report are consistent with alcohol-impaired driving fatality data. Men accounted for 81% of all alcohol-impaired driving episodes in 2010 and 82% of all alcohol-impaired drivers involved in fatal crashes in 2009 (1). Likewise, men aged 21–34 accounted for 32% of alcohol-impaired driving episodes and 35% of all alcohol-impaired drivers involved in fatal crashes (Tonja Lindsey, National Highway Traffic Safety Administration, personal communication, 2011).

The findings in this report are subject to at least seven limitations. First, BRFSS surveys only those aged ≥ 18 years, so alcohol-impaired driving episodes of younger drivers are not included, which underestimates episodes. Second, an increasing proportion of adults use wireless telephones exclusively; as of the second half of 2010, 28% of adults lived in wireless-only households (13). These adults are younger and report a higher prevalence of binge drinking compared with adults with landline phones (14). Given the association among binge drinking, younger persons, and alcohol-impaired driving, omitting wireless-only households likely results in underestimating alcohol-impaired driving episodes. Third, a social stigma is

TABLE 2. Rates of self-reported alcohol-impaired driving episodes among adults, by U.S. Census region and state — Behavioral Risk Factor Surveillance System, United States, 2010

| Region/State | Episodes per 1,000 population | (95% CI) |
|----------------------|-------------------------------|------------------|
| National | 479 | (425–533) |
| Northeast | 396 | (329–463) |
| Connecticut | 567 | (427–708) |
| Maine | 295* | (226–364) |
| Massachusetts | 835 [†] | (552–1,118) |
| New Hampshire | 309* | (225–393) |
| New Jersey | 270* | (150–390) |
| New York | 237* | (169–305) |
| Pennsylvania | 419 | (311–527) |
| Rhode Island | — [§] | — |
| Vermont | 462 | (352–572) |
| South | 460 | (345–574) |
| Alabama | 621 | (282–960) |
| Arkansas | — | — |
| Delaware | 843 [†] | (533–1,153) |
| District of Columbia | — | — |
| Florida | 446 | (364–529) |
| Georgia | — | — |
| Kentucky | — | — |
| Louisiana | 728 [†] | (585–870) |
| Maryland | 379 | (250–507) |
| Mississippi | — | — |
| North Carolina | 309* | (196–421) |
| Oklahoma | 321* | (251–390) |
| South Carolina | 582 | (335–829) |
| Tennessee | — | — |
| Texas | 605 | (444–765) |
| Virginia | — | — |
| West Virginia | — | — |
| West | 422 | (349–495) |
| Alaska | — | — |
| Arizona | 316* | (250–383) |
| California | 461 | (356–565) |
| Colorado | 375 | (262–488) |
| Hawaii | 492 | (389–596) |
| Idaho | — | — |
| Montana | 603 | (468–739) |
| Nevada | 443 | (319–567) |
| New Mexico | 256* | (114–399) |
| Oregon | 470 | (240–701) |
| Utah | — | — |
| Washington | 441 | (383–498) |
| Wyoming | 586 | (401–771) |
| Midwest | 643 | (516–766) |
| Illinois | 513 | (356–669) |
| Indiana | 400 | (280–521) |
| Iowa | 620 | (423–817) |
| Kansas | 450 | (367–534) |
| Michigan | 689 [†] | (506–871) |
| Minnesota | 474 | (332–616) |
| Missouri | 701 [†] | (496–905) |
| Nebraska | 832 [†] | (598–1,065) |
| North Dakota | 988 [†] | (713–1,262) |
| Ohio | 585 | (467–703) |
| South Dakota | 623 | (406–839) |
| Wisconsin | — | — |

Abbreviation: CI = confidence interval.

* Significantly lower than national rate.

[†] Significantly higher than national rate.

[§] Sample size <50 or relative standard error >0.30.

attached to alcohol-impaired driving; therefore, self-reports might be spuriously low. Fourth, self-reported alcohol-impaired driving as defined by the BRFSS survey cannot be equated to a specific BAC; however 85% of alcohol-impaired driving episodes were reported by persons who also reported binge drinking. Fifth, the alcohol-impaired driving prevalence estimates for 12 states and DC were potentially unstable because of small sample sizes and/or high relative standard errors. Therefore, this report included only the stable state estimates. Sixth, this report uses one month self-reported estimates of alcohol-impaired driving to calculate an annual estimate. However, BRFSS is administered year-round, eliminating potential bias from seasonal fluctuations in alcohol-impaired driving. Additionally, using a 5-week recall period to estimate injuries has been found to result in a more accurate estimate than longer recall periods (15). Finally, the CASRO response rate for the 2010 BRFSS was only 55%, which increases the risk for response bias; although the large sample size might decrease this risk.

Public support for preventing alcohol-impaired driving is strong. For example, 75% of respondents in a recent Department of Transportation survey endorsed weekly or monthly sobriety checkpoints; only 6% believed that sobriety checkpoints should not be used at all (16). However, sobriety checkpoints are not conducted in 12 states and are conducted at intervals varying from weekly to a few times a year in the remaining 38 states and DC (17). An estimated 1,500 to 3,000 lives might be saved annually through widespread use of frequent sobriety checkpoints (18), which produce an estimated \$6.80 in total benefits (i.e., reductions in medical costs, work loss, and lost quality of life) for each \$1.00 spent (19). Public support for ignition interlock programs is also strong. These programs install ignition interlock devices in the vehicles of persons convicted of alcohol-impaired driving to prevent them from operating the vehicle if they have been drinking. In a recent survey, 90% of respondents supported requiring ignition interlocks for drivers with multiple alcohol-impaired driving convictions, and 69% supported this requirement for drivers upon their first conviction (20). Historically, ignition interlock programs have targeted persons with multiple alcohol-impaired driving convictions. As of August 2011, 14 states had passed legislation requiring or strongly encouraging use of ignition interlocks for persons upon their first alcohol-impaired driving conviction (21). Ignition interlocks reduce alcohol-impaired driving rearrest rates by a median 67% while installed (9) and are estimated to result in a 6.6 benefit:cost ratio (19); however, only about 20% of eligible offenders currently are enrolled in ignition interlock programs (9,22).

Key Points

- Alcohol-impaired driving accounts for about one third of U.S. motor vehicle fatalities, nearly 11,000 deaths per year.
- In 2010, 1.8% of U.S. adults (4 million men and women) reported over 112 million episodes of alcohol impaired driving.
- Men reported 81% of episodes of alcohol-impaired driving
- About 5% of adults reported binge drinking at least four times per month, yet accounted for 55% of all alcohol-impaired driving episodes.
- Although the prevalence of alcohol impaired driving has declined, it continues to cause thousands of deaths each year. Effective interventions such as sobriety checkpoints and ignition interlocks can reduce alcohol impaired driving.

In recent decades, the United States has lagged behind most other high-income countries in reducing the rate of motor vehicle crash deaths (18). Because alcohol-impaired driving crashes account for about one third of all crash fatalities, any successful strategy for reducing overall crash deaths must address alcohol-impaired driving. To decrease alcohol-impaired driving, states and communities should consider expanding use of sobriety checkpoints, strictly enforcing 0.08 BAC laws and minimum legal drinking age laws, and requiring ignition interlocks for all persons convicted of alcohol-impaired driving, whether it is their first offense or a subsequent offense. To reduce the excessive drinking associated with alcohol-impaired driving, states and communities should consider increasing alcohol taxes, regulating alcohol outlet density, and enacting dram shop liability laws. States without primary seatbelt laws should consider enacting them to help reduce fatalities in alcohol-impaired driving crashes.

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References

1. National Highway Traffic Safety Administration. Traffic safety facts 2009: alcohol-impaired driving. Washington, DC: US Department of Transportation, National Highway Traffic Safety Administration; 2010. Available at <http://www-nrd.nhtsa.dot.gov/pubs/811385.pdf>. Accessed July 20, 2011.
2. Miller WR, Munoz RF. How to control your drinking. Albuquerque, NM: University of Mexico Press; 1982:8–11.
3. Behavioral Risk Factor Surveillance System. 2010 Summary data quality report. May 2011. Available at ftp://ftp.cdc.gov/pub/data/brfss/2010_summary_data_quality_report.pdf. Accessed August 2, 2011.
4. Quinlan KP, Brewer RD, Siegel P, et al. Alcohol-impaired driving among U.S. adults, 1993–2002. *Am J Prev Med* 2005;28;4:346–50.
5. Sivak M, Schoettle B. Toward understanding the recent large reductions in U.S. road fatalities. *Traffic Inj Prev* 2010;11:561–6.
6. Evans L. Do increases in the cost of fuel reduce traffic fatalities? October 2008. Available at <http://scienceservingsociety.com/p/X/07.htm>. Accessed August 12, 2011.
7. National Highway Traffic Safety Administration. Traffic safety facts 2009: a compilation of motor vehicle crash data from the Fatality Analysis Reporting System and the General Estimates System. Early edition. Washington, DC: US Department of Transportation, National Highway Traffic Safety Administration; 2010. Available at <http://www-nrd.nhtsa.dot.gov/pubs/811385.pdf>. Accessed July 20, 2011.
8. Williams AF. Alcohol-impaired driving and its consequences in the United States: the past 25 years. *J Safety Res* 2006;37:123–38.
9. The Task Force on Community Preventive Services. Motor vehicle-related injury prevention: reducing alcohol-impaired driving. Atlanta, GA: Task Force on Community Preventive Services; 2011. Available at <http://www.thecommunityguide.org/mvoi/aid/index.html>. Accessed August 2, 2011.
10. The Task Force on Community Preventive Services. Preventing excessive alcohol consumption. Atlanta, GA: Task Force on Community Preventive Services; 2011. Available at <http://www.thecommunityguide.org/alcohol/index.html>. Accessed August 2, 2011.
11. Kahane C. Fatality reduction by safety belts for front-seat occupants of cars and light trucks, technical report. Washington, DC: National Highway Traffic Safety Administration; 2000. Available at <http://www-nrd.nhtsa.dot.gov/pubs/809199.pdf>. Accessed August 1, 2011.
12. Lacey J, Kelley-Baker T, Furr-Holden D, et al. 2007 National roadside survey of alcohol and drug use by drivers: alcohol results. Washington, DC: National Highway Traffic Safety Administration; 2009. Available at <http://www.nhtsa.gov/DOT/NHTSA/Traffic%20Injury%20Control/Articles/Associated%20Files/811248.pdf>. Accessed August 2, 2011.
13. Blumberg SJ, Luke JV. Wireless substitution: early release of estimates from the National Health Interview Survey, July–December 2010, Hyattsville, MD: National Center for Health Statistics; 2011. Available at <http://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201106.pdf>. Accessed August 1, 2011.
14. CDC. Vital signs: binge drinking among high school students and adults—United States, 2009. *MMWR* 2010;59:1274–9.
15. Warner M, Schenker N, Heinen MA, Fingerhut LA. The effects of recall on reporting injury and poisoning episodes in the National Health Interview Survey. *Inj Prev* 2005;11:282–7.
16. Moulton BE, Peterson A, Haddix D, Drew L. National survey of drinking and driving attitudes and behaviors: 2008. Volume II: findings report. Washington, DC: National Highway Traffic Safety Administration; 2010. Available at <http://www.nhtsa.gov/staticfiles/nti/pdf/811343.pdf>. Accessed August 1, 2011.
17. Governors Highway Safety Administration. Sobriety checkpoint laws, August 2011. Available at http://www.statehighwaysafety.org/html/stateinfo/laws/checkpoint_laws.html. Accessed August 29, 2011.
18. Transportation Research Board of the National Academies. Achieving traffic safety goals in the United States: lessons from other nations. Special report 300. Washington, DC: Transportation Research Board of the National Academies; 2011. Available at <http://onlinepubs.trb.org/onlinepubs/sr/sr300.pdf>. Accessed August 3, 2011.
19. Children's Safety Network. Injury prevention: what works? A summary of cost-outcome analysis for impaired driving (2010 update). Calverton, MD: Children's Safety Network; 2010. Available at http://www.childrensafetynetwork.org/publications_resources/pdf/data/injurypreventionwhatworks_impaireddriving.pdf. Accessed August 12, 2011.
20. American Automobile Association Foundation for Traffic Safety. 2010 traffic safety culture index. Washington, DC: American Automobile Association Foundation for Traffic Safety; 2010. Available at <http://www.aaafoundation.org/pdf/2010tscindexfinalreport.pdf>. Accessed August 1, 2011.
21. Insurance Institute for Highway Safety. DUI/DWI laws: August 2011. Arlington, VA: Insurance Institute for Highway Safety; 2011. Available at <http://www.iihs.org/laws/dui.aspx>. Accessed August 12, 2011.
22. Marques PR, Voas RB. Key features for ignition interlock programs. Washington, DC: National Highway Traffic Safety Administration. March 2010. Publication No. DOT-HS-811-262. Available at http://www.nhtsa.gov/staticfiles/nti/impaired_driving/pdf/811262.pdf. Accessed August 12, 2011.

Multistate Outbreak of Listeriosis Associated with Jensen Farms Cantaloupe — United States, August–September 2011

On September 30, 2011, this report was posted as an MMWR Early Release on the MMWR website (<http://www.cdc.gov/mmwr>).

Listeriosis is caused by *Listeria monocytogenes*, a gram-positive bacillus common in the environment and acquired by humans primarily through consumption of contaminated food. Infection causes a spectrum of illness, ranging from febrile gastroenteritis to invasive disease, including sepsis and meningoencephalitis. Invasive listeriosis occurs predominantly in older adults and persons with impaired immune systems. Listeriosis in pregnant women is typically a mild “flu-like” illness, but can result in fetal loss, premature labor, or neonatal infection. Listeriosis is treated with antibiotics. On September 2, 2011, the Colorado Department of Public Health and Environment (CDPHE) notified CDC of seven cases of listeriosis reported since August 28. On average, Colorado reports two cases of listeriosis annually in August. By September 6, all seven Colorado patients interviewed with the Listeria Initiative* questionnaire reported eating cantaloupe in the month before illness began, and three reported eating cantaloupe marketed as “Rocky Ford.”

A case was defined as illness with one of the outbreak strains isolated on or after August 1. Outbreak strains initially were defined as clinical isolates of *L. monocytogenes* with 1) specimen collection dates in August, and 2) a two-enzyme, pulsed-field gel electrophoresis (PFGE) pattern combination that occurred in two or more persons and matched any of the three pattern combinations found among Colorado residents in August. Analysis of Listeria Initiative data comparing the first 19 outbreak-associated cases in 2011 with 85 cases among persons aged ≥ 60 years with sporadic listeriosis identified during August of the years 2004–2010 indicated that cantaloupe consumption was strongly associated with illness caused by the outbreak strains: 19 of 19 (100%) versus 54 of 85 (64%); (odds ratio = 14.9; 95% CI = 2.4– ∞). Initial tracebacks of cantaloupe purchased by patients converged on Jensen Farms in Colorado.

After cantaloupe was implicated, PulseNet, the national molecular subtyping network for foodborne bacterial disease surveillance, detected a multistate cluster with a fourth PFGE pattern combination; a sample of cantaloupe collected from the implicated farm yielded *L. monocytogenes* with this pattern, and interviews with patients revealed that most had consumed

cantaloupe. Isolates with this pattern were then also considered to be among the outbreak strains. By September 29, 84 cases with one of the four outbreak PFGE pattern combinations had been reported from 19 states,[†] including 83 with information on the date of illness onset (Figure). Among the patients, 88% were aged ≥ 60 years (range: 35–96 years); 55% were female, and two were pregnant. Fifteen deaths were reported. Ninety-two percent (57 of 62 with information on food consumption) reported eating cantaloupe in the month before illness began. All four outbreak strains of *L. monocytogenes* were isolated from whole and cut cantaloupe samples from patients’ homes or from samples of Jensen Farms cantaloupe collected from grocery stores and the farm. On September 14, the farm issued a voluntary recall of its cantaloupe.

This outbreak has several unusual features. First, this is the first listeriosis outbreak associated with melon. Second, four widely differing PFGE pattern combinations and two serotypes (1/2a and 1/2b) have been associated with the outbreak. Third, this outbreak is unusually large; only two U.S. listeriosis outbreaks, one associated with frankfurters (108 cases) and one with Mexican-style cheese (142), have had more cases (1,2). Additional cases likely will be reported because of the long incubation period (usually 1–3 weeks, range: 3–70 days) and the time needed for diagnosis and confirmation. Fourth, this outbreak has the highest number of deaths of any U.S. foodborne outbreak since a listeriosis outbreak in 1998 (1).

CDC recommends that persons do not eat cantaloupes from Jensen Farms. This recommendation is especially important for persons at greater risk for listeriosis, including older adults, persons with weakened immune systems, and pregnant women. Not all of the recalled cantaloupes are individually labeled with stickers to indicate production by Jensen Farms. Consumers should consult the retailer or discard any cantaloupe of uncertain origin. Recommendations for preventing listeriosis from other foods are available at <http://www.cdc.gov/listeria>.

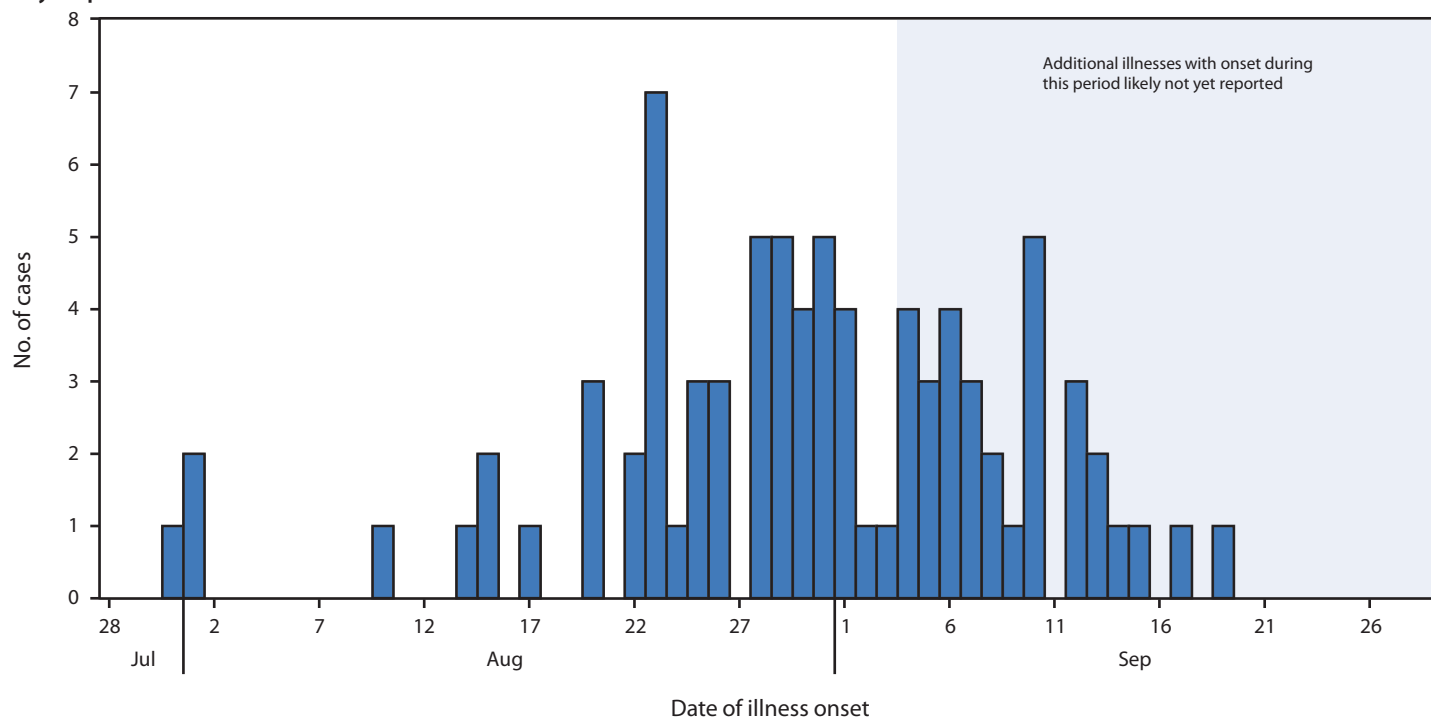
Reported by

Shaun Cosgrove, Alicia Cronquist, Colorado Dept of Public Health and Environment. Gail Wright, Boulder County Public Health. Tista Ghosh, Richard Vogt, Tri-County Health Department. Paul Teitell, Investigations Br, Food and Drug Administration (FDA)

*The Listeria Initiative is a CDC-led, enhanced surveillance system that has routinely collected data on food consumption from all patients with listeriosis since 2004. Additional information is available at http://www.cdc.gov/national-surveillance/listeria_surveillance.html.

[†] Colorado (17 cases), Texas (14), New Mexico (13), Oklahoma (11), Nebraska (6), Kansas (5), Missouri (3), Indiana (2), Wisconsin (2), Wyoming (2), Alabama (1), Arkansas (1), California (1), Illinois (1), Maryland (1), Montana (1), North Dakota (1), Virginia (1), and West Virginia (1).

FIGURE. Number of infections with outbreak-associated strains of *Listeria monocytogenes* (n = 83), by date of illness onset* — United States, July–September 2011



* Among persons for whom information on illness onset was reported to CDC by September 29, 2011.

Denver District. Allen Gelfius, Charlotte Spires, Tracy Duvernoy, Sheila Merriweather, FDA Coordinated Outbreak Response and Evaluation (CORE) Network. Molly Freeman, Patricia M. Griffin, Kelly A. Jackson, Lavin A. Joseph, Barbara E. Mahon, Karen Neil, Benjamin J. Silk, Cheryl Tarr, Robert Tauxe, Eija Trees, Div of Foodborne, Waterborne, and Environmental Diseases, National Center for Emerging and Zoonotic Infectious Diseases; Mam Ibraheem, Maho Imanishi, Neena Jain, Jeffrey McCollum, Katherine A. O'Connor, EIS officers, CDC.
Corresponding contributor: Kelly A. Jackson, gqv8@cdc.gov, 404-639-4603.

Acknowledgments

State and local health departments in the 19 states with cases.

References

1. Mead PS, Dunne EF, Graves L, et al. Nationwide outbreak of listeriosis due to contaminated meat. *Epidemiol Infect* 2006;134:744–51.
2. Linnan, MJ, Mascola L, Lou XD, et al. Epidemic listeriosis associated with Mexican-style cheese. *N Engl J Med* 1988;319:823–8.

Announcements

National Breast Cancer Awareness Month — October 2011

October is National Breast Cancer Awareness Month, a time to increase awareness of the most common cancer among women and the second leading cause of cancer-related deaths among women in the United States (1). In 2007, the most recent year for which data are available, 202,964 women received a diagnosis of breast cancer, and 40,598 women died from the disease (1).

Mammography can detect breast cancer at its earliest, most treatable stage, up to 3 years before lumps can be detected during breast self-examination or clinical examination. For 21 years, CDC's National Breast and Cervical Cancer Early Detection Program has helped low-income, uninsured, and underserved women gain access to breast and cervical cancer screening and follow-up services. The program has assisted approximately 3.9 million women, provided approximately 9.8 million screening examinations, and diagnosed nearly 53,000 cases of breast cancer. Additional information about CDC activities that promote early detection and treatment of breast cancer is available at <http://www.cdc.gov/cancer/breast>.

Reference

1. US Cancer Statistics Working Group. United States Cancer Statistics: 1999–2007 incidence and mortality web-based report. Atlanta, GA: US Department of Health and Human Services, CDC and National Cancer Institute; 2010. Available at <http://www.cdc.gov/uscs>. Accessed September 29, 2011.

World Arthritis Day — October 12, 2011

In 2003, the European League Against Rheumatism, in collaboration with worldwide organizations representing persons with arthritis and other rheumatic diseases, created World Arthritis Day. This observance aims to increase awareness of arthritis and to influence policies that can reduce the burden of arthritis.

The theme of this year's World Arthritis Day (October 12, 2011) is Move to Improve. Physical activity is a key self-management strategy for persons with arthritis and is proven to reduce pain and improve function and quality of life (1,2). The *2008 Physical Activity Guidelines for Americans* (3) recommends that adults, including those with arthritis, engage in 150 minutes or more per week of at least moderate-intensity aerobic physical activity and do muscle-strengthening exercises at least 2 days per week. Adults with arthritis who cannot meet these recommendations are encouraged to do what physical activity they can, because some is better than none.

Additional information on World Arthritis Day is available at <http://www.worldarthritisday.org>. Information about how to use physical activity to reduce arthritis pain is available at <http://www.fightarthritispain.org>. A list of CDC-recommended exercise classes proven safe and effective for arthritis is available at http://www.cdc.gov/arthritis/interventions/physical_activity.htm.

References

1. Physical Activity Guidelines Advisory Committee. Physical Activity Guidelines Advisory Committee report, 2008. Washington, DC: US Department of Health and Human Services; 2008. Available at <http://www.health.gov/paguidelines/report/pdf/committeereport.pdf>. Accessed September 26, 2011.
2. Kelley GA, Kelley KS, Hootman JM, Jones DL. Effects of community-deliverable exercise on pain and physical function in adults with arthritis and other rheumatic diseases: a meta-analysis. *Arth Care Res* 2011;63:79–93.
3. US Department of Health and Human Services. Physical activity guidelines for Americans, 2008. Washington, DC: US Department of Health and Human Services; 2008. Available at <http://www.health.gov/paguidelines>. Accessed September 26, 2011.

Errata

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In the Notice to Readers, “Final 2010 Reports of Nationally Notifiable Infectious Diseases,” multiple errors occurred in the introductory text and in Table 2. In the introductory text, on page 1088, “poliomyelitis, paralytic” was omitted from the statement specifying diseases with no cases reported. The sentence should read, “Because no cases of anthrax; diphtheria; eastern equine encephalitis virus disease, non-neuroinvasive; **poliomyelitis, paralytic**; poliovirus infection, nonparalytic; Powassan virus disease, non-neuroinvasive; rubella, congenital syndrome; severe acute respiratory syndrome–associated coronavirus disease; smallpox; western equine encephalitis virus disease, neuroinvasive and non-neuroinvasive; or yellow fever were reported in the United States during 2010, these diseases do not appear in these early release tables.”

For Table 2, “Reported cases of notifiable diseases, by geographic division and area — United States, 2010,” on page 1089, “poliomyelitis, paralytic” was omitted from the footnote that lists the diseases with no cases reported. On page 1097, in the section for territories, “Guam’s Q Fever, total, and Guam’s Q Fever, acute” are incorrectly reported as not reportable; it should have been displayed as “—” (no reported cases). On page 1099, under “*Streptococcus pneumoniae*, invasive disease” the number of reported cases, by geographic division and area, should read as follows:

TABLE 2. Reported cases of notifiable diseases, by geographic division and area — United States, 2010

| Area | <i>Streptococcus pneumoniae</i> , invasive disease* | |
|----------------------|---|------------|
| | All ages | Age <5 yrs |
| United States | 16,569 | 2,186 |
| New England | 942 | 107 |
| Connecticut | 389 | 30 |
| Maine | 130 | 10 |
| Massachusetts | 71 | 47 |
| New Hampshire | 145 | 6 |
| Rhode Island | 123 | 8 |
| Vermont | 84 | 6 |
| Mid. Atlantic | 1,701 | 262 |
| New Jersey | 754 | 64 |
| New York (Upstate) | 155 | 120 |
| New York City | 792 | 78 |
| Pennsylvania | N | N |
| E.N. Central | 3,299 | 375 |
| Illinois | N | 100 |
| Indiana | 781 | 55 |
| Michigan | 744 | 82 |
| Ohio | 1,227 | 100 |
| Wisconsin | 547 | 38 |
| W.N. Central | 875 | 157 |
| Iowa | N | N |
| Kansas | N | N |
| Minnesota | 649 | 87 |
| Missouri | N | 40 |
| Nebraska | 139 | 16 |
| North Dakota | 87 | 3 |
| South Dakota | N | 11 |
| S. Atlantic | 4,282 | 577 |
| Delaware | 50 | 2 |
| District of Columbia | 78 | 9 |
| Florida | 1,509 | 204 |
| Georgia | 1,461 | 162 |
| Maryland | 526 | 53 |
| North Carolina | N | N |
| South Carolina | 519 | 56 |
| Virginia | N | 59 |
| West Virginia | 139 | 32 |
| E.S. Central | 1,289 | 126 |
| Alabama | N | N |
| Kentucky | 205 | 12 |
| Mississippi | N | 19 |
| Tennessee | 1,084 | 95 |
| W.S. Central | 2,263 | 331 |
| Arkansas | 194 | 22 |
| Louisiana | 157 | 28 |
| Oklahoma | N | 55 |
| Texas | 1,912 | 226 |
| Mountain | 1,804 | 234 |
| Arizona | 823 | 105 |
| Colorado | 546 | 63 |
| Idaho | N | 8 |
| Montana | N | N |
| Nevada | N | N |
| New Mexico | 174 | 20 |
| Utah | 232 | 34 |
| Wyoming | 29 | 4 |
| Pacific | 114 | 17 |
| Alaska | 110 | 17 |
| California | N | N |
| Hawaii | 4 | — |
| Oregon | N | N |
| Washington | N | N |
| Territories | | |
| American Samoa | N | — |
| C.N.M.I. | — | — |
| Guam | — | — |
| Puerto Rico | — | — |
| U.S. Virgin Islands | — | — |

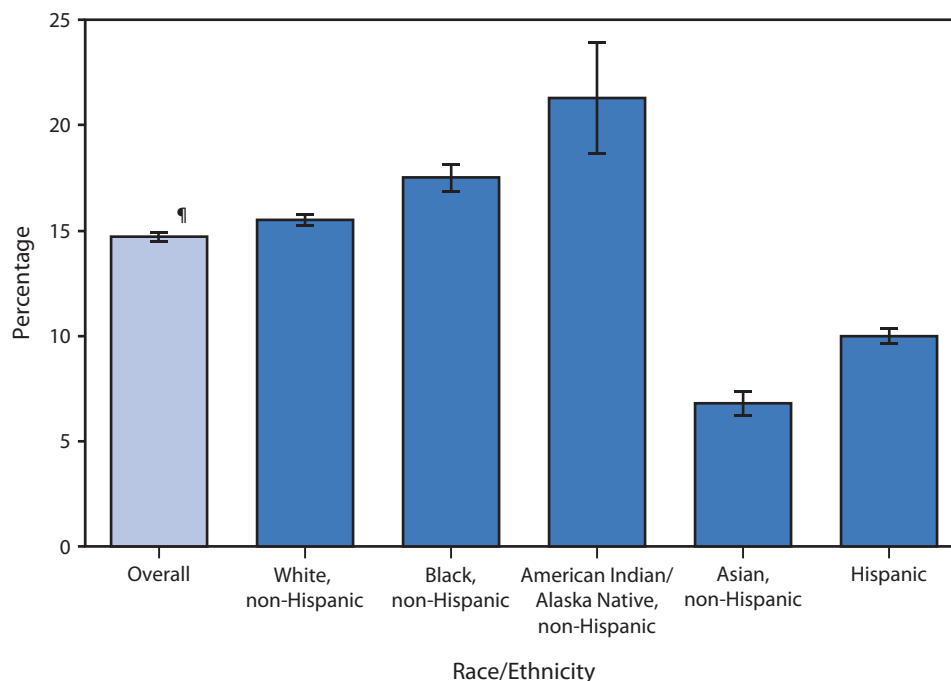
N: Not reportable. U: Unavailable. —: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.

* The previous categories of invasive pneumococcal disease among children less than 5 years and invasive, drug-resistant *Streptococcus pneumoniae* were eliminated. All cases of invasive *Streptococcus pneumoniae* disease, regardless of age or drug resistance are reported under a single disease code.

QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

Percentage of Adults Aged ≥18 Years with a Complex Activity Limitation,* by Race/Ethnicity[†] — National Health Interview Survey, United States, 2003–2009[§]



* A complex activity limitation is a limitation in the tasks and organized activities that, when executed, make up numerous social roles, such as working, attending school, or maintaining a household. Adults are defined as having a complex activity limitation if they have one or more of the following types of limitations: self-care limitation, social limitation, or work limitation.

[†] Race/ethnicity categories are limited to persons who indicated only a single race, except for the overall category, which includes persons of other and multiple races. Persons of Hispanic ethnicity might be of any race or combination of races. Non-Hispanic refers to persons who are not of Hispanic ethnicity, regardless of race.

[§] Estimates are based on household interviews of a sample of the civilian, noninstitutionalized U.S. population and are derived from the National Health Interview Survey sample adult component.

[¶] 95% confidence interval.

During 2003–2009, 14.7% of U.S. adults had one or more complex activity limitation. Among racial/ethnic populations, non-Hispanic Asian adults (6.8%) were least likely to have this limitation, and non-Hispanic American Indian/Alaska Native adults (21.3%) were most likely to have a complex activity limitation.

Sources: National Health Interview Survey, 2003–2009. Available at <http://www.cdc.gov/nchs/nhis.htm>.

Ward BW, Schiller JS. Prevalence of complex activity limitations among racial/ethnic groups and Hispanic subgroups of adults: United States, 2003–2009. Data brief 2011;73. Available at <http://www.cdc.gov/nchs/data/databriefs/db73.pdf>.

Notifiable Diseases and Mortality Tables

TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending October 1, 2011 (39th week)*

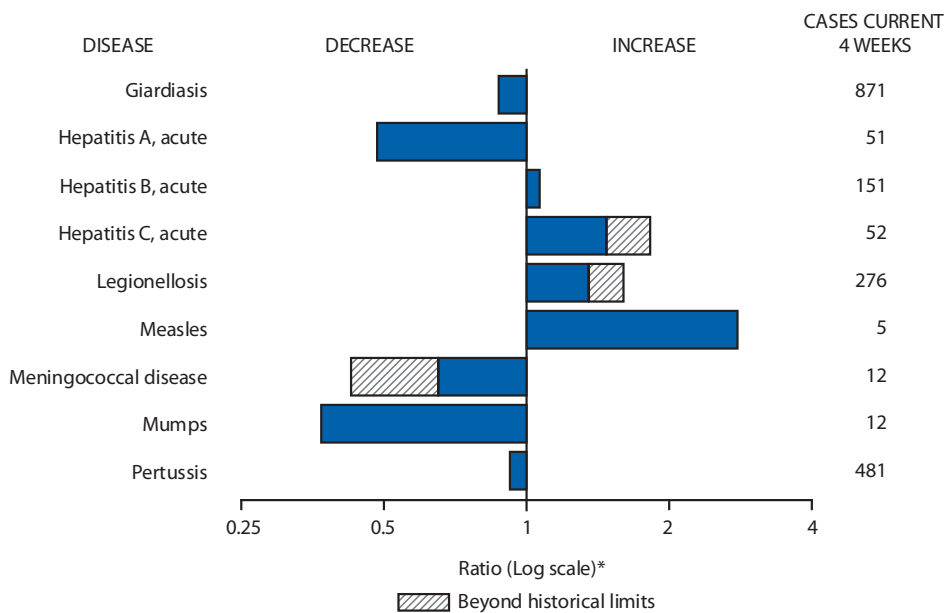
| Disease | Current week | Cum 2011 | 5-year weekly average [†] | Total cases reported for previous years | | | | | States reporting cases during current week (No.) |
|--|--------------|----------|------------------------------------|---|--------|------|------|------|--|
| | | | | 2010 | 2009 | 2008 | 2007 | 2006 | |
| Anthrax | — | — | — | — | 1 | — | 1 | 1 | |
| Arboviral diseases ^{§, ¶} : | | | | | | | | | |
| California serogroup virus disease | — | 80 | 2 | 75 | 55 | 62 | 55 | 67 | |
| Eastern equine encephalitis virus disease | — | 3 | 0 | 10 | 4 | 4 | 4 | 8 | |
| Powassan virus disease | — | 12 | — | 8 | 6 | 2 | 7 | 1 | |
| St. Louis encephalitis virus disease | — | 1 | 0 | 10 | 12 | 13 | 9 | 10 | |
| Western equine encephalitis virus disease | — | — | — | — | — | — | — | — | |
| Babesiosis | 4 | 421 | 1 | NN | NN | NN | NN | NN | NY (3), MD (1) |
| Botulism, total | — | 66 | 3 | 112 | 118 | 145 | 144 | 165 | |
| foodborne | — | 8 | 0 | 7 | 10 | 17 | 32 | 20 | |
| infant | — | 50 | 2 | 80 | 83 | 109 | 85 | 97 | |
| other (wound and unspecified) | — | 8 | 0 | 25 | 25 | 19 | 27 | 48 | |
| Brucellosis | 3 | 66 | 2 | 115 | 115 | 80 | 131 | 121 | FL (1), OK (1), CA (1) |
| Chancroid | 1 | 11 | 0 | 24 | 28 | 25 | 23 | 33 | NJ (1) |
| Cholera | — | 27 | 0 | 13 | 10 | 5 | 7 | 9 | |
| Cyclosporiasis [§] | 1 | 129 | 2 | 179 | 141 | 139 | 93 | 137 | FL (1) |
| Diphtheria | — | — | — | — | — | — | — | — | |
| <i>Haemophilus influenzae</i> ,** invasive disease (age <5 yrs): | | | | | | | | | |
| serotype b | — | 5 | 1 | 23 | 35 | 30 | 22 | 29 | |
| nonsertotype b | 1 | 84 | 2 | 200 | 236 | 244 | 199 | 175 | WV (1) |
| unknown serotype | 1 | 178 | 2 | 223 | 178 | 163 | 180 | 179 | FL (1) |
| Hansen disease [§] | 1 | 34 | 2 | 98 | 103 | 80 | 101 | 66 | NV (1) |
| Hantavirus pulmonary syndrome [§] | — | 18 | 1 | 20 | 20 | 18 | 32 | 40 | |
| Hemolytic uremic syndrome, postdiarrheal [§] | 7 | 126 | 8 | 266 | 242 | 330 | 292 | 288 | OH (2), OK (2), ID (2), CA (1) |
| Influenza-associated pediatric mortality ^{§, ††} | — | 112 | 2 | 61 | 358 | 90 | 77 | 43 | |
| Listeriosis | 23 | 503 | 20 | 821 | 851 | 759 | 808 | 884 | ME (1), NY (2), OH (3), IA (1), VA (1), NC (1), FL (3), LA (1), OK (1), TX (3), WY (2), CO (2), CA (2) |
| Measles ^{§§} | — | 197 | 1 | 63 | 71 | 140 | 43 | 55 | |
| Meningococcal disease, invasive ^{¶¶} : | | | | | | | | | |
| A, C, Y, and W-135 | — | 136 | 5 | 280 | 301 | 330 | 325 | 318 | |
| serogroup B | 1 | 72 | 2 | 135 | 174 | 188 | 167 | 193 | VA (1) |
| other serogroup | — | 11 | 0 | 12 | 23 | 38 | 35 | 32 | |
| unknown serogroup | 1 | 304 | 8 | 406 | 482 | 616 | 550 | 651 | FL (1) |
| Novel influenza A virus infections ^{***} | — | 6 | 0 | 4 | 43,774 | 2 | 4 | NN | |
| Plague | — | 2 | 0 | 2 | 8 | 3 | 7 | 17 | |
| Poliomyelitis, paralytic | — | — | — | — | 1 | — | — | — | |
| Polio virus Infection, nonparalytic [§] | — | — | — | — | — | — | — | NN | |
| Psittacosis [§] | — | 2 | 0 | 4 | 9 | 8 | 12 | 21 | |
| Q fever, total [§] | 2 | 84 | 2 | 131 | 113 | 120 | 171 | 169 | |
| acute | 1 | 64 | 2 | 106 | 93 | 106 | — | — | MD (1) |
| chronic | 1 | 20 | 0 | 25 | 20 | 14 | — | — | NY (1) |
| Rabies, human | — | 1 | 0 | 2 | 4 | 2 | 1 | 3 | |
| Rubella ^{†††} | — | 3 | 0 | 5 | 3 | 16 | 12 | 11 | |
| Rubella, congenital syndrome | — | — | — | — | 2 | — | — | 1 | |
| SARS-CoV [§] | — | — | — | — | — | — | — | — | |
| Smallpox [§] | — | — | — | — | — | — | — | — | |
| Streptococcal toxic-shock syndrome [§] | 1 | 98 | 2 | 142 | 161 | 157 | 132 | 125 | NY (1) |
| Syphilis, congenital (age <1 yr) ^{§§§} | — | 142 | 8 | 377 | 423 | 431 | 430 | 349 | |
| Tetanus | — | 6 | 1 | 26 | 18 | 19 | 28 | 41 | |
| Toxic-shock syndrome (staphylococcal) [§] | — | 62 | 1 | 82 | 74 | 71 | 92 | 101 | |
| Trichinellosis | — | 8 | 0 | 7 | 13 | 39 | 5 | 15 | |
| Tularemia | 1 | 101 | 2 | 124 | 93 | 123 | 137 | 95 | NY (1) |
| Typhoid fever | 3 | 274 | 11 | 467 | 397 | 449 | 434 | 353 | NY (1), CA (2) |
| Vancomycin-intermediate <i>Staphylococcus aureus</i> [§] | 1 | 52 | 1 | 91 | 78 | 63 | 37 | 6 | NY (1) |
| Vancomycin-resistant <i>Staphylococcus aureus</i> [§] | — | — | — | 2 | 1 | — | 2 | 1 | |
| Vibriosis (noncholera <i>Vibrio</i> species infections) [§] | 6 | 556 | 16 | 846 | 789 | 588 | 549 | NN | MD (1), FL (2), AZ (2), CA (1) |
| Viral hemorrhagic fever ^{¶¶¶} | — | — | — | 1 | NN | NN | NN | NN | |
| Yellow fever | — | — | — | — | — | — | — | — | |

See Table 1 footnotes on next page.

TABLE I. (Continued) Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending October 1, 2011 (39th week)*

—: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts.
 * Case counts for reporting years 2010 and 2011 are provisional and subject to change. For further information on interpretation of these data, see http://www.cdc.gov/osels/ph_surveillance/nndss/phs/files/ProvisionalNationa%20NotifiableDiseasesSurveillanceData20100927.pdf.
 † 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/osels/ph_surveillance/nndss/phs/files/5yearweeklyaverage.pdf.
 ‡ Not reportable in all states. Data from states where the condition is not reportable are excluded from this table except starting in 2007 for the arboviral diseases, STD data, TB data, and influenza-associated pediatric mortality, and in 2003 for SARS-CoV. Reporting exceptions are available at http://www.cdc.gov/osels/ph_surveillance/nndss/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 weekly from reports to the Influenza Division, National Center for Immunization and Respiratory Diseases. Since October 3, 2010, 116 influenza-associated pediatric deaths occurring during the 2010-11 influenza season have been reported.
 ‡‡ No measles cases were reported for the current week.
 ¶¶ Data for meningococcal disease (all serogroups) are available in Table II.
 *** CDC discontinued reporting of individual confirmed and probable cases of 2009 pandemic influenza A (H1N1) virus infections on July 24, 2009. During 2009, four cases of human infection with novel influenza A viruses, different from the 2009 pandemic influenza A (H1N1) strain, were reported to CDC. The four cases of novel influenza A virus infection reported to CDC during 2010, and the six cases reported during 2011, were identified as swine influenza A (H3N2) virus and are unrelated to the 2009 pandemic influenza A (H1N1) virus. Total case counts for 2009 were provided by the Influenza Division, National Center for Immunization and Respiratory Diseases (NCIRD).
 ††† No rubella cases were reported for the current week.
 §§§ Updated weekly from reports to the Division of STD Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention.
 ¶¶¶ There was one case of viral hemorrhagic fever reported during week 12 of 2010. The one case report was confirmed as lassa fever. See Table II for dengue hemorrhagic fever.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals October 1, 2011, 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.

Notifiable Disease Data Team and 122 Cities Mortality Data Team
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Morbidity and Mortality Weekly Report

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending October 1, 2011, and October 2, 2010 (39th week)*

| Reporting area | <i>Chlamydia trachomatis</i> infection | | | | | Coccidioidomycosis | | | | | Cryptosporidiosis | | | | |
|----------------------|--|-------------------|--------|----------|----------|--------------------|-------------------|-----|----------|----------|-------------------|-------------------|-----|----------|----------|
| | Current week | Previous 52 weeks | | Cum 2011 | Cum 2010 | Current week | Previous 52 weeks | | Cum 2011 | Cum 2010 | Current week | Previous 52 weeks | | Cum 2011 | Cum 2010 |
| | | Med | Max | | | | Med | Max | | | | Med | Max | | |
| United States | 12,763 | 26,084 | 31,142 | 976,768 | 968,092 | 83 | 352 | 568 | 13,516 | NN | 137 | 134 | 334 | 6,329 | 7,191 |
| New England | 412 | 862 | 2,043 | 32,225 | 30,984 | — | 0 | 1 | 1 | NN | 1 | 5 | 55 | 260 | 422 |
| Connecticut | — | 213 | 1,557 | 7,106 | 8,111 | — | 0 | 0 | — | NN | — | 0 | 49 | 49 | 77 |
| Maine† | — | 59 | 100 | 2,337 | 1,933 | — | 0 | 0 | — | NN | — | 1 | 4 | 37 | 83 |
| Massachusetts | 376 | 419 | 860 | 16,721 | 15,581 | — | 0 | 0 | — | NN | — | 2 | 7 | 89 | 137 |
| New Hampshire | 3 | 53 | 82 | 2,012 | 1,783 | — | 0 | 1 | 1 | NN | — | 1 | 5 | 49 | 50 |
| Rhode Island† | 33 | 76 | 154 | 3,004 | 2,620 | — | 0 | 0 | — | NN | — | 0 | 1 | 1 | 15 |
| Vermont† | — | 26 | 84 | 1,045 | 956 | — | 0 | 0 | — | NN | 1 | 1 | 4 | 35 | 60 |
| Mid. Atlantic | 2,059 | 3,400 | 5,069 | 127,388 | 126,820 | — | 0 | 1 | 3 | NN | 11 | 16 | 37 | 694 | 677 |
| New Jersey | 182 | 542 | 938 | 21,470 | 19,775 | — | 0 | 0 | — | NN | — | 0 | 4 | 21 | 37 |
| New York (Upstate) | 770 | 715 | 2,099 | 26,785 | 25,243 | — | 0 | 0 | — | NN | 10 | 4 | 15 | 175 | 173 |
| New York City | 251 | 1,129 | 2,612 | 40,581 | 46,487 | — | 0 | 0 | — | NN | — | 1 | 6 | 55 | 71 |
| Pennsylvania | 856 | 966 | 1,240 | 38,552 | 35,315 | — | 0 | 1 | 3 | NN | 1 | 9 | 26 | 443 | 396 |
| E.N. Central | 1,013 | 3,971 | 7,039 | 145,603 | 153,566 | — | 0 | 5 | 37 | NN | 52 | 32 | 134 | 1,932 | 2,029 |
| Illinois | — | 1,066 | 1,320 | 35,989 | 45,301 | — | 0 | 0 | — | NN | — | 3 | 24 | 139 | 285 |
| Indiana | 210 | 482 | 3,376 | 19,913 | 15,069 | — | 0 | 0 | — | NN | — | 4 | 14 | 180 | 234 |
| Michigan | 460 | 929 | 1,412 | 35,565 | 37,163 | — | 0 | 3 | 22 | NN | 2 | 6 | 13 | 246 | 267 |
| Ohio | 189 | 1,002 | 1,134 | 37,306 | 38,549 | — | 0 | 3 | 15 | NN | 47 | 9 | 95 | 888 | 382 |
| Wisconsin | 154 | 458 | 559 | 16,830 | 17,484 | — | 0 | 0 | — | NN | 3 | 8 | 55 | 479 | 861 |
| W.N. Central | 355 | 1,448 | 1,667 | 53,974 | 54,304 | — | 0 | 2 | 6 | NN | 10 | 19 | 82 | 1,057 | 1,592 |
| Iowa | 15 | 210 | 254 | 7,918 | 7,925 | — | 0 | 0 | — | NN | 1 | 6 | 18 | 288 | 337 |
| Kansas | 30 | 195 | 288 | 7,713 | 7,339 | — | 0 | 0 | — | NN | — | 0 | 8 | 25 | 90 |
| Minnesota | — | 273 | 368 | 8,995 | 11,648 | — | 0 | 0 | — | NN | — | 0 | 10 | — | 349 |
| Missouri | 286 | 544 | 759 | 20,941 | 19,517 | — | 0 | 0 | — | NN | 8 | 4 | 63 | 438 | 478 |
| Nebraska† | 24 | 112 | 218 | 4,574 | 3,707 | — | 0 | 2 | 6 | NN | 1 | 4 | 12 | 162 | 221 |
| North Dakota | — | 43 | 77 | 1,490 | 1,777 | — | 0 | 0 | — | NN | — | 0 | 12 | 28 | 19 |
| South Dakota | — | 63 | 93 | 2,343 | 2,391 | — | 0 | 0 | — | NN | — | 1 | 13 | 116 | 98 |
| S. Atlantic | 3,292 | 5,212 | 6,685 | 204,852 | 195,018 | — | 0 | 2 | 3 | NN | 16 | 21 | 37 | 889 | 822 |
| Delaware | 91 | 85 | 128 | 3,196 | 3,294 | — | 0 | 0 | — | NN | — | 0 | 1 | 7 | 7 |
| District of Columbia | — | 107 | 180 | 4,030 | 4,065 | — | 0 | 0 | — | NN | — | 0 | 1 | 5 | 5 |
| Florida | 1,006 | 1,494 | 1,698 | 57,276 | 57,052 | — | 0 | 0 | — | NN | 13 | 8 | 17 | 352 | 307 |
| Georgia | 793 | 979 | 2,384 | 38,536 | 33,204 | — | 0 | 0 | — | NN | 1 | 5 | 11 | 217 | 209 |
| Maryland† | 633 | 464 | 1,125 | 17,744 | 18,171 | — | 0 | 2 | 3 | NN | 2 | 1 | 6 | 52 | 31 |
| North Carolina | — | 852 | 1,688 | 35,909 | 33,036 | — | 0 | 0 | — | NN | — | 0 | 13 | 36 | 73 |
| South Carolina† | — | 515 | 946 | 20,533 | 19,699 | — | 0 | 0 | — | NN | — | 2 | 8 | 106 | 91 |
| Virginia† | 769 | 648 | 965 | 24,578 | 23,647 | — | 0 | 0 | — | NN | — | 2 | 8 | 98 | 83 |
| West Virginia | — | 78 | 121 | 3,050 | 2,850 | — | 0 | 0 | — | NN | — | 0 | 5 | 16 | 16 |
| E.S. Central | 1,808 | 1,804 | 3,314 | 71,773 | 69,241 | — | 0 | 0 | — | NN | 19 | 6 | 17 | 257 | 261 |
| Alabama† | 594 | 524 | 1,567 | 21,504 | 20,134 | — | 0 | 0 | — | NN | 2 | 3 | 13 | 107 | 131 |
| Kentucky | 390 | 268 | 2,352 | 11,726 | 11,527 | — | 0 | 0 | — | NN | 17 | 1 | 4 | 45 | 65 |
| Mississippi | 498 | 398 | 696 | 15,771 | 16,381 | — | 0 | 0 | — | NN | — | 1 | 3 | 32 | 17 |
| Tennessee† | 326 | 593 | 795 | 22,772 | 21,199 | — | 0 | 0 | — | NN | — | 1 | 6 | 73 | 48 |
| W.S. Central | 2,169 | 3,387 | 4,338 | 131,874 | 132,671 | — | 0 | 1 | 5 | NN | 9 | 7 | 62 | 362 | 383 |
| Arkansas† | 287 | 309 | 440 | 12,257 | 11,814 | — | 0 | 0 | — | NN | — | 0 | 3 | 16 | 27 |
| Louisiana | — | 477 | 1,052 | 16,372 | 19,980 | — | 0 | 1 | 5 | NN | — | 0 | 9 | 37 | 61 |
| Oklahoma | — | 222 | 850 | 7,557 | 10,671 | — | 0 | 0 | — | NN | 1 | 2 | 34 | 66 | 69 |
| Texas† | 1,882 | 2,415 | 3,107 | 95,688 | 90,206 | — | 0 | 0 | — | NN | 8 | 4 | 34 | 243 | 226 |
| Mountain | 877 | 1,650 | 2,155 | 63,487 | 62,741 | 71 | 275 | 457 | 10,756 | NN | 11 | 11 | 30 | 473 | 485 |
| Arizona | — | 507 | 698 | 17,840 | 20,510 | 69 | 271 | 455 | 10,630 | NN | 1 | 1 | 4 | 35 | 30 |
| Colorado | 569 | 416 | 848 | 18,239 | 14,647 | — | 0 | 0 | — | NN | 4 | 3 | 12 | 132 | 110 |
| Idaho† | — | 78 | 235 | 2,895 | 3,017 | — | 0 | 0 | — | NN | 4 | 2 | 9 | 90 | 81 |
| Montana† | 50 | 61 | 89 | 2,482 | 2,308 | — | 0 | 2 | 3 | NN | 1 | 1 | 6 | 59 | 39 |
| Nevada† | 211 | 200 | 380 | 8,127 | 7,650 | 2 | 1 | 5 | 72 | NN | — | 0 | 2 | 7 | 36 |
| New Mexico† | 47 | 196 | 1,183 | 7,810 | 8,071 | — | 0 | 4 | 38 | NN | 1 | 2 | 7 | 97 | 108 |
| Utah | — | 126 | 175 | 4,662 | 4,980 | — | 0 | 2 | 10 | NN | — | 1 | 5 | 33 | 60 |
| Wyoming† | — | 38 | 90 | 1,432 | 1,558 | — | 0 | 2 | 3 | NN | — | 0 | 5 | 20 | 21 |
| Pacific | 778 | 3,916 | 6,559 | 145,592 | 142,747 | 12 | 62 | 143 | 2,705 | NN | 8 | 11 | 29 | 405 | 520 |
| Alaska | — | 108 | 157 | 4,173 | 4,641 | — | 0 | 0 | — | NN | — | 0 | 3 | 10 | 4 |
| California | 778 | 2,949 | 5,763 | 113,488 | 109,187 | 12 | 62 | 143 | 2,698 | NN | 8 | 7 | 19 | 245 | 274 |
| Hawaii | — | 108 | 135 | 3,677 | 4,608 | — | 0 | 0 | — | NN | — | 0 | 0 | — | 1 |
| Oregon | — | 270 | 524 | 10,048 | 8,409 | — | 0 | 1 | 7 | NN | — | 2 | 11 | 93 | 172 |
| Washington | — | 416 | 522 | 14,206 | 15,902 | — | 0 | 0 | — | NN | — | 1 | 9 | 57 | 69 |
| Territories | | | | | | | | | | | | | | | |
| American Samoa | — | 0 | 0 | — | — | — | 0 | 0 | — | NN | N | 0 | 0 | N | N |
| C.N.M.I. | — | — | — | — | — | — | — | — | — | NN | — | — | — | — | — |
| Guam | — | 6 | 81 | 189 | 691 | — | 0 | 0 | — | NN | — | 0 | 0 | — | — |
| Puerto Rico | 180 | 102 | 349 | 4,063 | 4,659 | — | 0 | 0 | — | NN | N | 0 | 0 | N | N |
| U.S. Virgin Islands | — | 15 | 27 | 539 | 444 | — | 0 | 0 | — | NN | — | 0 | 0 | — | — |

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

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

* Case counts for reporting year 2010 and 2011 are provisional and subject to change. For further information on interpretation of these data, see http://www.cdc.gov/osels/ph_surveillance/nndss/phs/files/ProvisionalNationalNotifiableDiseasesSurveillanceData20100927.pdf. Data for TB are displayed in Table IV, which appears quarterly.

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

Morbidity and Mortality Weekly Report

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending October 1, 2011, and October 2, 2010 (39th week)*

| Reporting area | Dengue Virus Infection† | | | | | | | | | |
|----------------------|-------------------------|-------------------|-----|----------|----------|---------------------------|-------------------|----|----------|----------|
| | Dengue Fever§ | | | | | Dengue Hemorrhagic Fever¶ | | | | |
| | Current week | Previous 52 weeks | | Cum 2011 | Cum 2010 | Current week | Previous 52 weeks | | Cum 2011 | Cum 2010 |
| | Med | Max | | | | Med | Max | | | |
| United States | — | 3 | 20 | 104 | 589 | — | 0 | 1 | 1 | 9 |
| New England | — | 0 | 3 | 1 | 6 | — | 0 | 0 | — | — |
| Connecticut | — | 0 | 0 | — | — | — | 0 | 0 | — | — |
| Maine** | — | 0 | 2 | — | 3 | — | 0 | 0 | — | — |
| Massachusetts | — | 0 | 0 | — | — | — | 0 | 0 | — | — |
| New Hampshire | — | 0 | 0 | — | — | — | 0 | 0 | — | — |
| Rhode Island** | — | 0 | 0 | — | 1 | — | 0 | 0 | — | — |
| Vermont** | — | 0 | 1 | 1 | 2 | — | 0 | 0 | — | — |
| Mid. Atlantic | — | 1 | 4 | 24 | 200 | — | 0 | 0 | — | 5 |
| New Jersey | — | 0 | 3 | — | 25 | — | 0 | 0 | — | — |
| New York (Upstate) | — | 0 | 1 | — | 29 | — | 0 | 0 | — | 2 |
| New York City | — | 0 | 2 | 10 | 128 | — | 0 | 0 | — | 3 |
| Pennsylvania | — | 0 | 2 | 14 | 18 | — | 0 | 0 | — | — |
| E.N. Central | — | 0 | 4 | 7 | 57 | — | 0 | 0 | — | 1 |
| Illinois | — | 0 | 2 | 1 | 16 | — | 0 | 0 | — | — |
| Indiana | — | 0 | 1 | 1 | 12 | — | 0 | 0 | — | — |
| Michigan | — | 0 | 1 | 2 | 9 | — | 0 | 0 | — | — |
| Ohio | — | 0 | 1 | 1 | 14 | — | 0 | 0 | — | — |
| Wisconsin | — | 0 | 2 | 2 | 6 | — | 0 | 0 | — | 1 |
| W.N. Central | — | 0 | 6 | 4 | 24 | — | 0 | 1 | — | — |
| Iowa | — | 0 | 1 | 3 | 2 | — | 0 | 0 | — | — |
| Kansas | — | 0 | 1 | 1 | 4 | — | 0 | 0 | — | — |
| Minnesota | — | 0 | 1 | — | 13 | — | 0 | 0 | — | — |
| Missouri | — | 0 | 1 | — | 4 | — | 0 | 0 | — | — |
| Nebraska** | — | 0 | 6 | — | — | — | 0 | 0 | — | — |
| North Dakota | — | 0 | 0 | — | 1 | — | 0 | 0 | — | — |
| South Dakota | — | 0 | 0 | — | — | — | 0 | 1 | — | — |
| S. Atlantic | — | 1 | 6 | 43 | 209 | — | 0 | 1 | 1 | 2 |
| Delaware | — | 0 | 0 | — | — | — | 0 | 0 | — | — |
| District of Columbia | — | 0 | 0 | — | — | — | 0 | 0 | — | — |
| Florida | — | 1 | 6 | 32 | 163 | — | 0 | 0 | — | 2 |
| Georgia | — | 0 | 1 | 3 | 11 | — | 0 | 0 | — | — |
| Maryland** | — | 0 | 0 | — | — | — | 0 | 0 | — | — |
| North Carolina | — | 0 | 1 | 1 | 6 | — | 0 | 0 | — | — |
| South Carolina** | — | 0 | 0 | — | 13 | — | 0 | 0 | — | — |
| Virginia** | — | 0 | 1 | 7 | 14 | — | 0 | 1 | 1 | — |
| West Virginia | — | 0 | 0 | — | 2 | — | 0 | 0 | — | — |
| E.S. Central | — | 0 | 1 | 1 | 5 | — | 0 | 0 | — | — |
| Alabama** | — | 0 | 1 | — | 2 | — | 0 | 0 | — | — |
| Kentucky | — | 0 | 0 | — | 2 | — | 0 | 0 | — | — |
| Mississippi | — | 0 | 0 | — | — | — | 0 | 0 | — | — |
| Tennessee** | — | 0 | 1 | 1 | 1 | — | 0 | 0 | — | — |
| W.S. Central | — | 0 | 2 | 6 | 25 | — | 0 | 0 | — | 1 |
| Arkansas** | — | 0 | 0 | — | — | — | 0 | 0 | — | 1 |
| Louisiana | — | 0 | 1 | 3 | 4 | — | 0 | 0 | — | — |
| Oklahoma | — | 0 | 1 | — | 4 | — | 0 | 0 | — | — |
| Texas** | — | 0 | 1 | 3 | 17 | — | 0 | 0 | — | — |
| Mountain | — | 0 | 2 | 3 | 17 | — | 0 | 0 | — | — |
| Arizona | — | 0 | 2 | 2 | 7 | — | 0 | 0 | — | — |
| Colorado | — | 0 | 0 | — | — | — | 0 | 0 | — | — |
| Idaho** | — | 0 | 1 | — | 2 | — | 0 | 0 | — | — |
| Montana** | — | 0 | 1 | — | 3 | — | 0 | 0 | — | — |
| Nevada** | — | 0 | 0 | — | 4 | — | 0 | 0 | — | — |
| New Mexico** | — | 0 | 0 | — | 1 | — | 0 | 0 | — | — |
| Utah | — | 0 | 1 | 1 | — | — | 0 | 0 | — | — |
| Wyoming** | — | 0 | 0 | — | — | — | 0 | 0 | — | — |
| Pacific | — | 0 | 4 | 15 | 46 | — | 0 | 0 | — | — |
| Alaska | — | 0 | 0 | — | 1 | — | 0 | 0 | — | — |
| California | — | 0 | 2 | 5 | 32 | — | 0 | 0 | — | — |
| Hawaii | — | 0 | 4 | 5 | — | — | 0 | 0 | — | — |
| Oregon | — | 0 | 0 | — | — | — | 0 | 0 | — | — |
| Washington | — | 0 | 1 | 5 | 13 | — | 0 | 0 | — | — |
| Territories | | | | | | | | | | |
| American Samoa | — | 0 | 0 | — | — | — | 0 | 0 | — | — |
| C.N.M.I. | — | — | — | — | — | — | — | — | — | — |
| Guam | — | 0 | 0 | — | — | — | 0 | 0 | — | — |
| Puerto Rico | — | 29 | 291 | 794 | 9,200 | — | 0 | 10 | 10 | 217 |
| U.S. Virgin Islands | — | 0 | 0 | — | — | — | 0 | 0 | — | — |

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

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

* Case counts for reporting year 2010 and 2011 are provisional and subject to change. For further information on interpretation of these data, see http://www.cdc.gov/osels/ph_surveillance/nndss/phs/files/ProvisionalNationa%20NotifiableDiseasesSurveillanceData20100927.pdf. Data for TB are displayed in Table IV, which appears quarterly.

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

§ Dengue Fever includes cases that meet criteria for Dengue Fever with hemorrhage, other clinical and unknown case classifications.

¶ DHF includes cases that meet criteria for dengue shock syndrome (DSS), a more severe form of DHF.

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

Morbidity and Mortality Weekly Report

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending October 1, 2011, and October 2, 2010 (39th week)*

| Reporting area | Ehrlichiosis/Anaplasmosis† | | | | | | | | | | | | | | |
|-----------------------------|------------------------------|-------------------|-----|----------|----------|----------------------------------|-------------------|----|----------|----------|--------------|-------------------|----|----------|----------|
| | <i>Ehrlichia chaffeensis</i> | | | | | <i>Anaplasma phagocytophilum</i> | | | | | Undetermined | | | | |
| | Current week | Previous 52 weeks | | Cum 2011 | Cum 2010 | Current week | Previous 52 weeks | | Cum 2011 | Cum 2010 | Current week | Previous 52 weeks | | Cum 2011 | Cum 2010 |
| | Med | Max | | | | Med | Max | | | | Med | Max | | | |
| United States | 3 | 7 | 109 | 583 | 566 | 11 | 16 | 44 | 456 | 1,464 | — | 2 | 13 | 86 | 76 |
| New England | — | 0 | 2 | 4 | 4 | — | 2 | 15 | 109 | 81 | — | 0 | 1 | 1 | 2 |
| Connecticut | — | 0 | 0 | — | — | — | 0 | 5 | — | 32 | — | 0 | 0 | — | — |
| Maine [§] | — | 0 | 1 | 1 | 2 | — | 0 | 2 | 13 | 14 | — | 0 | 0 | — | — |
| Massachusetts | — | 0 | 0 | — | — | — | 0 | 10 | 49 | — | — | 0 | 0 | — | — |
| New Hampshire | — | 0 | 1 | 2 | 2 | — | 0 | 4 | 14 | 13 | — | 0 | 1 | 1 | 2 |
| Rhode Island [§] | — | 0 | 1 | 1 | — | — | 0 | 10 | 30 | 21 | — | 0 | 0 | — | — |
| Vermont [§] | — | 0 | 0 | — | — | — | 0 | 1 | 3 | 1 | — | 0 | 0 | — | — |
| Mid. Atlantic | 1 | 1 | 7 | 53 | 78 | 10 | 4 | 27 | 238 | 217 | — | 0 | 2 | 11 | 9 |
| New Jersey | — | 0 | 1 | — | 48 | — | 0 | 3 | — | 59 | — | 0 | 0 | — | 1 |
| New York (Upstate) | 1 | 0 | 7 | 46 | 24 | 9 | 3 | 25 | 207 | 146 | — | 0 | 2 | 11 | 6 |
| New York City | — | 0 | 1 | 7 | 5 | — | 0 | 5 | 28 | 11 | — | 0 | 0 | — | — |
| Pennsylvania | — | 0 | 1 | — | 1 | 1 | 0 | 1 | 3 | 1 | — | 0 | 1 | — | 2 |
| E.N. Central | — | 0 | 3 | 21 | 41 | — | 0 | 9 | 14 | 450 | — | 1 | 4 | 36 | 40 |
| Illinois | — | 0 | 2 | 11 | 15 | — | 0 | 2 | 6 | 6 | — | 0 | 1 | 2 | 3 |
| Indiana | — | 0 | 0 | — | — | — | 0 | 0 | — | — | — | 0 | 3 | 28 | 14 |
| Michigan | — | 0 | 2 | 4 | 2 | — | 0 | 1 | — | 3 | — | 0 | 2 | 4 | — |
| Ohio | — | 0 | 1 | 6 | 6 | — | 0 | 1 | 5 | 2 | — | 0 | 1 | 1 | — |
| Wisconsin | — | 0 | 1 | — | 18 | — | 0 | 9 | 3 | 439 | — | 0 | 1 | 1 | 23 |
| W.N. Central | — | 1 | 18 | 145 | 115 | — | 0 | 20 | 31 | 642 | — | 0 | 11 | 15 | 9 |
| Iowa | N | 0 | 0 | N | N | N | 0 | 0 | N | N | N | 0 | 0 | N | N |
| Kansas | — | 0 | 1 | 2 | 6 | — | 0 | 1 | 2 | 1 | — | 0 | 0 | — | — |
| Minnesota | — | 0 | 12 | — | — | — | 0 | 20 | 1 | 631 | — | 0 | 11 | — | — |
| Missouri | — | 1 | 18 | 141 | 107 | — | 0 | 7 | 26 | 10 | — | 0 | 7 | 14 | 9 |
| Nebraska [§] | — | 0 | 1 | 1 | 2 | — | 0 | 0 | — | — | — | 0 | 1 | 1 | — |
| North Dakota | N | 0 | 0 | N | N | N | 0 | 0 | N | N | N | 0 | 0 | N | N |
| South Dakota | — | 0 | 1 | 1 | — | — | 0 | 1 | 2 | — | — | 0 | 0 | — | — |
| S. Atlantic | — | 3 | 33 | 201 | 220 | — | 1 | 8 | 47 | 54 | — | 0 | 1 | 9 | 5 |
| Delaware | — | 0 | 2 | 15 | 17 | — | 0 | 1 | 1 | 4 | — | 0 | 0 | — | — |
| District of Columbia | N | 0 | 0 | N | N | N | 0 | 0 | N | N | N | 0 | 0 | N | N |
| Florida | — | 0 | 3 | 13 | 8 | — | 0 | 3 | 8 | 3 | — | 0 | 0 | — | — |
| Georgia | — | 0 | 3 | 16 | 19 | — | 0 | 2 | 7 | 1 | — | 0 | 1 | 1 | 1 |
| Maryland [§] | — | 0 | 3 | 23 | 19 | — | 0 | 2 | 4 | 13 | — | 0 | 0 | — | 2 |
| North Carolina | — | 0 | 17 | 55 | 82 | — | 0 | 6 | 17 | 21 | — | 0 | 0 | — | — |
| South Carolina [§] | — | 0 | 1 | 1 | 4 | — | 0 | 0 | — | 1 | — | 0 | 0 | — | — |
| Virginia [§] | — | 1 | 14 | 78 | 69 | — | 0 | 3 | 10 | 11 | — | 0 | 1 | 7 | 2 |
| West Virginia | — | 0 | 1 | — | 2 | — | 0 | 0 | — | — | — | 0 | 1 | 1 | — |
| E.S. Central | 1 | 0 | 8 | 64 | 85 | 1 | 0 | 2 | 12 | 18 | — | 0 | 3 | 10 | 8 |
| Alabama [§] | — | 0 | 2 | 3 | 10 | — | 0 | 1 | 3 | 7 | N | 0 | 0 | N | N |
| Kentucky | — | 0 | 3 | 10 | 16 | — | 0 | 0 | — | — | — | 0 | 0 | — | 1 |
| Mississippi | — | 0 | 1 | 3 | 3 | — | 0 | 0 | — | 2 | — | 0 | 0 | — | 1 |
| Tennessee [§] | 1 | 0 | 6 | 48 | 56 | 1 | 0 | 1 | 9 | 9 | — | 0 | 3 | 10 | 6 |
| W.S. Central | 1 | 0 | 87 | 95 | 22 | — | 0 | 9 | 3 | 2 | — | 0 | 0 | — | 1 |
| Arkansas [§] | — | 0 | 12 | 38 | 4 | — | 0 | 2 | 2 | — | — | 0 | 0 | — | — |
| Louisiana | — | 0 | 0 | — | 1 | — | 0 | 0 | — | — | — | 0 | 0 | — | — |
| Oklahoma | 1 | 0 | 82 | 56 | 14 | — | 0 | 7 | 1 | 2 | — | 0 | 0 | — | — |
| Texas [§] | — | 0 | 1 | 1 | 3 | — | 0 | 1 | — | — | — | 0 | 0 | — | 1 |
| Mountain | — | 0 | 0 | — | — | — | 0 | 0 | — | — | — | 0 | 1 | 3 | — |
| Arizona | — | 0 | 0 | — | — | — | 0 | 0 | — | — | — | 0 | 1 | 3 | — |
| Colorado | N | 0 | 0 | N | N | N | 0 | 0 | N | N | N | 0 | 0 | N | N |
| Idaho [§] | N | 0 | 0 | N | N | N | 0 | 0 | N | N | N | 0 | 0 | N | N |
| Montana [§] | N | 0 | 0 | N | N | N | 0 | 0 | N | N | N | 0 | 0 | N | N |
| Nevada [§] | N | 0 | 0 | N | N | N | 0 | 0 | N | N | N | 0 | 0 | N | N |
| New Mexico [§] | N | 0 | 0 | N | N | N | 0 | 0 | N | N | N | 0 | 0 | N | N |
| Utah | — | 0 | 0 | — | — | — | 0 | 0 | — | — | — | 0 | 0 | — | — |
| Wyoming [§] | — | 0 | 0 | — | — | — | 0 | 0 | — | — | — | 0 | 0 | — | — |
| Pacific | — | 0 | 1 | — | 1 | — | 0 | 1 | 2 | — | — | 0 | 1 | 1 | 2 |
| Alaska | N | 0 | 0 | N | N | N | 0 | 0 | N | N | N | 0 | 0 | N | N |
| California | — | 0 | 1 | — | 1 | — | 0 | 0 | — | — | — | 0 | 1 | 1 | 2 |
| Hawaii | N | 0 | 0 | N | N | N | 0 | 0 | N | N | N | 0 | 0 | N | N |
| Oregon | — | 0 | 0 | — | — | — | 0 | 1 | 2 | — | — | 0 | 0 | — | — |
| Washington | — | 0 | 0 | — | — | — | 0 | 0 | — | — | — | 0 | 0 | — | — |
| Territories | | | | | | | | | | | | | | | |
| American Samoa | N | 0 | 0 | N | N | N | 0 | 0 | N | N | N | 0 | 0 | N | N |
| C.N.M.I. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Guam | N | 0 | 0 | N | N | N | 0 | 0 | N | N | N | 0 | 0 | N | N |
| Puerto Rico | N | 0 | 0 | N | N | N | 0 | 0 | N | N | N | 0 | 0 | N | N |
| U.S. Virgin Islands | — | 0 | 0 | — | — | — | 0 | 0 | — | — | — | 0 | 0 | — | — |

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

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† Cumulative total *E. ewingii* cases reported for year 2010 = 10, and 13 cases reported for 2011.

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

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending October 1, 2011, and October 2, 2010 (39th week)*

| Reporting area | Giardiasis | | | | | Gonorrhea | | | | | Haemophilus influenzae, invasive† All ages, all serotypes | | | | |
|-----------------------------|--------------|-------------------|-----|----------|----------|--------------|-------------------|-------|----------|----------|--|-------------------|-----|----------|----------|
| | Current week | Previous 52 weeks | | Cum 2011 | Cum 2010 | Current week | Previous 52 weeks | | Cum 2011 | Cum 2010 | Current week | Previous 52 weeks | | Cum 2011 | Cum 2010 |
| | | Med | Max | | | | Med | Max | | | | Med | Max | | |
| United States | 199 | 294 | 456 | 10,781 | 14,955 | 3,130 | 5,902 | 7,484 | 221,911 | 228,434 | 20 | 64 | 141 | 2,356 | 2,284 |
| New England | 17 | 23 | 42 | 888 | 1,281 | 56 | 100 | 206 | 3,872 | 4,199 | — | 4 | 12 | 141 | 134 |
| Connecticut | — | 4 | 9 | 131 | 234 | — | 42 | 150 | 1,592 | 1,896 | — | 1 | 6 | 37 | 25 |
| Maine [§] | 10 | 3 | 10 | 135 | 158 | — | 3 | 17 | 170 | 133 | — | 0 | 2 | 17 | 10 |
| Massachusetts | — | 11 | 21 | 343 | 550 | 47 | 48 | 80 | 1,719 | 1,802 | — | 2 | 6 | 62 | 71 |
| New Hampshire | — | 2 | 6 | 85 | 135 | 3 | 2 | 7 | 102 | 111 | — | 0 | 2 | 11 | 10 |
| Rhode Island [§] | — | 1 | 10 | 56 | 53 | 6 | 7 | 16 | 252 | 209 | — | 0 | 2 | 9 | 11 |
| Vermont [§] | 7 | 3 | 11 | 138 | 151 | — | 0 | 8 | 37 | 48 | — | 0 | 3 | 5 | 7 |
| Mid. Atlantic | 52 | 58 | 103 | 2,165 | 2,507 | 497 | 763 | 1,121 | 29,071 | 26,504 | 4 | 13 | 32 | 533 | 426 |
| New Jersey | — | 5 | 20 | 134 | 368 | 52 | 137 | 225 | 5,653 | 4,256 | — | 2 | 7 | 79 | 80 |
| New York (Upstate) | 33 | 22 | 72 | 820 | 849 | 145 | 114 | 271 | 4,299 | 4,137 | 1 | 3 | 18 | 141 | 110 |
| New York City | 2 | 16 | 29 | 630 | 707 | 53 | 246 | 497 | 9,037 | 8,946 | — | 3 | 6 | 123 | 70 |
| Pennsylvania | 17 | 16 | 26 | 581 | 583 | 247 | 263 | 363 | 10,082 | 9,165 | 3 | 4 | 11 | 190 | 166 |
| E.N. Central | 40 | 46 | 78 | 1,742 | 2,550 | 260 | 1,016 | 2,091 | 38,027 | 42,189 | 3 | 11 | 22 | 414 | 371 |
| Illinois | — | 9 | 16 | 297 | 570 | — | 262 | 369 | 9,045 | 11,627 | — | 3 | 10 | 123 | 129 |
| Indiana | — | 6 | 14 | 189 | 317 | 39 | 114 | 1,018 | 4,803 | 4,245 | — | 2 | 7 | 75 | 75 |
| Michigan | 5 | 10 | 25 | 349 | 542 | 115 | 236 | 491 | 9,039 | 10,221 | 2 | 1 | 4 | 49 | 25 |
| Ohio | 31 | 17 | 29 | 624 | 628 | 60 | 315 | 394 | 11,778 | 12,400 | 1 | 2 | 7 | 114 | 92 |
| Wisconsin | 4 | 8 | 17 | 283 | 493 | 46 | 93 | 127 | 3,362 | 3,696 | — | 1 | 5 | 53 | 50 |
| W.N. Central | 15 | 24 | 54 | 846 | 1,644 | 121 | 300 | 363 | 11,290 | 10,988 | — | 3 | 10 | 115 | 167 |
| Iowa | 3 | 5 | 15 | 212 | 227 | 4 | 37 | 53 | 1,418 | 1,314 | — | 0 | 0 | — | 1 |
| Kansas | 1 | 2 | 7 | 71 | 176 | 9 | 39 | 57 | 1,522 | 1,573 | — | 0 | 2 | 16 | 16 |
| Minnesota | — | 0 | 26 | — | 653 | — | 36 | 53 | 1,233 | 1,639 | — | 0 | 5 | — | 59 |
| Missouri | 5 | 8 | 23 | 322 | 317 | 98 | 150 | 184 | 5,697 | 5,145 | — | 1 | 5 | 62 | 65 |
| Nebraska [§] | 6 | 4 | 11 | 150 | 172 | 9 | 24 | 49 | 905 | 841 | — | 1 | 3 | 25 | 16 |
| North Dakota | — | 0 | 12 | 34 | 18 | 1 | 4 | 8 | 141 | 154 | — | 0 | 6 | 11 | 10 |
| South Dakota | — | 1 | 6 | 57 | 81 | — | 11 | 20 | 374 | 322 | — | 0 | 1 | 1 | — |
| S. Atlantic | 24 | 54 | 100 | 2,009 | 2,999 | 833 | 1,456 | 1,862 | 55,030 | 57,900 | 8 | 15 | 31 | 567 | 593 |
| Delaware | 1 | 0 | 2 | 24 | 26 | 10 | 16 | 31 | 607 | 750 | — | 0 | 2 | 3 | 5 |
| District of Columbia | — | 1 | 3 | 29 | 45 | — | 39 | 69 | 1,460 | 1,587 | — | 0 | 1 | — | 3 |
| Florida | 20 | 24 | 56 | 904 | 1,617 | 282 | 377 | 465 | 14,757 | 15,412 | 3 | 5 | 12 | 184 | 139 |
| Georgia | — | 13 | 51 | 555 | 587 | 242 | 313 | 874 | 11,653 | 11,502 | — | 3 | 7 | 105 | 128 |
| Maryland [§] | 3 | 4 | 13 | 202 | 214 | 157 | 117 | 246 | 4,268 | 5,265 | 1 | 2 | 5 | 68 | 52 |
| North Carolina | N | 0 | 0 | N | N | — | 284 | 535 | 11,070 | 11,070 | — | 1 | 7 | 56 | 107 |
| South Carolina [§] | — | 2 | 7 | 83 | 116 | — | 145 | 257 | 5,845 | 6,081 | — | 1 | 5 | 59 | 70 |
| Virginia [§] | — | 7 | 32 | 190 | 364 | 142 | 110 | 185 | 4,239 | 5,842 | 1 | 1 | 8 | 75 | 69 |
| West Virginia | — | 0 | 8 | 22 | 30 | — | 16 | 29 | 593 | 391 | 3 | 0 | 9 | 17 | 20 |
| E.S. Central | 3 | 4 | 11 | 132 | 162 | 512 | 495 | 1,007 | 19,638 | 18,764 | 1 | 3 | 11 | 148 | 136 |
| Alabama [§] | 3 | 4 | 11 | 132 | 162 | 187 | 159 | 409 | 6,585 | 5,843 | — | 1 | 4 | 44 | 22 |
| Kentucky | N | 0 | 0 | N | N | 118 | 69 | 712 | 3,219 | 2,996 | — | 0 | 4 | 21 | 27 |
| Mississippi | N | 0 | 0 | N | N | 137 | 118 | 197 | 4,309 | 4,613 | — | 0 | 3 | 12 | 10 |
| Tennessee [§] | N | 0 | 0 | N | N | 70 | 142 | 223 | 5,525 | 5,312 | 1 | 2 | 5 | 71 | 77 |
| W.S. Central | 6 | 5 | 15 | 190 | 312 | 571 | 918 | 1,319 | 34,122 | 36,572 | 2 | 2 | 26 | 104 | 108 |
| Arkansas [§] | 2 | 2 | 9 | 90 | 95 | 100 | 90 | 138 | 3,669 | 3,582 | 1 | 0 | 3 | 27 | 15 |
| Louisiana | 4 | 3 | 10 | 100 | 155 | — | 133 | 372 | 4,677 | 6,118 | — | 1 | 4 | 37 | 24 |
| Oklahoma | — | 0 | 0 | — | 62 | — | 59 | 254 | 2,169 | 3,193 | 1 | 1 | 19 | 39 | 61 |
| Texas [§] | N | 0 | 0 | N | N | 471 | 599 | 867 | 23,607 | 23,679 | — | 0 | 4 | 1 | 8 |
| Mountain | 17 | 26 | 51 | 961 | 1,365 | 89 | 191 | 253 | 7,535 | 7,215 | 1 | 5 | 12 | 201 | 240 |
| Arizona | — | 3 | 8 | 97 | 126 | — | 69 | 110 | 2,733 | 2,395 | — | 2 | 6 | 75 | 88 |
| Colorado | 11 | 12 | 25 | 466 | 543 | 45 | 44 | 89 | 1,690 | 2,085 | 1 | 1 | 5 | 48 | 67 |
| Idaho [§] | 1 | 3 | 9 | 108 | 164 | — | 2 | 14 | 90 | 83 | — | 0 | 2 | 15 | 13 |
| Montana [§] | 3 | 2 | 5 | 60 | 81 | 1 | 1 | 4 | 60 | 86 | — | 0 | 1 | 2 | 2 |
| Nevada [§] | 2 | 1 | 6 | 44 | 80 | 39 | 37 | 103 | 1,551 | 1,390 | — | 0 | 2 | 14 | 6 |
| New Mexico [§] | — | 2 | 6 | 66 | 83 | 4 | 28 | 98 | 1,207 | 887 | — | 1 | 4 | 32 | 32 |
| Utah | — | 3 | 9 | 101 | 245 | — | 4 | 10 | 174 | 261 | — | 0 | 3 | 14 | 26 |
| Wyoming [§] | — | 0 | 5 | 19 | 43 | — | 1 | 3 | 30 | 28 | — | 0 | 1 | 1 | 6 |
| Pacific | 25 | 49 | 128 | 1,848 | 2,135 | 191 | 611 | 791 | 23,326 | 24,103 | 1 | 3 | 10 | 133 | 109 |
| Alaska | — | 2 | 7 | 70 | 80 | — | 20 | 34 | 731 | 1,004 | — | 0 | 3 | 19 | 20 |
| California | 20 | 33 | 67 | 1,252 | 1,296 | 191 | 504 | 695 | 19,394 | 19,676 | 1 | 0 | 6 | 34 | 16 |
| Hawaii | — | 0 | 4 | 24 | 47 | — | 13 | 26 | 474 | 554 | — | 0 | 3 | 19 | 18 |
| Oregon | 5 | 7 | 20 | 250 | 388 | — | 25 | 40 | 978 | 776 | — | 1 | 6 | 58 | 50 |
| Washington | — | 8 | 57 | 252 | 324 | — | 49 | 86 | 1,749 | 2,093 | — | 0 | 2 | 3 | 5 |
| Territories | | | | | | | | | | | | | | | |
| American Samoa | — | 0 | 0 | — | — | — | 0 | 0 | — | — | — | 0 | 0 | — | — |
| C.N.M.I. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Guam | — | 0 | 0 | — | 3 | — | 0 | 10 | 6 | 72 | — | 0 | 0 | — | — |
| Puerto Rico | 1 | 1 | 7 | 33 | 69 | 7 | 6 | 14 | 244 | 226 | — | 0 | 0 | — | 1 |
| U.S. Virgin Islands | — | 0 | 0 | — | — | — | 2 | 7 | 83 | 108 | — | 0 | 0 | — | — |

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

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

* Case counts for reporting year 2010 and 2011 are provisional and subject to change. For further information on interpretation of these data, see http://www.cdc.gov/osels/ph_surveillance/nndss/phs/files/ProvisionalNationalNotifiableDiseasesSurveillanceData20100927.pdf. Data for TB are displayed in Table IV, which appears quarterly.

† Data for H. influenzae (age <5 yrs for serotype b, nonserotype b, and unknown serotype) are available in Table I.

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

Morbidity and Mortality Weekly Report

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending October 1, 2011, and October 2, 2010 (39th week)*

| Reporting area | Hepatitis (viral, acute), by type | | | | | | | | | | | | | | |
|----------------------|-----------------------------------|-------------------|----|----------|----------|--------------|-------------------|-----|----------|----------|--------------|-------------------|----|----------|----------|
| | A | | | | | B | | | | | C | | | | |
| | Current week | Previous 52 weeks | | Cum 2011 | Cum 2010 | Current week | Previous 52 weeks | | Cum 2011 | Cum 2010 | Current week | Previous 52 weeks | | Cum 2011 | Cum 2010 |
| | Med | Max | | | | Med | Max | | | | Med | Max | | | |
| United States | 11 | 22 | 74 | 831 | 1,213 | 24 | 48 | 167 | 1,776 | 2,460 | 15 | 18 | 39 | 731 | 627 |
| New England | 1 | 1 | 4 | 39 | 82 | — | 1 | 8 | 47 | 44 | — | 1 | 4 | 40 | 45 |
| Connecticut | — | 0 | 3 | 9 | 22 | — | 0 | 4 | 10 | 18 | — | 0 | 3 | 25 | 30 |
| Maine† | 1 | 0 | 2 | 6 | 7 | — | 0 | 2 | 7 | 11 | — | 0 | 2 | 6 | 2 |
| Massachusetts | — | 0 | 2 | 16 | 43 | — | 0 | 6 | 29 | 8 | — | 0 | 2 | 5 | 12 |
| New Hampshire | — | 0 | 1 | — | 1 | — | 0 | 1 | 1 | 5 | N | 0 | 0 | N | N |
| Rhode Island† | — | 0 | 1 | 3 | 9 | U | 0 | 0 | U | U | U | 0 | 0 | U | U |
| Vermont† | — | 0 | 2 | 5 | — | — | 0 | 0 | — | 2 | — | 0 | 1 | 4 | 1 |
| Mid. Atlantic | 2 | 4 | 12 | 152 | 204 | 2 | 5 | 12 | 196 | 227 | — | 1 | 6 | 63 | 80 |
| New Jersey | — | 1 | 4 | 21 | 59 | — | 1 | 4 | 32 | 62 | — | 0 | 4 | 1 | 18 |
| New York (Upstate) | 1 | 1 | 4 | 38 | 44 | 1 | 1 | 9 | 37 | 36 | — | 0 | 4 | 36 | 39 |
| New York City | — | 1 | 6 | 51 | 58 | — | 1 | 5 | 59 | 69 | — | 0 | 2 | 2 | 3 |
| Pennsylvania | 1 | 1 | 3 | 42 | 43 | 1 | 2 | 4 | 68 | 60 | — | 0 | 4 | 24 | 20 |
| E.N. Central | 1 | 4 | 8 | 145 | 159 | 2 | 5 | 38 | 248 | 386 | 2 | 3 | 12 | 137 | 72 |
| Illinois | — | 1 | 4 | 38 | 42 | — | 1 | 6 | 50 | 99 | — | 0 | 2 | 6 | — |
| Indiana | — | 0 | 3 | 12 | 11 | — | 1 | 3 | 37 | 59 | — | 1 | 5 | 48 | 24 |
| Michigan | — | 1 | 6 | 58 | 54 | — | 1 | 6 | 63 | 102 | 1 | 2 | 7 | 77 | 33 |
| Ohio | 1 | 1 | 3 | 32 | 37 | 2 | 1 | 30 | 78 | 84 | 1 | 0 | 1 | 5 | 8 |
| Wisconsin | — | 0 | 2 | 5 | 15 | — | 0 | 3 | 20 | 42 | — | 0 | 1 | 1 | 7 |
| W.N. Central | 1 | 1 | 25 | 33 | 63 | — | 2 | 16 | 99 | 89 | — | 0 | 6 | 7 | 13 |
| Iowa | — | 0 | 1 | 4 | 9 | — | 0 | 1 | 7 | 13 | — | 0 | 0 | — | — |
| Kansas | — | 0 | 2 | 3 | 10 | — | 0 | 2 | 9 | 6 | — | 0 | 1 | 3 | 1 |
| Minnesota | — | 0 | 22 | 9 | 13 | — | 0 | 15 | 9 | 6 | — | 0 | 6 | 2 | 6 |
| Missouri | — | 0 | 1 | 10 | 16 | — | 2 | 5 | 62 | 53 | — | 0 | 1 | — | 4 |
| Nebraska† | 1 | 0 | 1 | 5 | 14 | — | 0 | 3 | 11 | 10 | — | 0 | 1 | 2 | 2 |
| North Dakota | — | 0 | 3 | — | — | — | 0 | 0 | — | — | — | 0 | 0 | — | — |
| South Dakota | — | 0 | 2 | 2 | 1 | — | 0 | 1 | 1 | 1 | — | 0 | 0 | — | — |
| S. Atlantic | 2 | 5 | 13 | 171 | 267 | 10 | 12 | 54 | 493 | 669 | 7 | 4 | 11 | 181 | 142 |
| Delaware | — | 0 | 1 | 2 | 6 | — | 0 | 1 | 1 | 22 | U | 0 | 0 | U | U |
| District of Columbia | — | 0 | 0 | — | 1 | — | 0 | 0 | — | 3 | — | 0 | 0 | — | 2 |
| Florida | 2 | 1 | 6 | 60 | 106 | 6 | 4 | 11 | 157 | 221 | 1 | 1 | 4 | 46 | 43 |
| Georgia | — | 1 | 4 | 33 | 33 | 1 | 2 | 8 | 71 | 135 | — | 1 | 3 | 28 | 21 |
| Maryland† | — | 0 | 4 | 21 | 18 | — | 1 | 4 | 41 | 48 | — | 0 | 2 | 27 | 19 |
| North Carolina | — | 0 | 3 | 20 | 41 | 1 | 2 | 12 | 85 | 80 | 4 | 1 | 7 | 44 | 32 |
| South Carolina† | — | 0 | 2 | 9 | 22 | 1 | 1 | 4 | 26 | 46 | — | 0 | 1 | 1 | 1 |
| Virginia† | — | 0 | 3 | 18 | 38 | — | 1 | 7 | 48 | 67 | — | 0 | 2 | 14 | 10 |
| West Virginia | — | 0 | 5 | 8 | 2 | 1 | 0 | 43 | 64 | 47 | 2 | 0 | 6 | 21 | 14 |
| E.S. Central | 1 | 0 | 6 | 37 | 33 | 2 | 9 | 14 | 319 | 272 | 5 | 3 | 7 | 132 | 119 |
| Alabama† | — | 0 | 2 | 4 | 6 | 1 | 2 | 5 | 82 | 53 | 1 | 0 | 2 | 11 | 5 |
| Kentucky | 1 | 0 | 6 | 8 | 13 | — | 2 | 6 | 79 | 96 | 2 | 1 | 6 | 56 | 82 |
| Mississippi | — | 0 | 1 | 7 | 2 | — | 1 | 3 | 34 | 26 | U | 0 | 0 | U | U |
| Tennessee† | — | 0 | 5 | 18 | 12 | 1 | 3 | 7 | 124 | 97 | 2 | 1 | 5 | 65 | 32 |
| W.S. Central | 3 | 2 | 15 | 90 | 100 | 7 | 7 | 67 | 224 | 433 | — | 2 | 11 | 67 | 53 |
| Arkansas† | — | 0 | 1 | — | 2 | — | 1 | 4 | 38 | 48 | — | 0 | 0 | — | 1 |
| Louisiana | — | 0 | 1 | 2 | 8 | — | 1 | 4 | 23 | 44 | — | 0 | 2 | 5 | 2 |
| Oklahoma | — | 0 | 4 | 3 | 1 | 5 | 1 | 16 | 57 | 76 | — | 1 | 10 | 34 | 19 |
| Texas† | 3 | 2 | 11 | 85 | 89 | 2 | 3 | 45 | 106 | 265 | — | 0 | 3 | 28 | 31 |
| Mountain | — | 1 | 5 | 52 | 122 | — | 1 | 5 | 56 | 111 | 1 | 1 | 4 | 44 | 51 |
| Arizona | — | 0 | 2 | 14 | 52 | — | 0 | 3 | 13 | 19 | U | 0 | 0 | U | U |
| Colorado | — | 0 | 2 | 17 | 33 | — | 0 | 3 | 15 | 39 | — | 0 | 3 | 14 | 12 |
| Idaho† | — | 0 | 1 | 6 | 6 | — | 0 | 1 | 2 | 6 | 1 | 0 | 2 | 8 | 9 |
| Montana† | — | 0 | 1 | 2 | 4 | — | 0 | 0 | — | — | — | 0 | 1 | 3 | 2 |
| Nevada† | — | 0 | 3 | 5 | 12 | — | 0 | 3 | 16 | 34 | — | 0 | 1 | 6 | 5 |
| New Mexico† | — | 0 | 1 | 5 | 3 | — | 0 | 2 | 5 | 5 | — | 0 | 1 | 10 | 13 |
| Utah | — | 0 | 2 | 1 | 9 | — | 0 | 1 | 5 | 7 | — | 0 | 1 | 1 | 10 |
| Wyoming† | — | 0 | 1 | 2 | 3 | — | 0 | 1 | — | 1 | — | 0 | 1 | 2 | — |
| Pacific | — | 3 | 15 | 112 | 183 | 1 | 3 | 25 | 94 | 229 | — | 1 | 12 | 60 | 52 |
| Alaska | — | 0 | 1 | 2 | 1 | — | 0 | 1 | 4 | 3 | U | 0 | 0 | U | U |
| California | — | 2 | 15 | 81 | 145 | 1 | 1 | 22 | 40 | 151 | — | 1 | 4 | 25 | 20 |
| Hawaii | — | 0 | 2 | 7 | 7 | — | 0 | 1 | 5 | 5 | U | 0 | 0 | U | U |
| Oregon | — | 0 | 2 | 5 | 15 | — | 0 | 4 | 27 | 35 | — | 0 | 3 | 11 | 14 |
| Washington | — | 0 | 4 | 17 | 15 | — | 0 | 4 | 18 | 35 | — | 0 | 5 | 24 | 18 |
| Territories | | | | | | | | | | | | | | | |
| American Samoa | — | 0 | 0 | — | — | — | 0 | 0 | — | — | — | 0 | 0 | — | — |
| C.N.M.I. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Guam | — | 0 | 5 | 8 | 4 | — | 0 | 8 | 28 | 64 | — | 0 | 4 | 10 | 52 |
| Puerto Rico | — | 0 | 2 | 6 | 12 | — | 0 | 3 | 7 | 19 | N | 0 | 0 | N | N |
| U.S. Virgin Islands | — | 0 | 0 | — | — | — | 0 | 0 | — | — | — | 0 | 0 | — | — |

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Morbidity and Mortality Weekly Report

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending October 1, 2011, and October 2, 2010 (39th week)*

| Reporting area | Meningococcal disease, invasive [†] | | | | | Mumps | | | | | Pertussis | | | | |
|-----------------------------|--|-------------------|----|----------|----------|--------------|-------------------|----|----------|----------|--------------|-------------------|-------|----------|----------|
| | All serogroups | | | | | | | | | | | | | | |
| | Current week | Previous 52 weeks | | Cum 2011 | Cum 2010 | Current week | Previous 52 weeks | | Cum 2011 | Cum 2010 | Current week | Previous 52 weeks | | Cum 2011 | Cum 2010 |
| | Med | Max | | | | Med | Max | | | | Med | Max | | | |
| United States | 2 | 15 | 53 | 523 | 595 | 3 | 6 | 47 | 211 | 2,400 | 95 | 281 | 2,925 | 10,117 | 16,469 |
| New England | — | 0 | 3 | 24 | 14 | — | 0 | 1 | 6 | 24 | 5 | 8 | 18 | 332 | 401 |
| Connecticut | — | 0 | 1 | 3 | 2 | — | 0 | 0 | — | 11 | — | 1 | 3 | 30 | 91 |
| Maine [§] | — | 0 | 1 | 4 | 3 | — | 0 | 1 | — | 1 | 5 | 2 | 8 | 111 | 38 |
| Massachusetts | — | 0 | 2 | 11 | 4 | — | 0 | 1 | 3 | 9 | — | 3 | 10 | 99 | 214 |
| New Hampshire | — | 0 | 1 | 1 | — | — | 0 | 0 | — | 3 | — | 1 | 7 | 58 | 13 |
| Rhode Island [§] | — | 0 | 1 | — | — | — | 0 | 1 | 2 | — | — | 0 | 3 | 18 | 34 |
| Vermont [§] | — | 0 | 3 | 5 | 5 | — | 0 | 1 | 1 | — | — | 0 | 4 | 16 | 11 |
| Mid. Atlantic | — | 1 | 6 | 59 | 62 | — | 1 | 23 | 26 | 2,059 | 27 | 31 | 125 | 1,160 | 1,083 |
| New Jersey | — | 0 | 1 | 5 | 19 | — | 0 | 2 | 9 | 342 | — | 3 | 7 | 105 | 127 |
| New York (Upstate) | — | 0 | 4 | 19 | 9 | — | 0 | 2 | 7 | 660 | 20 | 13 | 81 | 517 | 370 |
| New York City | — | 0 | 3 | 22 | 16 | — | 0 | 22 | 9 | 1,033 | — | 0 | 19 | 38 | 66 |
| Pennsylvania | — | 0 | 2 | 13 | 18 | — | 0 | 16 | 1 | 24 | 7 | 14 | 70 | 500 | 520 |
| E.N. Central | — | 2 | 7 | 71 | 100 | 1 | 1 | 7 | 54 | 48 | 15 | 61 | 198 | 2,096 | 3,718 |
| Illinois | — | 0 | 3 | 21 | 19 | — | 1 | 3 | 30 | 17 | — | 15 | 50 | 541 | 653 |
| Indiana | — | 0 | 2 | 11 | 22 | — | 0 | 1 | — | 3 | — | 4 | 26 | 142 | 525 |
| Michigan | — | 0 | 4 | 9 | 16 | — | 0 | 1 | 9 | 17 | 1 | 15 | 57 | 516 | 1,060 |
| Ohio | — | 0 | 2 | 20 | 25 | 1 | 0 | 5 | 12 | 9 | 8 | 17 | 80 | 561 | 1,139 |
| Wisconsin | — | 0 | 2 | 10 | 18 | — | 0 | 1 | 3 | 2 | 6 | 10 | 25 | 336 | 341 |
| W.N. Central | — | 1 | 4 | 37 | 42 | — | 0 | 4 | 31 | 79 | 6 | 23 | 501 | 881 | 1,525 |
| Iowa | — | 0 | 1 | 9 | 9 | — | 0 | 1 | 5 | 37 | — | 5 | 36 | 142 | 430 |
| Kansas | — | 0 | 1 | 2 | 6 | — | 0 | 1 | 4 | 4 | 1 | 2 | 10 | 73 | 140 |
| Minnesota | — | 0 | 2 | — | 3 | — | 0 | 4 | 1 | 4 | — | 0 | 469 | 326 | 450 |
| Missouri | — | 0 | 2 | 13 | 17 | — | 0 | 3 | 12 | 9 | 4 | 7 | 43 | 235 | 294 |
| Nebraska [§] | — | 0 | 2 | 10 | 5 | — | 0 | 1 | 5 | 23 | 1 | 1 | 11 | 44 | 146 |
| North Dakota | — | 0 | 1 | 1 | 2 | — | 0 | 3 | 4 | — | — | 0 | 10 | 37 | 38 |
| South Dakota | — | 0 | 1 | 2 | — | — | 0 | 0 | — | 2 | — | 0 | 6 | 24 | 27 |
| S. Atlantic | 2 | 2 | 8 | 109 | 108 | — | 0 | 3 | 21 | 47 | 19 | 30 | 106 | 1,018 | 1,326 |
| Delaware | — | 0 | 1 | 1 | 1 | — | 0 | 0 | — | — | — | 0 | 5 | 21 | 10 |
| District of Columbia | — | 0 | 1 | 1 | 1 | — | 0 | 0 | — | 3 | — | 0 | 2 | 3 | 8 |
| Florida | 1 | 1 | 5 | 42 | 49 | — | 0 | 2 | 7 | 8 | 6 | 6 | 17 | 253 | 246 |
| Georgia | — | 0 | 1 | 12 | 8 | — | 0 | 2 | 4 | 2 | 1 | 3 | 13 | 128 | 190 |
| Maryland [§] | — | 0 | 1 | 11 | 7 | — | 0 | 1 | 1 | 10 | 1 | 2 | 6 | 61 | 101 |
| North Carolina | — | 0 | 3 | 13 | 12 | — | 0 | 2 | 7 | 8 | 3 | 3 | 35 | 140 | 242 |
| South Carolina [§] | — | 0 | 1 | 9 | 11 | — | 0 | 0 | — | 4 | 2 | 3 | 25 | 108 | 294 |
| Virginia [§] | 1 | 0 | 2 | 13 | 17 | — | 0 | 2 | 2 | 10 | — | 7 | 41 | 246 | 173 |
| West Virginia | — | 0 | 3 | 7 | 2 | — | 0 | 0 | — | 2 | 6 | 0 | 41 | 58 | 62 |
| E.S. Central | — | 0 | 3 | 20 | 32 | — | 0 | 1 | 4 | 9 | 5 | 9 | 28 | 276 | 599 |
| Alabama [§] | — | 0 | 2 | 9 | 6 | — | 0 | 1 | 1 | 6 | — | 3 | 11 | 109 | 160 |
| Kentucky | — | 0 | 2 | 2 | 14 | — | 0 | 0 | — | 1 | — | 1 | 16 | 56 | 211 |
| Mississippi | — | 0 | 1 | 2 | 3 | — | 0 | 1 | 3 | — | — | 0 | 10 | 24 | 60 |
| Tennessee [§] | — | 0 | 2 | 7 | 9 | — | 0 | 1 | — | 2 | 5 | 2 | 10 | 87 | 168 |
| W.S. Central | — | 1 | 12 | 43 | 65 | 2 | 1 | 15 | 51 | 81 | 7 | 23 | 297 | 687 | 2,299 |
| Arkansas [§] | — | 0 | 1 | 8 | 5 | — | 0 | 1 | 1 | 5 | — | 2 | 16 | 48 | 168 |
| Louisiana | — | 0 | 2 | 9 | 12 | — | 0 | 2 | — | 5 | — | 0 | 3 | 15 | 33 |
| Oklahoma | — | 0 | 2 | 7 | 15 | 2 | 0 | 1 | 3 | — | — | 0 | 92 | 29 | 51 |
| Texas [§] | — | 0 | 10 | 19 | 33 | — | 1 | 14 | 47 | 71 | 7 | 19 | 187 | 595 | 2,047 |
| Mountain | — | 1 | 4 | 36 | 45 | — | 0 | 2 | 6 | 18 | 9 | 41 | 100 | 1,344 | 1,146 |
| Arizona | — | 0 | 1 | 10 | 11 | — | 0 | 0 | — | 5 | — | 14 | 29 | 557 | 343 |
| Colorado | — | 0 | 1 | 8 | 16 | — | 0 | 1 | 3 | 7 | 7 | 9 | 63 | 304 | 176 |
| Idaho [§] | — | 0 | 1 | 5 | 5 | — | 0 | 1 | 1 | 1 | 1 | 2 | 11 | 104 | 165 |
| Montana [§] | — | 0 | 2 | 4 | 1 | — | 0 | 0 | — | — | — | 2 | 16 | 71 | 61 |
| Nevada [§] | — | 0 | 1 | 1 | 8 | — | 0 | 0 | — | 1 | — | 0 | 5 | 20 | 29 |
| New Mexico [§] | — | 0 | 1 | 1 | 3 | — | 0 | 2 | 2 | — | 1 | 2 | 10 | 98 | 102 |
| Utah | — | 0 | 2 | 7 | 1 | — | 0 | 0 | — | 3 | — | 5 | 16 | 182 | 258 |
| Wyoming [§] | — | 0 | 1 | — | — | — | 0 | 0 | — | 1 | — | 0 | 1 | 8 | 12 |
| Pacific | — | 4 | 26 | 124 | 127 | — | 0 | 3 | 12 | 35 | 2 | 71 | 1,710 | 2,323 | 4,372 |
| Alaska | — | 0 | 1 | 2 | 1 | — | 0 | 1 | 1 | 1 | — | 0 | 4 | 21 | 35 |
| California | — | 2 | 17 | 89 | 83 | — | 0 | 3 | 5 | 23 | — | 56 | 1,569 | 1,648 | 3,753 |
| Hawaii | — | 0 | 1 | 4 | 1 | — | 0 | 1 | 2 | 3 | — | 1 | 9 | 72 | 59 |
| Oregon | — | 0 | 3 | 16 | 25 | — | 0 | 1 | 4 | 2 | 2 | 5 | 14 | 213 | 231 |
| Washington | — | 0 | 8 | 13 | 17 | — | 0 | 1 | — | 6 | — | 9 | 131 | 369 | 294 |
| Territories | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| American Samoa | — | 0 | 0 | — | — | — | 0 | 0 | — | — | — | 0 | 0 | — | — |
| C.N.M.I. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Guam | — | 0 | 0 | — | — | — | 2 | 9 | 12 | 457 | — | 0 | 14 | 31 | 2 |
| Puerto Rico | — | 0 | 1 | — | 2 | — | 0 | 1 | 1 | 1 | — | 0 | 1 | 2 | 2 |
| 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 reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
 * Case counts for reporting year 2010 and 2011 are provisional and subject to change. For further information on interpretation of these data, see http://www.cdc.gov/osels/ph_surveillance/nndss/phs/files/ProvisionalNationalNotifiableDiseasesSurveillanceData20100927.pdf. Data for TB are displayed in Table IV, which appears quarterly.
 † Data for meningococcal disease, invasive caused by serogroups A, C, Y, and 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).

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