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Toxicology Testing and Results for Suicide Victims — 13 States, 2004

In 2003, an estimated 31,484 suicides (10.7 per 100,000 population) occurred in the United States (1). Suicide was the fourth leading cause of death among persons aged 10–64 years and the second and third leading causes of death among persons aged 25–34 and 10–24 years, respectively (2). Few studies have attempted to determine the contribution of substance use to suicide (3,4). To assess toxicology testing practices and to determine the prevalence of positive results for alcohol or other drugs, CDC analyzed test results of suicide victims in the 13 states that collected data for the National Violent Death Reporting System (NVDRS) in 2004. This report summarizes the results of that analysis, which determined that 1) the percentage of suicide victims tested varied among states, ranging from 25.9% to 97.7%; 2) of those victims tested, 33.3% were positive for alcohol, and 16.4% were positive for opiates; and 3) similar percentages of poisoning suicide (i.e., suspected intentional overdose) and nonpoisoning suicide victims tested positive for alcohol or other drugs, with the exception of opiates. These results underscore the need to continue monitoring toxicology test results of suicide victims, which might identify patterns of substance use that can help guide development of effective suicide interventions. Such data can be enhanced by uniform, comprehensive, toxicology testing practices on a state and national basis.

NVDRS is a state-based surveillance system that collects information on all violent deaths (i.e., homicides, suicides, legal interventions, unintentional deaths by firearm, or deaths of undetermined intent) in participating states, combining data from death certificates with toxicology results from coroners and medical examiners (5,6). The study described in this report was based on 2004 data collected from 13 states* as of

July 2006; these states represented 23.4% of the U.S. population. Suicides were included when listed by coroners or medical examiners as the manner of death; whether a suicide resulted from poisoning or nonpoisoning was determined by the cause of death listed.

During 2004, NVDRS received data on 7,277 deaths by suicide. In certain states, toxicology testing was performed routinely on nearly all suicide victims; in other states, testing was performed selectively, an apparent targeting of suicides in which use of alcohol or other drugs was suspected as likely causing or contributing to the deaths. Of the 7,277 victims, testing for at least one substance was performed on 5,550 (76.3%). The percentage of suicide deaths for which at least one test was completed varied among states from 25.9% to 97.7%.[†]

Overall, the percentage of suicide victims tested varied by type of substance tested: alcohol (74.4%), cocaine (48.4%), opiates (i.e., heroin or prescription opioid analgesics) (45.3%), amphetamines (38.8%), and marijuana (29.6%) (Table 1). The percentage of victims tested also varied among states by type of substance tested, ranging from 97.4% to 25.1% for alcohol, 95.3% to 1.1% for amphetamines, 96.5% to 7.5%

[†] Alaska, 62 (41.1%) suicide victims tested; Colorado, 578 (88.0%); Georgia, 563 (62.2%); Maryland, 366 (75.9%); Massachusetts, 337 (78.7%); New Jersey, 554 (89.2%); North Carolina, 906 (87.0%); Oklahoma, 455 (88.3%); Oregon, 136 (25.9%); Rhode Island, 83 (96.5%); South Carolina, 286 (64.3%); Virginia, 812 (97.7%); and Wisconsin, 412 (69.9%).

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*Alaska, Colorado, Georgia, Maryland, Massachusetts, New Jersey, North Carolina, Oklahoma, Oregon, Rhode Island, South Carolina, Virginia, and Wisconsin.

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for cocaine, 96.5% to 10.9% for opiates, and 95.3% to 0.4% for marijuana.

Among all suicide victims with positive test results, the greatest percentage tested positive for alcohol (33.3%), followed by opiates (16.4%), cocaine (9.4%), marijuana (7.7%), and amphetamines (3.9%). Among states (excluding those in which fewer than 20 victims were tested), the percentage of positive tests ranged from 27.4% to 40.6% for alcohol, none to 23.0% for amphetamines, 3.1% to 21.8% for cocaine, and 9.6% to 63.7% for opiates. Numbers of positive tests for marijuana in individual states were too small to be considered (Table 1).

Greater percentages of victims of suicides caused by poisoning were tested (Table 2) than nonpoisoning suicide victims (Table 3). Tests for alcohol were conducted in 82.0% of poisoning suicides and 72.9% of nonpoisoning suicides. Similar differences were observed for amphetamines (54.2% versus 35.8%), cocaine (66.0% versus 44.9%), opiates (70.7% versus 40.2%), and marijuana (42.3% versus 27.0%). However, despite greater testing in poisoning suicides, with the exception of opiates, the proportions of tests with positive results were similar for poisoning and nonpoisoning suicides, respectively: 31.6% versus 33.7% for alcohol, 5.8% versus 3.3% for amphetamines, and 8.3% versus 9.7% for cocaine. For opiates, 39.8% of poisoning victims tested positive, compared with 8.2% of nonpoisoning victims (Tables 2 and 3).

Reported by: D Karch, PhD, A Crosby, MD, T Simon, PhD, Div of Violence Prevention, National Center for Injury Prevention and Control, CDC.

Editorial Note: In this study, substantial percentages of suicide victims tested positive for alcohol or other drugs. The most frequently identified substance was alcohol, found in one third of those tested; four other substances were identified in approximately 10% of tested victims. These test results are consistent with previous studies demonstrating use of alcohol or other drugs by suicide victims (7,8).

Among states, substantial variation was observed in both the percentage of suicide victims tested for alcohol or other drugs and the specific substances included in testing. In addition, states were more likely to test victims of suspected poisoning suicide than nonpoisoning suicide. However, the similarities in positive test results involving four of the five substance types in poisoning and nonpoisoning suicides suggest that use of alcohol or other drugs might contribute substantially to suicides overall, regardless of cause of death. The finding that opiates (the fifth substance type) were nearly five times more prevalent among poisoning suicide victims is consistent with evidence that prescription opioid analgesics cause more intentional overdose deaths than illegal non-opioid drugs (CDC, unpublished data, 2006).

The relationship between substance use and other suicide risk factors is complex; the chronology and causal pathway of events leading to suicide are difficult to determine. To better understand the results of this study, CDC is funding a survey of coroner and medical examiner toxicology laboratories to examine practices and protocols regarding testing of suicide victims.

The findings in this report are subject to at least three limitations. First, high percentages of positive results in a state might reflect targeted testing rather than greater drug use in that state. Second, manner of death for certain suspected suicides might have been listed as undetermined, excluding those cases from the study; the scope of this limitation has been documented previously (9). Finally, the alcohol or other drugs in the bodies of victims were only recorded as present or absent; no evaluations were conducted to determine whether the concentrations present were lethal or intoxicating.

Despite evidence of substance use among substantial numbers of suicide victims, none of the 13 states reporting to NVDRS in 2004 conducted comprehensive alcohol and drug screenings on all suicide victims. Previous studies of subpopulations by specific substance, geographic area, race/ethnicity, and age have documented the limited toxicology screening performed in certain states. Descriptions of cases selected for toxicology screening suggest subjective determinations for testing on the basis of local policy and individual coroner or medical examiner preference (10).

More comprehensive toxicology testing for suicide victims might provide greater insight into trends and geographic variations in the role of substance use in suicides. Comprehensive toxicology data also could be linked with demographic data already collected by coroners and medical examiners at the state and local levels. These combined data could enable studies of the relationship of substance use to suicides in specific populations at greatest risk. Such studies remain critical to better understanding of suicidal behavior and development of effective interventions.

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Improvement in Lipid and Glycated Hemoglobin Control Among Black Adults with Diabetes — Raleigh and Greensboro, North Carolina, 1997–2004

Previous studies have indicated that, in the United States, black persons with diabetes have lower levels of glycemic and lipid control (1,2) and are at increased risk for diabetes-related complications (3) than white persons with the disease. Clinical trials have demonstrated that glycemic and lipid control can reduce the risk for microvascular and macrovascular complications among adults (4,5). In addition, recent studies of national survey data have indicated a secular trend of gradual improvements in blood pressure, cholesterol levels, and smoking rates among U.S. persons with diabetes (6,7). These studies have demonstrated an increase in the proportion of persons who meet recommended levels for blood pressure, glycated hemoglobin (HbA1c), and cholesterol (6,7). Whether black persons in the United States have benefited from these overall improvements is unclear. Surveys conducted among black adults in Raleigh and Greensboro, North Carolina, as part of Project DIRECT (Diabetes Intervention Reaching and Educating Communities Together), provided an opportunity to examine trends in diabetes control and risk for complications (8). Project DIRECT is a community-based intervention aimed at improving self-care, access to care, and quality of care for residents with diabetes (9). The analyses described in this report examined whether glycemic and lipid control improved in both communities from 1997 to 2004, a period of rapid advances in clinical understanding of how to control diabetes and its complications. This report summarizes the results of those analyses, which indicated improvements in the proportion of black adults with diabetes who reported that they were meeting recommended levels of HbA1c, low-density lipoprotein (LDL) cholesterol, high-density lipoprotein (HDL) cholesterol, triglycerides, and total cholesterol. However, a substantial number of these persons smoked and were above recommended glycemic and lipid levels at follow-up.

Therefore, continued education of the public is important in improving quality of care and reducing risk factors for persons at high risk for diabetes and cardiovascular disease.

As part of Project DIRECT, cross-sectional, population-based health surveys were conducted in person in two predominately black communities, one in southeast Raleigh and one in Greensboro, North Carolina, in 1997 (baseline) and 2004 (follow-up). The target population for each survey consisted of civilian, noninstitutionalized, English-speaking residents of the selected areas who were aged ≥ 18 years. The baseline survey used a multistage area probability sample design to select addresses for screening. The follow-up survey used a systematic random sample of mailing address lists within selected census tracts of the two communities. In the baseline and follow-up surveys, participants who answered "yes" to the question, "Have you ever been told by a doctor that you have diabetes?" were identified as persons with a previous diagnosis of diabetes. These participants were asked to complete the diabetes module, which examined levels of diabetes care, access to care, and preventive health-care practices. Women who reported being told they had diabetes during pregnancy only were classified as not having diabetes. Baseline survey participants with self-reported diabetes and all black respondents in the follow-up survey were asked to complete a laboratory examination.

In 1997, a total of 2,639 households were screened, and 2,300 persons agreed to participate (response rate: 84.4% in Raleigh, 88.9% in Greensboro). Of the 2,300 participants, 617 had diabetes, and 407 agreed to participate in an examination. In the follow-up survey, 3,540 households were screened, and 3,083 persons agreed to participate (response rate: 78.9% in Raleigh, 83.5% in Greensboro). Of the 3,083 participants, 729 had diabetes, and 435 agreed to participate in an examination. A trained phlebotomist conducted the health examinations, which included measurements of height and weight to determine body mass index (BMI), defined as weight (kg) divided by height (m^2), and fasting blood draws. Blood samples were transported to a central laboratory to assess HbA1c and lipid levels (HDL, LDL, total cholesterol, and triglycerides). The following criteria were used to classify persons as having glycemic, lipid, and BMI measures outside the ranges recommended by the American Diabetes Association: HbA1c $>7\%$, HDL cholesterol <40 mg/dL, LDL cholesterol ≥ 130 mg/dL, total cholesterol ≥ 200 mg/dL, triglycerides ≥ 200 mg/dL, and BMI ≥ 30 (10). Smoking and insulin use were also assessed.

Data were weighted to reflect the age, sex, and racial/ethnic composition of the study population based on the 2000 U.S. Census population. However, the results in this report are for black adults only. Prevalence estimates and estimated variances

for the baseline and follow-up survey results were calculated; the two-sided Student's t-test was used to test the hypothesis that proportions were equal in the two surveys.

Sociodemographic data were collected in the baseline and follow-up surveys (Table 1). The proportion of the population self-reporting diabetes who were obese (BMI ≥ 30) increased significantly ($p < 0.05$) from the baseline to the follow-up survey (50.3% to 58.8%) (Table 2). However, improvements were reported in HbA1c and lipid levels. The proportion of black adults not meeting recommended HbA1c levels declined from 79.2% to 55.7%. The proportion not meeting recommended LDL cholesterol levels declined from 49.9% to 18.5%, and the proportion not meeting recommended total cholesterol levels declined from 57.8% to 26.4%. Significant decreases also were found in the proportion of persons not meeting recommended levels of triglycerides (16.6% to 11.5%) and HDL cholesterol (32.3% to 23.5%). The one risk factor that did not improve was smoking; prevalence remained at approximately 46%. In addition, the proportion of persons using insulin significantly decreased, from 47.6% to 39.6% ($p < 0.01$). These results were then age standardized to the 2000 U.S. Census population, which yielded

TABLE 1. Sociodemographic characteristics of black adults with diabetes — Raleigh and Greensboro, North Carolina, 1997 and 2004

Characteristic	1997		2004	
	%	(SE)*	%	(SE)
Age group (yrs)				
18–24	1.8	(0.6)	1.2	(0.6)
25–44	13.5	(1.7)	16.5	(1.6)
45–64	48.4	(2.2)	39.4	(2.0)
65–74	27.2	(2.0)	25.2	(1.9)
≥ 75	9.2	(1.4)	17.7	(1.7)
Sex				
Men	36.7	(2.3)	35.0	(2.0)
Women	63.3	(2.3)	65.0	(2.0)
Education				
Less than high school	38.8	(2.3)	31.8	(2.0)
High school or GED†	30.6	(2.4)	34.4	(2.0)
Some college	19.3	(1.9)	19.8	(1.7)
College degree	11.3	(1.5)	14.0	(1.5)
Health insurance				
Private/Employee	52.1	(3.6)	46.0	(2.1)
Medicare/Medicaid	33.2	(3.6)	37.8	(2.0)
Military	2.4	(0.9)	2.1	(0.6)
Other	1.2	(0.7)	0.2	(0.2)
Uninsured	11.2	(2.0)	13.9	(1.5)
Duration of residence (yrs)§				
<2	—	—	16.0	(2.7)
2–9	—	—	28.0	(2.9)
≥ 10	—	—	56.0	(3.4)

SOURCES: Project DIRECT (Diabetes Intervention Reaching and Educating Communities Together) 1997 baseline survey (sample size = 617) and 2004 follow-up survey (sample size = 729).

* Standard error.

† General Educational Development.

§ Item not included in the 1997 baseline survey.

TABLE 2. Prevalence of cardiovascular risk factors among black adults with diabetes — Raleigh and Greensboro, North Carolina, 1997 and 2004

Risk factor	Unadjusted				Age standardized*			
	1997		2004		1997		2004	
	%	(SE) [†]	%	(SE)	%	(SE)	%	(SE)
Obesity [§]	50.3	(2.6)	58.8	(2.1) [¶]	53.1	(3.5)	64.4	(3.3) ^{**}
Insulin use	47.6	(2.9)	39.6	(2.8) ^{**}	56.3	(3.9)	41.6	(4.4) [¶]
Smoking	46.9	(3.5)	45.1	(3.7)	59.2	(5.3)	54.8	(6.4)
Glycated hemoglobin (HbA1c) >7%	79.2	(2.1)	55.7	(2.7) [¶]	82.5	(2.6)	61.9	(3.9) [¶]
HDL ^{††} <40 mg/dL	32.3	(2.7)	23.5	(2.4) [¶]	34.2	(4.2)	27.4	(4.0)
LDL ^{§§} ≥130 mg/dL	49.9	(2.8)	18.5	(2.1) [¶]	43.7	(4.0)	18.7	(3.1) [¶]
Total cholesterol ≥200 mg/dL	57.8	(2.6)	26.4	(2.4) [¶]	50.1	(3.7)	26.1	(3.6) [¶]
Triglycerides ≥200 mg/dL	16.6	(2.0)	11.5	(1.7) ^{**}	18.7	(3.3)	11.0	(2.4) ^{**}

SOURCES: Project DIRECT (Diabetes Intervention Reaching and Educating Communities Together) 1997 baseline survey (sample size = 617) and 2004 follow-up survey (sample size = 729).

* Standardized to the 2000 U.S. population.

† Standard error.

§ Defined as body mass index (weight [kg] / height [m²]) ≥30.

¶ p<0.01.

** p<0.05.

†† High-density lipoprotein cholesterol.

§§ Low-density lipoprotein cholesterol.

consistent results, although differences in HDL cholesterol levels were no longer statistically significant. Except for the secular trends described in this report, no overall significant differences in glycemic or lipid levels or in BMI were found between residents in southeast Raleigh and Greensboro.

Reported by: SA Rutledge, PhD, EW Gregg, PhD, G Beckles, MD, DE Williams, MD, PhD, Project DIRECT Evaluation Study Group, Div of Diabetes Translation, National Center for Chronic Disease Prevention and Health Promotion, CDC.

Editorial Note: The findings in this report indicate that the proportion of persons with diabetes from two predominately black communities in North Carolina who met the recommended glycemic and lipid levels increased from 1997 to 2004. These findings parallel national data (6,7). Improvements in lipid levels nationally have been attributed to multiple factors, including increased awareness and education, lipid testing, declining saturated fat and cholesterol content in the diet, and the proliferation of highly efficacious lipid-lowering drugs (6). Similarly, controlling glycemic levels has been the focus of major awareness campaigns directed at patients (e.g., the “Be Smart About Your Heart: Control the ABCs of Diabetes” campaign by the National Diabetes Education Program [NDEP]), and the aim of quality-improvement efforts in diabetes care. Measures to prevent or control risk factors through interventions targeting patients, health-care providers, and health-care systems might account for some of the improvements observed. In addition, improvements might be attributable to national public health programs such as NDEP and the National Cholesterol Education Program (NCEP).

In contrast, the increasing proportion of persons who are obese and have diabetes is of concern and parallels trends from national surveys. This finding suggests that, despite apparent

improvements in risk-factor control among persons with diabetes, this disease and its consequences will continue to be a threat until rates of obesity and other risk factors are reduced in the U.S. population. For example, despite improvements in risk-factor control among Project DIRECT study participants, approximately 55% remained above recommended HbA1c levels, approximately 26% were above recommended total cholesterol levels, and 23% were above recommended HDL cholesterol levels. The data indicate no change in smoking prevalence. The high proportion of smokers is a public health concern because of their increased risk for macrovascular and microvascular complications.

The findings in this report are subject to at least two limitations. First, the use of mailing lists for the follow-up survey excluded residents who requested removal from the list or who used post office boxes. However, the possible incomplete coverage that resulted from using this method was corrected for by adding housing units missing from the sampling frame. Second, inclusion of data from southeast Raleigh, the site of Project DIRECT’s community-based intervention project, might have influenced changes in glycemic and lipid control between the baseline and follow-up study. However, the findings in this report are consistent with those obtained when data from the community of Greensboro were analyzed separately.

Continued education of the public through initiatives of NCEP, NDEP, and other programs remains important in the measures to reduce risk factors and improve quality of care for persons at high risk for diabetes and cardiovascular disease. NDEP is a joint program of CDC and the National Institutes of Health, which are charged with reducing the burden of diabetes and its complications in the United States. One NDEP

initiative, "Small Steps. Big Rewards. Prevent Type 2 Diabetes," is designed to increase awareness and knowledge of diabetes in black communities and other populations at high risk. Additional information is available at http://www.ndep.nih.gov/campaigns/SmallSteps/SmallSteps_50ways.htm. CDC provides additional resources and technical assistance to diabetes control and prevention programs throughout the United States and its territories to improve diabetes education, quality of diabetes care, and early detection of diabetes complications.

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Geographic Disparities in Diabetes-Related Amputations — Texas-Mexico Border, 2003

The risk for lower extremity amputation (LEA) is estimated at 15 to 40 times higher among persons with diabetes than among persons without diabetes (1). In Texas, the prevalence of diabetes is higher near the Mexico border (2,3), where persons are more likely to have lower levels of education, lower incomes, no health insurance, and other barriers to obtaining health care (4). To determine whether diabetes-related LEA rates are higher near the Texas-Mexico border, rates were calculated, in both the general population and among persons with diabetes, for diabetes-related LEAs in border and

nonborder counties.* Data used for this analysis included 2003 Texas Inpatient Hospital Discharge Data (TIHDD) (5), 2003 Texas population estimates, and data from the 2003 Texas Behavioral Risk Factor Surveillance System (BRFSS). The results of the analysis indicated that the age- and sex-adjusted rate of diabetes-related LEAs in the general population along the border was nearly double the rate of nonborder counties. Among persons with diabetes, the rate along the border also was significantly higher than among those in nonborder counties, but the rate differences were primarily among men aged ≥ 45 years. Additional measures to prevent diabetes and improve education regarding diabetes care are needed to reduce the excess burden of LEAs among persons with diabetes along the border.

In this analysis, the number of LEAs among persons with diabetes was determined using the 2003 TIHDD, which includes demographic, administrative, and medical information for all hospital discharges from approximately 95% of state-licensed hospitals in Texas. Veterans Affairs hospitals are exempt from reporting, as are hospitals in counties with a population $< 35,000$ or with fewer than 100 licensed hospital beds. An LEA in a person with diabetes was defined as any hospital discharge with an *International Classification of Diseases, Ninth Revision, Clinical Modification* (ICD-9-CM) code for a lower extremity nontraumatic amputation procedure (ICD-9-CM 84.1) and a discharge diagnosis that included a code for diabetes (ICD-9-CM 250). Rates of diabetes-related LEAs in the population were calculated using 2003 Texas population estimates for border and nonborder counties as the denominator.

To estimate the rate of LEAs among persons with diabetes, the denominator was calculated by multiplying age- and sex-specific diabetes prevalence estimates for border and nonborder regions from the 2003 Texas BRFSS by the corresponding population estimates for each region. BRFSS is a cross-sectional, random-digit-dialed telephone survey conducted in each state among noninstitutionalized civilians aged ≥ 18 years. Respondents were classified as persons with diabetes if they reported that a doctor had told them they had diabetes and the diabetes was not pregnancy related. No distinction was made between type 1 and 2 diabetes. Overall rates comparing border and nonborder counties were adjusted for age (18–44, 45–64, or ≥ 65 years) and sex using the 2000 U.S. standard population. Because of missing county data ($n = 40$) and age data ($n = 29$ [2%] border counties, $n = 197$ [3%] nonborder counties), 266 discharges for LEA were excluded from rate calculations. Rate ratios (RRs) and

* Border counties were defined as the 32 (of 254) counties within 100 km (62 miles) of the Mexico border.

corresponding 95% confidence intervals (CIs) comparing border and nonborder counties were calculated overall and by age group and sex.

In 2003, a total of 7,325 LEAs (including the 266 excluded from rate calculations) occurred among persons with diabetes. The number of diabetes-related LEAs in border counties was 1,168, compared with 6,117 in nonborder counties. The age distribution for LEAs in border counties was significantly different from the distribution in nonborder counties ($p < 0.01$, chi-square test), with a higher proportion of LEAs among persons aged ≥ 65 years residing along the border (Table 1). A significantly higher proportion of men along the border underwent LEAs (65.2%) than did men in nonborder counties (59.9%; $p < 0.01$). The overall age- and sex-adjusted rate of LEAs in the population was 8.3 per 10,000 persons (CI = 7.7–8.7) in border counties and 4.5 (CI = 4.4–4.6) in nonborder counties (Table 2). Rates were higher among both men and women in border counties but were greatest among men aged ≥ 45 years. Among persons with diabetes, the overall age- and sex-adjusted rate of LEAs was 53.6 per 10,000 persons (CI = 50.5–56.7) in border counties compared with 39.9 (CI = 38.8–40.9) in nonborder counties. Rates among women were similar in border and nonborder counties. The disparity in rates among men was greater with increasing age (Table 3).

Reported by: P Huang, MD, Texas Dept of State Health Svcs. D Bensyl, PhD, Office of Workforce and Career Development; EA Miller, PhD, EIS Officer, CDC.

TABLE 1. Number and percentage of hospital discharges for diabetes-related lower extremity amputations in border and nonborder counties, by selected characteristics — Texas, 2003*

Characteristic	Border counties		Nonborder counties	
	No.	(%)	No.	(%)
Sex†				
Male	745	(65.2)	3,560	(59.9)
Female	397	(34.8)	2,379	(40.1)
Race/Ethnicity†				
Black, non-Hispanic	3	(0.3)	1,315	(21.5)
Hispanic	993	(85.2)	2,057	(40.5)
White, non-Hispanic	71	(6.1)	2,469	(40.5)
Other	98	(8.4)	263	(4.3)
Age group (yrs)†				
18–44	56	(4.9)	448	(7.6)
45–64	459	(40.3)	2,691	(45.5)
≥ 65	624	(54.8)	2,781	(47.0)
Payer†				
Medicare	767	(65.7)	3,666	(60.2)
Medicaid	191	(16.4)	476	(7.8)
Commercial	96	(8.2)	858	(14.1)
Self-pay	73	(6.3)	552	(9.1)
Other	40	(3.4)	536	(8.8)

* Totals differ because of missing data.

† Significant difference ($p < 0.01$, chi-square test) between border and nonborder counties.

TABLE 2. Numbers, rates, and rate ratios (RRs) of diabetes-related lower extremity amputations in border and nonborder counties, by sex and age group — Texas, 2003*

Characteristic	Border counties		Nonborder counties		RR	(95% CI [§])
	No.	Rate [†]	No.	Rate		
Overall	1,139	8.3 [¶]	5,920	4.5 [¶]	1.8	(1.7–1.9)
Men						
18–44 yrs	45	1.0	326	0.8	1.2	(0.9–1.7)
45–64 yrs	327	16.8	1,736	8.1	2.1	(1.8–2.3)
≥ 65 yrs	370	37.7	1,484	18.0	2.1	(1.9–2.3)
Women						
18–44 yrs	11	0.2	122	0.3	0.7	(0.4–1.4)
45–64 yrs	132	6.0	955	4.3	1.4	(1.1–1.7)
≥ 65 yrs	254	19.7	1,297	15.5	1.7	(1.5–1.9)

* Only includes amputations with available data for sex and age.

† Per 10,000 population.

§ Confidence interval.

¶ Age and sex adjusted to the 2000 U.S. standard population.

TABLE 3. Numbers, rates, and rate ratios (RRs) of diabetes-related lower extremity amputations among persons with diabetes in border and nonborder counties, by sex and age group — Texas, 2003*

Characteristic	Border counties		Nonborder counties		RR	(95% CI [§])
	No.	Rate [†]	No.	Rate		
Overall	1,139	53.6 [§]	5,920	39.9 [§]	1.3	(1.2–1.6)
Men						
18–44 yrs	45	34.2	326	32.3	1.1	(0.8–1.4)
45–64 yrs	327	88.2	1,736	58.1	1.5	(1.3–1.7)
≥ 65 yrs	370	214.0	1,484	101.3	2.1	(1.9–2.4)
Women						
18–44 yrs	11	7.4	122	9.0	0.8	(0.4–1.5)
45–64 yrs	132	44.2	955	35.5	1.3	(1.0–1.5)
≥ 65 yrs	254	83.3	1,297	81.3	1.0	(0.9–1.2)

* Only includes amputations with available data for sex and age.

† Per 10,000 persons with diabetes.

§ Age and sex adjusted to the 2000 U.S. standard population.

Editorial Note: Rates of diabetes-related LEAs in the general population were higher along the Texas-Mexico border compared with nonborder counties, especially among men. This is consistent with the higher prevalence of diabetes along the border. The estimated prevalence of diabetes from the 2003 Texas BRFSS was 9.5% in border counties and 7.9% in nonborder counties. However, the prevalence along the border might be considerably higher. Another study using blood samples and self-report to determine diabetes prevalence estimated the prevalence at 16.1% along the entire U.S.-Mexico border (3).

Numerous barriers to health care have been identified among residents of border counties. For example, physicians are unevenly distributed, and the ratio of population to health professionals is high (6). Additionally, residents along the border have lower education levels, greater poverty, and a greater

prevalence of persons without insurance than residents of nonborder counties (6). Because of these barriers, diabetes complications might be more advanced, which could lead to higher rates of LEAs among persons with diabetes. Rates calculated among persons with diabetes were higher in border counties, but primarily among men aged ≥ 45 years.

The disabling and life-altering nature of LEAs has substantial effects on society and the health-care system. Total charges for diabetes-related LEA hospitalizations in Texas reached \$324 million in 2003. Because of the greater prevalence of diabetes and possibly because of poor access to and use of preventive health-care services, LEAs disproportionately affect the border region. The border region accounted for 19% (\$61 million) of the charges for all diabetes-related LEA hospitalizations in Texas, even though the border population is only 10% of the state's population. In addition, a significantly larger proportion of diabetes-related LEAs in border counties were paid for by Medicaid than in nonborder counties (16.4% versus 7.8%, respectively; $p < 0.01$, chi-square test).

The findings in this report are subject to at least four limitations. First, rates were calculated based on the number of hospital discharges for amputations rather than the number of persons who received an amputation. The TIHDD does not distinguish between whether a person was discharged for an amputation or a subsequent reamputation (i.e., a higher level amputation on the same extremity, such as a toe amputation followed by a foot amputation on one leg) within the same year. One study in Texas estimated the rate of reamputation to be as high as 26.7% within a year (7); therefore, a disproportionately higher rate of reamputations along the border might have contributed to the higher rates of amputations found in this analysis. Second, rates of LEAs among persons with diabetes were calculated using a denominator based on diabetes prevalence estimates from the Texas BRFSS. Because BRFSS is a landline telephone survey and estimates of diabetes prevalence are based on self-report, the BRFSS survey is thought to underestimate diabetes prevalence (8). Finally, race/ethnicity data were defined and collected differently in each data set used in this analysis, and few amputations occurred in border counties among non-Hispanics; therefore, corresponding rates and RRs limited to non-Hispanics were imprecise, and rates adjusted for and stratified by race/ethnicity are not presented. However, differences between residents with diabetes in border counties and nonborder counties were similar when comparing LEA rates among Hispanics only.[†]

[†] For Hispanics with diabetes in border versus nonborder counties, men: 18–44 years (RR = 1.2), 45–64 years (RR = 1.6), ≥ 65 years (RR = 1.8); women: 18–44 years (RR = 0.9), 45–64 years (RR = 1.1), ≥ 65 years (RR = 1.0).

Controlling blood-glucose levels, having regular foot examinations and doctor visits, and using appropriate footwear can prevent diabetes-related amputations. Community outreach to educate the public and improve access to health care along the border is important. Diabetes education interventions along the U.S.-Mexico border have proven to be effective in teaching diabetes self-management, resulting in better diabetes control (9,10). Future interventions in Texas border communities should include community health workers (known as *promotores de salud*), culturally adapted curricula, and classes at community health centers to increase diabetes knowledge. Furthermore, measures to prevent obesity and diabetes are essential to reduce the effects of diabetes along the border.

Acknowledgments

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Notice to Readers

National Influenza Vaccination Week — November 27–December 3, 2006

Each year in the United States, approximately 5%–20% of the population is infected with influenza virus, an estimated 200,000 persons are hospitalized from influenza complications, and an estimated 36,000 persons die from influenza. Influenza vaccination is the best way to prevent influenza and its severe complications. Anyone who wants to reduce their risk for acquiring influenza should be vaccinated each influenza season. However, annual influenza vaccination is recommended for the following groups (*1*).

- persons at high risk for influenza-related complications and severe disease, including:
 - children aged 6–59 months,
 - pregnant women,
 - persons aged ≥ 50 years,
 - persons of any age with certain chronic medical conditions; and
- persons who live with or care for persons at high risk, including:
 - household contacts who have frequent contact with persons at high risk and who can transmit influenza to those persons at high risk, and
 - health-care workers.

Although influenza vaccination is recommended before or early in the influenza season, persons who are not vaccinated early (particularly those in the recommended groups) should seek vaccination as soon as possible throughout the fall and winter months; influenza viruses can circulate anytime during November–April.

To help raise awareness regarding the importance of influenza vaccination throughout the influenza season, the Department of Health and Human Services, CDC, the National Influenza Vaccine Summit, and other partners have designated November 27–December 3 as National Influenza Vaccination Week. Because of phased vaccine distribution this year, many health-care providers did not receive their full orders of vaccine as early in the influenza vaccination season as they would have preferred; the timing of distribution this season underscores the importance of raising awareness of the benefits of vaccination in November, December, and beyond. CDC encourages state and local health departments, public health partners, and health-care providers to plan vaccination clinics and other activities to promote influenza vaccination. Free materials, including posters and educational flyers, are available at <http://www.cdc.gov/flu/gallery>.

Reference

1. CDC. Prevention and control of influenza: recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 2006;55(No. RR-10).

Notice to Readers

Satellite Broadcast: Adult Immunization 2006

CDC and the Public Health Training Network will present the satellite broadcast and webcast, “Adult Immunization 2006” on December 7, 2006, at noon EST. The 2.5-hour broadcast will outline vaccine-preventable diseases among adults in the United States, highlight the 2006–2007 Adult Immunization Schedule, and describe strategies to improve adult vaccination coverage levels. The program will include a discussion of vaccines routinely recommended for adults, including influenza, pneumococcal, Tdap, human papillomavirus, and herpes zoster. The program also will address vaccines recommended for health-care workers and identify resources for vaccine recommendations for international travel. Participants nationwide can interact with course instructors via toll-free telephone lines during a live question-and-answer session.

Additional information about the program is available at <http://www2.cdc.gov/phtn/adult-imm06/default.asp>. Information for site administrators about establishing and registering a viewing location for groups is available at <http://www.cdc.gov/phtnonline>. This website also is appropriate for individual participants who wish to view the broadcast from a specific location or who seek Continuing Education credit.

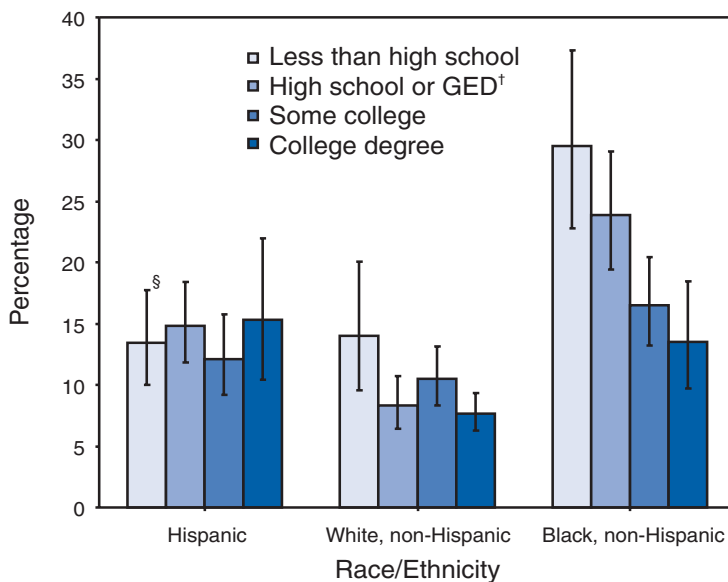
No registration is necessary to access the webcast via an Internet connection. The webcast will be available until January 8, 2007, and will become available as a self-study DVD and Internet-based program in February 2007.

Erratum: Vol. 55, No. 45

In the QuickStats, “Prevalence of Overweight Among Persons Aged 2–19 Years, by Sex — National Health and Nutrition Examination Survey (NHANES), United States, 1999–2000 Through 2003–2004,” on page 1229, the second sentence should read, “By 2003–2004, approximately 12.5 million persons aged 2–19 years (17.1%) were overweight.”

QuickStats

Percentage of Persons Aged 22–44 Years at Increased Risk for Human Immunodeficiency Virus (HIV) Infection, by Race/Ethnicity and



* Available at <http://www.cdc.gov/nchs/nsfg.htm>. As part of the survey, respondents answered a set of self-administered questions about number of opposite-sex sex partners, exchanging sex for money or drugs, male-male sex, illicit drug use, and other HIV risk behaviors during the 12 months preceding the survey.

[†] General Educational Development.

[§] 95% confidence interval.

In 2002, although educational attainment was not related to HIV risk status among Hispanic and non-Hispanic white persons aged 22–44 years, higher education was strongly associated with lower HIV risk among non-Hispanic black persons. For example, 13.5% of black college graduates were at increased risk for HIV, compared with 29.5% of blacks with less than a high school education. Overall, 12.7% of men and 10.0% of women (a total of 10.6 million persons aged 22–44 years) reported sexual or drug-related behaviors that placed them at increased risk for HIV.

SOURCE: Anderson JE, Mosher WD, Chandra A. Measuring HIV risk in the U.S. population aged 15–44: results from Cycle 6 (2002) of the National Survey of Family Growth. *Adv Data* 2006;377. Available at <http://www.cdc.gov/nchs/data/ad/ad377.pdf>.

TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending November 18, 2006 (46th Week)*

Disease	Current week	Cum 2006	5-year weekly average†	Total cases reported for previous years					States reporting cases during current week (No.)
				2005	2004	2003	2002	2001	
Anthrax	—	1	0	—	—	—	2	23	
Botulism:									
foodborne	—	8	0	19	16	20	28	39	
infant	—	72	2	90	87	76	69	97	
other (wound & unspecified)	—	43	1	33	30	33	21	19	
Brucellosis	2	95	2	122	114	104	125	136	IN (1), TN (1)
Chancroid	—	26	1	17	30	54	67	38	
Cholera	—	6	0	8	5	2	2	3	
Cyclosporiasis§	—	106	2	716	171	75	156	147	
Diphtheria	—	—	—	—	—	1	1	2	
Domestic arboviral diseases§¶:									
California serogroup	—	49	1	80	112	108	164	128	
eastern equine	—	6	0	21	6	14	10	9	
Powassan	—	1	—	1	1	—	1	N	
St. Louis	—	7	0	13	12	41	28	79	
western equine	—	—	—	—	—	—	—	—	
Ehrlichiosis§:									
human granulocytic	16	350	7	790	537	362	511	261	NY (16)
human monocytic	7	347	6	521	338	321	216	142	NY (6), MD (1)
human (other & unspecified)	—	157	1	122	59	44	23	6	
<i>Haemophilus influenzae</i> ,**									
invasive disease (age <5 yrs):									
serotype b	—	8	0	9	19	32	34	—	
nonserotype b	—	74	3	135	135	117	144	—	
unknown serotype	2	169	2	217	177	227	153	—	SC (1), AZ (1)
Hansen disease§	—	63	2	88	105	95	96	79	
Hantavirus pulmonary syndrome§	—	27	0	29	24	26	19	8	
Hemolytic uremic syndrome, postdiarrheal§	1	221	4	221	200	178	216	202	OH (1)
Hepatitis C viral, acute	6	658	28	751	713	1,102	1,835	3,976	OH (1), NC (2), GA (1), FL (1), OR (1)
HIV infection, pediatric (age <13 yrs)§,††	—	52	6	380	436	504	420	543	
Influenza-associated pediatric mortality§,§§	—	40	0	45	—	N	N	N	
Listeriosis	8	625	15	892	753	696	665	613	NY (1), OH (1), IN (1), NC (1), FL (2), CA (2)
Measles¶¶	—	44	1	66	37	56	44	116	
Meningococcal disease, invasive***:									
A, C, Y, & W-135	3	173	4	297	—	—	—	—	NC (3)
serogroup B	—	107	2	157	—	—	—	—	
other serogroup	—	16	0	27	—	—	—	—	
Mumps	16	6,005	5	314	258	231	270	266	NY (7), OH (2), MO (1), KS (2), MD (1), AZ (1), UT (1), CA (1)
Plague	—	16	0	8	3	1	2	2	
Poliomyelitis, paralytic	—	—	—	1	—	—	—	—	
Psittacosis§	1	19	0	19	12	12	18	25	NY (1)
Q fever§	1	133	1	139	70	71	61	26	FL (1)
Rabies, human	—	1	0	2	7	2	3	1	
Rubella	—	9	—	11	10	7	18	23	
Rubella, congenital syndrome	—	1	0	1	—	1	1	3	
SARS-CoV§,†††	—	—	—	—	—	8	N	N	
Smallpox§	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome§	—	85	1	129	132	161	118	77	
<i>Streptococcus pneumoniae</i> ,§									
invasive disease (age <5 yrs)	15	959	17	1,257	1,162	845	513	498	NY (3), MO (1), MD (3), OK (2), CO (4), AZ (2)
Syphilis, congenital (age <1 yr)	4	239	8	361	353	413	412	441	NC (1), AZ (3)
Tetanus	—	19	1	27	34	20	25	37	
Toxic-shock syndrome (other than streptococcal)§	1	86	2	96	95	133	109	127	KY (1)
Trichinellosis	—	11	0	19	5	6	14	22	
Tularemia§	—	78	2	154	134	129	90	129	
Typhoid fever	2	242	5	324	322	356	321	368	OH (1), CA (1)
Vancomycin-intermediate <i>Staphylococcus aureus</i> §	—	3	0	2	—	N	N	N	
Vancomycin-resistant <i>Staphylococcus aureus</i> §	—	—	—	3	1	N	N	N	
Yellow fever	—	—	—	—	—	—	1	—	

—: No reported cases. N: Not notifiable. Cum: Cumulative year-to-date counts.
 * Incidence data for reporting year 2006 are provisional, whereas data for 2001, 2002, 2003, 2004, and 2005 are finalized.
 † Calculated by summing the incidence counts for the current week, the two weeks preceding the current week, and the two weeks following the current week, for a total of 5 preceding years. Additional information is available at <http://www.cdc.gov/epo/dphsi/phs/files/5yearweeklyaverage.pdf>.
 § Not notifiable in all states.
 ¶ Includes both neuroinvasive and non-neuroinvasive. Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases (proposed) (ArboNET Surveillance).
 ** Data for *H. influenzae* (all ages, all serotypes) are available in Table II.
 †† Updated monthly from reports to the Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (proposed). Implementation of HIV reporting influences the number of cases reported. Pediatric HIV data will not be updated monthly for the remainder of this year due to upgrading of the national HIV/AIDS surveillance data management system. Data for HIV/AIDS are available in Table IV quarterly.
 §§ Updated weekly from reports to the Influenza Division, National Center for Immunization and Respiratory Diseases (proposed).
 ¶¶ No measles cases were reported for the current week.
 *** Data for meningococcal disease (all serogroups and unknown serogroups) are available in Table II.
 ††† Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases (proposed).

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending November 18, 2006, and November 19, 2005 (46th Week)*

Reporting area	Lyme disease					Malaria				
	Current week	Previous 52 weeks		Cum 2006	Cum 2005	Current week	Previous 52 weeks		Cum 2006	Cum 2005
		Med	Max				Med	Max		
United States	171	236	2,153	15,412	19,921	4	25	125	1,112	1,247
New England	121	30	780	2,711	3,614	—	1	11	45	67
Connecticut	7	11	753	1,630	778	—	0	3	11	17
Maine†	21	1	34	253	239	—	0	1	4	5
Massachusetts	—	1	23	33	2,283	—	0	3	19	36
New Hampshire	—	5	90	519	227	—	0	3	9	6
Rhode Island	93	0	62	186	37	—	0	8	1	2
Vermont†	—	1	14	90	50	—	0	1	1	1
Mid. Atlantic	43	136	1,176	8,686	11,374	—	5	13	239	329
New Jersey	—	21	172	1,848	3,277	—	0	3	28	72
New York (Upstate)	43	63	1,150	3,682	3,625	—	1	11	42	47
New York City	—	1	18	145	381	—	2	9	128	176
Pennsylvania	—	34	234	3,011	4,091	—	1	4	41	34
E.N. Central	—	9	146	1,356	1,691	—	2	7	109	133
Illinois	—	0	2	—	126	—	1	4	44	71
Indiana	—	0	3	19	30	—	0	3	10	6
Michigan	—	1	6	53	55	—	0	2	17	21
Ohio	—	1	5	43	53	—	0	3	27	24
Wisconsin	—	8	141	1,241	1,427	—	0	3	11	11
W.N. Central	—	6	169	719	872	—	0	32	50	45
Iowa	—	1	8	87	91	—	0	1	2	8
Kansas	—	0	2	4	3	—	0	2	7	6
Minnesota	—	3	167	606	759	—	0	30	29	11
Missouri	—	0	2	10	14	—	0	1	6	17
Nebraska†	—	0	2	11	3	—	0	1	4	3
North Dakota	—	0	3	—	—	—	0	1	1	—
South Dakota	—	0	1	1	2	—	0	1	1	—
S. Atlantic	7	27	113	1,653	2,129	4	7	15	294	275
Delaware	—	7	28	437	619	—	0	1	5	3
District of Columbia	1	0	7	56	8	2	0	2	5	8
Florida	3	1	5	45	42	—	1	6	56	53
Georgia	—	0	1	6	6	1	1	6	76	47
Maryland†	3	14	70	804	1,143	1	1	5	65	94
North Carolina	—	0	4	29	44	—	0	8	28	30
South Carolina†	—	0	2	18	19	—	0	2	9	8
Virginia†	—	3	25	245	232	—	1	9	48	29
West Virginia	—	0	44	13	16	—	0	1	2	3
E.S. Central	—	0	3	27	34	—	0	3	21	29
Alabama†	—	0	3	10	3	—	0	2	9	6
Kentucky	—	0	2	7	5	—	0	1	3	10
Mississippi	—	0	0	—	—	—	0	1	4	—
Tennessee†	—	0	2	10	26	—	0	2	5	13
W.S. Central	—	0	3	17	74	—	2	31	79	114
Arkansas	—	0	1	—	4	—	0	1	2	6
Louisiana	—	0	0	—	3	—	0	1	4	5
Oklahoma	—	0	0	—	—	—	0	2	7	10
Texas†	—	0	3	17	67	—	1	29	66	93
Mountain	—	0	4	30	21	—	1	9	63	52
Arizona	—	0	2	9	8	—	0	9	22	13
Colorado	—	0	1	5	—	—	0	1	13	24
Idaho†	—	0	2	5	2	—	0	1	1	—
Montana†	—	0	0	—	—	—	0	1	2	—
Nevada†	—	0	1	2	3	—	0	1	4	3
New Mexico†	—	0	1	2	3	—	0	1	4	3
Utah	—	0	1	6	2	—	0	2	17	7
Wyoming	—	0	1	1	3	—	0	0	—	2
Pacific	—	4	16	213	112	—	4	13	212	203
Alaska	—	0	1	3	4	—	0	4	23	6
California	—	4	15	194	79	—	3	10	142	149
Hawaii	N	0	0	N	N	—	0	2	4	18
Oregon†	—	0	2	13	20	—	0	1	11	12
Washington	—	0	3	3	9	—	0	5	32	18
American Samoa	U	0	0	U	U	U	0	0	U	U
C.N.M.I.	U	0	0	U	U	U	0	0	U	U
Guam	—	0	0	—	—	—	0	0	—	—
Puerto Rico	N	0	0	N	N	—	0	1	1	4
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—

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

U: Unavailable. —: No reported cases. N: Not notifiable.

Cum: Cumulative year-to-date counts.

Med: Median.

Max: Maximum.

* Incidence data for reporting year 2006 is provisional.

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

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending November 18, 2006, and November 19, 2005 (46th Week)*

Table with columns for Reporting area, Rabies, animal, Rocky Mountain spotted fever, and Salmonellosis. Sub-columns include Current week, Previous 52 weeks (Med, Max), and Cumulative counts for 2006 and 2005. Rows list various states and territories.

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

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending November 18, 2006, and November 19, 2005 (46th Week)*

Reporting area	West Nile virus disease†									
	Neuroinvasive					Non-neuroinvasive				
	Current week	Previous 52 weeks		Cum 2006	Cum 2005	Current week	Previous 52 weeks		Cum 2006	Cum 2005
		Med	Max				Med	Max		
United States	—	1	170	1,357	1,190	—	1	380	2,384	1,683
New England	—	0	3	9	9	—	0	2	3	4
Connecticut	—	0	3	7	4	—	0	1	2	2
Maine§	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	0	1	2	4	—	0	1	1	2
New Hampshire	—	0	0	—	—	—	0	0	—	—
Rhode Island	—	0	0	—	1	—	0	0	—	—
Vermont§	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	—	0	6	18	47	—	0	3	7	22
New Jersey	—	0	2	2	3	—	0	1	2	3
New York (Upstate)	—	0	0	—	19	—	0	0	—	5
New York City	—	0	4	8	11	—	0	2	4	3
Pennsylvania	—	0	2	8	14	—	0	1	1	11
E.N. Central	—	0	42	231	258	—	0	22	99	156
Illinois	—	0	21	117	136	—	0	19	70	115
Indiana	—	0	7	26	11	—	0	2	7	12
Michigan	—	0	10	42	54	—	0	1	2	8
Ohio	—	0	11	35	46	—	0	3	11	15
Wisconsin	—	0	2	11	11	—	0	2	9	6
W.N. Central	—	0	35	214	169	—	0	76	440	463
Iowa	—	0	3	21	14	—	0	4	13	23
Kansas	—	0	3	17	17	—	0	3	13	N
Minnesota	—	0	6	30	18	—	0	7	35	27
Missouri	—	0	13	47	17	—	0	2	12	13
Nebraska§	—	0	8	41	55	—	0	35	175	133
North Dakota	—	0	5	20	12	—	0	28	117	74
South Dakota	—	0	7	38	36	—	0	22	75	193
S. Atlantic	—	0	2	13	34	—	0	4	7	29
Delaware	—	0	0	—	1	—	0	0	—	1
District of Columbia	—	0	0	—	3	—	0	1	1	2
Florida	—	0	1	3	10	—	0	0	—	11
Georgia	—	0	1	2	9	—	0	3	5	11
Maryland§	—	0	2	7	4	—	0	1	1	1
North Carolina	—	0	0	—	2	—	0	0	—	2
South Carolina§	—	0	0	—	5	—	0	0	—	—
Virginia§	—	0	0	—	—	—	0	0	—	1
West Virginia	—	0	1	1	—	N	0	0	N	N
E.S. Central	—	0	14	106	65	—	0	15	92	38
Alabama§	—	0	2	7	6	—	0	0	—	4
Kentucky	—	0	0	—	5	—	0	1	1	—
Mississippi	—	0	10	84	39	—	0	15	89	31
Tennessee§	—	0	4	15	15	—	0	2	2	3
W.S. Central	—	0	59	342	157	—	0	26	204	150
Arkansas	—	0	4	23	13	—	0	2	5	15
Louisiana	—	0	14	88	—	—	0	9	81	54
Oklahoma	—	0	6	26	17	—	0	4	18	14
Texas§	—	0	38	205	127	—	0	15	100	67
Mountain	—	0	61	338	145	—	0	222	1,300	240
Arizona	—	0	9	47	52	—	0	12	56	61
Colorado	—	0	10	60	21	—	0	48	250	85
Idaho§	—	0	30	111	3	—	0	151	752	10
Montana§	—	0	3	12	8	—	0	7	21	17
Nevada§	—	0	9	34	14	—	0	13	75	17
New Mexico§	—	0	1	3	20	—	0	1	5	13
Utah	—	0	8	56	21	—	0	17	101	31
Wyoming	—	0	7	15	6	—	0	8	40	6
Pacific	—	0	15	86	306	—	0	45	232	581
Alaska	—	0	0	—	—	—	0	0	—	—
California	—	0	15	79	305	—	0	33	179	575
Hawaii	—	0	0	—	—	—	0	0	—	—
Oregon§	—	0	2	7	1	—	0	12	50	6
Washington	—	0	0	—	—	—	0	2	3	—
American Samoa	U	0	0	U	U	U	0	0	U	U
C.N.M.I.	U	0	0	U	U	U	0	0	U	U
Guam	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—

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U: Unavailable. —: No reported cases. N: Not notifiable.

Cum: Cumulative year-to-date counts.

Med: Median.

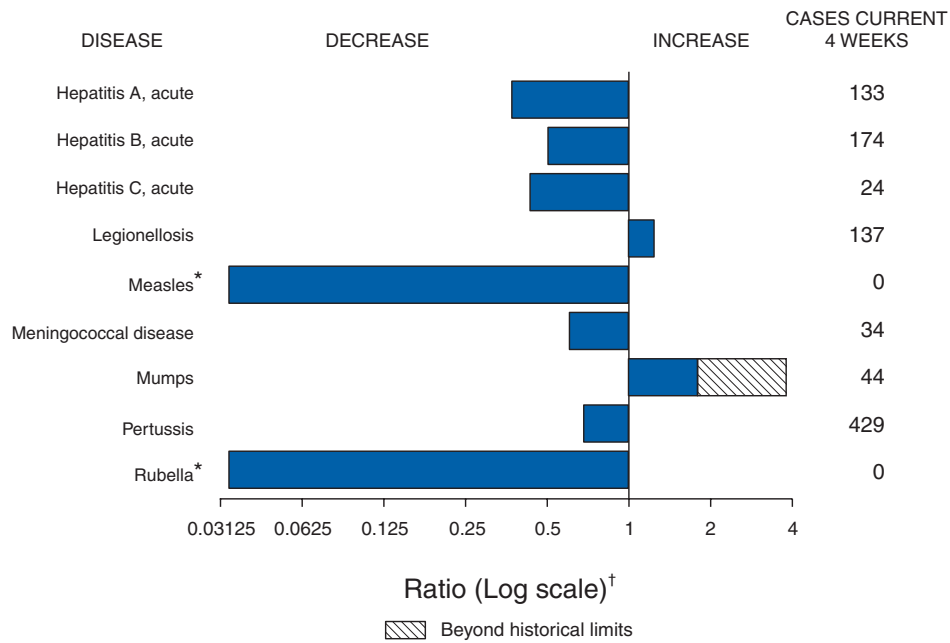
Max: Maximum.

* Incidence data for reporting year 2006 is provisional.

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

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

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals November 18, 2006, with historical data



* No measles or rubella cases were reported for the current 4-week period yielding a ratio for week 46 of zero (0).
 † Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

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