

MMWRTM
**MORBIDITY AND MORTALITY
WEEKLY REPORT**

- 349 National Arthritis Month
- 349 Impact of Arthritis and Other Rheumatic Conditions on the Health-Care System
- 353 Mental Retardation Following Diagnosis of a Metabolic Disorder in Children Aged 3–10 Years
- 356 Patients' Reports of Counseling on Mammography Screening by Health-Care Providers
- 359 Assessment of Public Health Computer Readiness for 2000

National Arthritis Month — May 1999

May is National Arthritis Month. Arthritis and other rheumatic conditions are among the most common chronic conditions and constitute the leading cause of disability, affecting an estimated 42.7 million persons in the United States. The prevalence of arthritis is expected to increase to 60 million by 2020 (1). On May 18, the Arthritis Foundation is sponsoring Arthritis Action Day to draw national attention to this public health problem. In addition, the Arthritis Foundation is working with CDC and other organizations to implement the *National Arthritis Action Plan: A Public Health Strategy* (NAAP) (2) and to promote progress toward proposed arthritis health objectives for 2010 (3).

Additional information about arthritis, National Arthritis Month, Arthritis Action Day, NAAP, and ongoing local Arthritis Foundation programs and services is available from the Arthritis Foundation, telephone (800) 283-7800, or on the World-Wide Web, <http://www.arthritis.org>.*

References

1. CDC. Arthritis prevalence and activity limitations—United States, 1990. *MMWR* 1994;43:433–8.
2. CDC. National Arthritis Action Plan: a public health strategy. Atlanta, Georgia: Arthritis Foundation, Association of State and Territorial Health Officials, and CDC, 1999.
3. Office of Disease Prevention and Health Promotion. Healthy people 2010 objectives: draft for public comment. Washington, DC: US Department of Health and Human Services, Office of Disease Prevention and Health Promotion, 1998.

*References to sites of nonfederal organizations on the World-Wide Web are provided as a service to *MMWR* readers and do not constitute or imply endorsement of these organizations or their programs by CDC or the U.S. Department of Health and Human Services. CDC is not responsible for the content of pages found at these sites.

**Impact of Arthritis and Other Rheumatic Conditions
on the Health-Care System — United States, 1997**

Arthritis and other rheumatic conditions are the leading cause of disability in the United States (1), affecting approximately 43 million persons (2) and costing \$65 billion in 1992 (3). By 2020, these numbers will increase as the population ages (4). This

Arthritis — Continued

report examines several measures of the impact of arthritis on the U.S. health-care system; the findings indicate that arthritis and other rheumatic conditions have a large impact on hospitalizations, ambulatory-care visits, and home health care, with women accounting for most of this impact and all persons aged <65 years accounting for a substantial portion.

The impact on the health-care system was measured using the most recent data on inpatient care, ambulatory care, and home health care. The 1997 National Hospital Discharge Survey was used to measure the number of discharges (by first-listed discharge diagnosis), days of care, and average length of stay at short-stay, nonfederal hospitals. The 1997 National Ambulatory Medical Care Survey and the 1997 National Hospital Ambulatory Medical Care Survey were used to measure the number and percentage (recorded by principal diagnosis and setting) of ambulatory-care visits. The 1996 National Home and Hospice Care Survey was used to measure the number and percentage (recorded by first diagnosis at admission) of home health-care discharges and the average length of service. Arthritis and other rheumatic conditions (e.g., lupus, bursitis, and fibromyalgia) were defined using the National Arthritis Data Workgroup definition (4)*. When appropriate, data were examined by age group (<15, 15–44, 45–64, and ≥65 years) and sex. Data were analyzed using SUDAAN (5), and the results were weighted to account for the complex sample design.

Persons with arthritis and other rheumatic conditions accounted for 2.4% (approximately 744,000) of all hospital discharges and 2.4% (approximately 4 million) of days of care in 1997, with an average length of stay similar to that for all conditions (approximately 5 days) (Table 1). Of these discharges, women accounted for 60.7% and

* *International Classification of Diseases, Ninth Edition, Clinical Modification* (ICD-9-CM) codes 095.6, 095.7, 098.5, 099.3, 136.1, 274, 277.2, 287.0, 344.6, 353.0, 354.0, 355.5, 357.1, 390, 391, 437.4, 443.0, 446, 447.6, 696.0, 710–716, 719.0, 719.2–719.9, 720–721, 725–727, 728.0–728.3, 728.6–728.9, 729.0–729.1, and 729.4.

TABLE 1. Number and percentage distribution of discharges from short-stay hospitals, number and percentage distribution of days of care, and average length of stay for all conditions and for first-listed diagnosis of arthritis and other rheumatic conditions, by age and sex of patients — National Hospital Discharge Survey, United States, 1997

Characteristic	Discharges (thousands)		% of all arthritis discharges	Days of care (thousands)		% of all arthritis days of care	Average length of stay (days)
	No.	(95% CI*)		No.	(95% CI)		
All conditions	30,914	(±1,740)	—	157,458	(±10,523)	—	5.1
Arthritis and other rheumatic conditions	744	(± 88)	100.0	3,835	(± 714)	100.0	5.2
Age (yrs)							
<15	21	(± 8)	2.8	63	(± 23)	1.6	3.0
15–44	90	(± 14)	12.1	481	(± 257)	12.6	5.3
45–64	218	(± 27)	29.3	1,023	(± 189)	26.7	4.7
≥65	414	(± 58)	55.7	2,269	(± 586)	59.2	5.5
Sex							
Male	292	(± 19)	39.3	1,307	(± 196)	34.1	4.5
Female	451	(± 57)	60.7	2,529	(± 603)	65.9	5.6

* Confidence interval.

TABLE 2. Number and percentage distribution of ambulatory-care visits by setting for all visits and for principal diagnosis of arthritis and other rheumatic conditions, by age and sex of patients — National Ambulatory Medical Care Survey and National Hospital Ambulatory Medical Care Survey, United States, 1997

	Physician's office			Outpatient department			Emergency department			Combined settings		
	Visits		% of all arthritis visits	Visits		% of all arthritis visits	Visits		% of all arthritis visits	Visits		% of all arthritis visits
	No. (millions)	(95% CI*)		No. (millions)	(95% CI)		No. (millions)	(95% CI)		No. (millions)	(95% CI)	
All visits	787	(±56)	—	77	(±14)	—	95	(± 8)	—	959	(±59)	—
Arthritis and other rheumatic conditions	39	(± 7)	100	3	(± 0.8)	100	2	(± 0.3)	100	44	(± 7)	100
Age (yrs)												
<15	†	—	†	†	—	†	0.2	(± 0.1)	8	1	(± 0.4)	2
15–44	10	(± 2)	27	1	(± 0.3)	35	1	(± 0.2)	50	12	(± 2)	28
45–64	15	(± 3)	39	1	(± 0.4)	38	0.6	(± 0.1)	25	17	(± 3)	38
≥65	13	(± 3)	33	0.6	(± 0.1)	19	0.4	(± 0.1)	17	14	(± 3)	31
Sex												
Male	14	(± 2)	37	1	(± 0.3)	36	0.9	(± 0.2)	43	16	(± 2)	37
Female	24	(± 5)	63	2	(± 0.5)	64	1	(± 0.2)	57	28	(± 6)	63

*Confidence interval.

†Data do not meet standards of reliability or precision (sample size is <30) and therefore are not reported.

Arthritis — Continued

persons aged <65 years for 44.2%. Persons with arthritis and other rheumatic conditions accounted for 4.6% (approximately 44 million) of all ambulatory-care visits, including 38.9 million visits to physicians' offices, 2.9 million visits to outpatient departments, and 2.2 million visits to emergency departments (Table 2). Of these visits, women accounted for 63% and persons aged <65 years accounted for 68%. Arthritis and other rheumatic conditions accounted for 4.8% (approximately 372,000) of all discharges from home health care, with an average length of service of 88.7 days. Most (60%) home health-care discharges were attributable to osteoarthritis. Of these discharges, women accounted for approximately 70% and persons aged <65 years for approximately 26%.

Reported by: Div of Health Care Statistics, National Center for Health Statistics; Health Care and Aging Studies Br, Div of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, CDC.

Editorial Note: The findings in this report indicate that arthritis and other rheumatic conditions cause large numbers of persons to receive care in hospital, ambulatory, and home health settings. Women and all persons aged <65 years accounted for much of this impact. The impact of arthritis has been underrecognized, and key interventions that reduce arthritis pain and health-care costs have been underused (6). Primary (e.g., weight control and injury prevention), secondary (e.g., early diagnosis and appropriate management), and tertiary (e.g., self-management and rehabilitation services) prevention measures can help reduce this impact (7).

These findings are subject to at least one limitation. These data sources do not measure health care in other settings important to persons with arthritis, such as rehabilitation services, chiropractors' offices, physical and occupational therapy services, and mental health services.

Recognition of arthritis and other rheumatic conditions as a large public health problem is increasing; the problem has been addressed in the *National Arthritis Action Plan: A Public Health Strategy* (7) and the first-ever draft objectives for arthritis in the national health objectives for 2010 (8). Future research will expand analyses of health-care system data to explore arthritis trends, the interaction of arthritis and other chronic conditions, and other settings of care. In 1999, CDC is initiating funding to increase public health activities targeting arthritis prevention at the national and state levels. State-level arthritis programs should consider collaboration with components of the health-care system because of the large impact of arthritis.

References

1. CDC. Prevalence of disabilities and associated health conditions—United States, 1991–1992. *MMWR* 1994;43:730–1,737–9.
2. CDC. Prevalence and impact of chronic joint symptoms—seven states, 1996. *MMWR* 1998; 47:345–51.
3. Yelin E, Callahan LF. The economic cost and social and psychological impact of musculoskeletal conditions. *Arthritis Rheum* 1995;38:1351–62.
4. CDC. Arthritis prevalence and activity limitations—United States, 1990. *MMWR* 1994;43:433–8.
5. Shah BV. SUDAAN user's manual, release 6.0. Research Triangle Park, North Carolina: Research Triangle Institute, 1992.
6. Kruger JM, Helmick CG, Callahan LF, Haddix AC. Cost-effectiveness of the Arthritis Self-help Course. *Arch Intern Med* 1998;158:1245–9.
7. CDC. National Arthritis Action Plan: a public health strategy. Atlanta, Georgia: Arthritis Foundation, Association of State and Territorial Health Officials, and CDC, 1999.

Arthritis — Continued

8. Office of Disease Prevention and Health Promotion. Healthy people 2010 objectives: draft for public comment. Washington, DC: US Department of Health and Human Services, Office of Disease Prevention and Health Promotion, 1998.

Mental Retardation Following Diagnosis of a Metabolic Disorder in Children Aged 3–10 Years — Metropolitan Atlanta, Georgia, 1991–1994

One of the largest population-based disease intervention programs in the United States is newborn metabolic screening. Since the mid- to late 1970s, newborns have been screened routinely for one or more metabolic disorders (1–4). The goal of early identification and treatment of metabolic disorders is prevention of the serious medical and developmental consequences of the disorders (e.g., mental retardation [MR]). Despite this goal, the United States has no mechanism for systematic surveillance of the developmental status of children who screen positive for and subsequently have metabolic disorders diagnosed. To determine the number of selected developmental disabilities attributable to metabolic disorders detected by newborn screening, CDC conducted a preliminary investigation of children with developmental disabilities and metabolic disorders in the metropolitan Atlanta area using data from the Metropolitan Atlanta Developmental Disabilities Surveillance Program (MADDSP). This report summarizes the results of this investigation, which indicate that newborn screening is highly effective in reducing the burden of MR associated with these disorders.

Since 1991, CDC has conducted MADDSP, an ongoing, population-based surveillance system for selected developmental disabilities (i.e., MR, cerebral palsy, hearing impairment, and vision impairment) among children aged 3–10 years in the five-county metropolitan area. MADDSP identifies children with one or more of these conditions by reviewing existing records at multiple sources, including the public school systems serving the surveillance area; three pediatric specialty-care hospitals and their associated clinics; and other agencies serving children with sensory, motor, or mental impairments. The prevalence of the selected disabilities in metropolitan Atlanta is comparable with other published population-based rates (5).

The records of children with developmental disabilities who were born from 1981 through 1991 to a resident of the Atlanta area were reviewed to identify the presence of associated medical conditions. Medical data for children in MADDSP include pregnancy and birth history, data on congenital malformations, diagnostic information, and data on general medical conditions associated with the children's disability. In addition to narrative information on medical conditions from MADDSP, data are reviewed from nonmedical sources (e.g., schools and social service agencies), and hospital discharge data (discharge diagnoses identified by selected *International Classification of Diseases, Ninth Revision, Clinical Modification*, codes). For this report, a pediatric geneticist and a developmental pediatrician independently reviewed medical data from MADDSP and identified a subset of children for whom the primary etiology of their developmental disability appeared to be a metabolic disorder.

Thirteen children in MADDSP were identified as having possible metabolic disorders. Some indication of abnormal metabolic status—such as a positive screening result or mention of a metabolic disorder—was noted in these children's records. These 13 children included nine with positive screening test results for congenital hypothy-

Mental Retardation — Continued

roidism, two with classic galactosemia (galactose-1-phosphate uridyl transferase deficiency), one with maple syrup urine disease (MSUD), and one with tyrosinuria. In the judgement of study physicians, two of the 13 children (one with galactosemia and one with MSUD) appeared to have developmental disabilities, specifically MR, that could be attributed to a metabolic disorder.

Cases were excluded based on individual assessments. Of the nine children reported with congenital hypothyroidism, three had Down syndrome, and the other six were born prematurely, had other medical conditions, and most likely had transient hypothyroxinemia of prematurity. For the child reported with tyrosinuria, no confirmatory information was available in the MADDSP records, and no additional information about this child was located by searching records of the genetics programs in the area. One child reported with galactosemia was a carrier for the condition and did not have MR.

Of the two children with developmental disabilities attributable to metabolic disorders, one had galactosemia resulting in MR, and the other had MSUD with MR. The child with galactosemia was born in the early 1980s and was identified in school records as having MR at age 8 years. The result of the initial screening test for galactosemia for this child was normal; however, galactosemia subsequently was diagnosed when the child was aged 1 month. The child with MSUD also was born in the early 1980s and was detected as having MSUD by the newborn screening test for MSUD. According to medical records, that child had cerebral palsy diagnosed at age 5 years and MR at age 6 years.

Assuming that a child with an untreated metabolic disorder associated with MR will develop MR, CDC and the Emory University School of Medicine estimated the expected number of children with MR attributable to these disorders in the metropolitan Atlanta area (Table 1) (1,7). This calculation was based on the estimated incidence of each metabolic disorder in Georgia and the number of live-born infants in the five-county metropolitan Atlanta area (6). Of the 362,390 live-born infants of residents of metropolitan Atlanta from 1981 through 1991, an estimated 148 children would have screened positive for at least one of six metabolic disorders and would have been at risk for having MR if left untreated. However, only two children from these birth co-

TABLE 1. Observed and expected number of children with mental retardation (MR) following a positive result on a screening test for selected metabolic disorders — metropolitan Atlanta, Georgia, birth years 1981–1991

Metabolic disorder	Rate*	Observed no. children with MR [†]	Expected no. children with MR [§]
Phenylketonuria	6.2	0	23
Homocystinuria	0.3	0	1
Maple syrup urine disease	0.8	1	3
Tyrosinemia (familial)	— [¶]	0	0
Hypothyroidism (primary congenital)	20.3	0	74
Classic galactosemia	12.8	1	47

* Average annual birth prevalence rate in Georgia, 1981–1991 per 100,000 children (6).

[†] Based on Metropolitan Atlanta Developmental Disabilities Surveillance Program.

[§] Based on the birth prevalence in Georgia and the number of live-born infants of residents of metropolitan Atlanta, 1981–1991.

[¶] No cases of familial tyrosinemia during 1981–1991.

Mental Retardation — Continued

horts were identified in MADDSP as having MR associated with one of these underlying metabolic disorders.

Reported by: PM Fernhoff, MD, Div of Medical Genetics, Dept of Pediatrics, Emory Univ School of Medicine, Atlanta, Georgia. Div of Child Development, Disability, and Health (proposed), National Center for Environmental Health, CDC.

Editorial Note: The findings in this report underscore the importance of early identification and treatment of children with metabolic disorders to prevent or lessen the severity of serious neurodevelopmental sequelae. Screening for metabolic disorders does not ensure complete detection of affected infants. Some infants with metabolic disorders will be missed because of individual genetic variations, administrative or laboratory errors, or low sensitivity of screening tests (4,8). Surveillance for developmental disabilities among children who have metabolic disorders would facilitate efforts to determine the effectiveness of treatment and metabolic control. The finding that metropolitan Atlanta children have a low occurrence of serious developmental disabilities attributable to these rare and serious metabolic disorders supports the effectiveness of the newborn screening program. However, the presence of two cases of MR attributable to MSUD and galactosemia suggests a need to conduct surveillance or other assessments of children with metabolic disorders identified by newborn screening to monitor the effectiveness of this intervention program.

The findings in this report are subject to at least three limitations. First, to be identified by MADDSP, a child with a metabolic disorder must have survived to age 3 years and must have lived in the five-county ascertainment area at that age or later. Second, the data did not allow researchers to evaluate the effect of treatment for metabolic disorders on the severity of associated developmental disabilities. Although treatment of some metabolic disorders may not prevent completely a developmental disability, it may lessen its severity. Therefore, treated children may not meet the MADDSP case definition for MR but may still have some cognitive impairment. Finally, a metabolic disorder diagnosis may not have been in the medical records that were reviewed by the MADDSP staff.

The specific panel of newborn screening tests varies by state (3). With the advent of tandem mass-spectrometry and the decreasing costs of DNA technology, the screening panel for any given state potentially could be expanded to include up to 50 different organic acid and amino acid disorders (9,10). As these technologic advances are implemented to establish a more thorough system for early identification and diagnosis, surveillance systems and other assessments of children with metabolic disorders will help gauge the effectiveness of screening and treatment during infancy. CDC is initiating an effort to link data from MADDSP with data on newborns in metropolitan Atlanta who have had a metabolic disorder diagnosed.

References

1. Taeusch WH, Ballard RA, Avery ME. Diseases of the newborn. Philadelphia, Pennsylvania: WB Saunders Co., 1991:111-46.
2. Fisher DA, Dussault JH, Foley TP Jr, et al. Screening for congenital hypothyroidism: results of screening 1 million North American infants. *J Pediatr* 1979;94:700-5.
3. American Academy of Pediatrics. Newborn screening fact sheets. *Pediatrics* 1996;98:467-72.
4. Fernhoff PM, Fitzmaurice N, Milner J. Coordinated system for comprehensive newborn metabolic screening. *South Med J* 1982;75:529-32.
5. Boyle CA, Yeargin-Allsopp M, Doernberg NS, et al. Prevalence of selected developmental disabilities in children 3-10 years of age: the Metropolitan Atlanta Developmental Disabilities Surveillance Program. *MMWR* 1996;45(no. SS-2):1-13.

Mental Retardation — Continued

6. Grinzaid KA, Breen S, Fernhoff PM. Comprehensive newborn metabolic screening annual report—1997. Atlanta, Georgia: State of Georgia, Division of Medical Genetics, Department of Pediatrics, Emory University School of Medicine, 1998.
7. Nelson WE, Behrman RE, Kleigman RN, et al, eds. Textbook of pediatrics. 15th ed. Philadelphia, Pennsylvania: WB Saunders Co., 1996.
8. American Academy of Pediatrics. Issues in newborn screening. *Pediatrics* 1992;89:345–9.
9. Rashed MS, Ozand PT, Bucknall MP, Little D. Diagnosis of inborn errors of metabolism from blood spots by acylcarnitines and amino acids profiling using automated electrosopy tandem mass spectroscopy. *Pediatr Resear* 1995;38:324–31.
10. Levy H. Newborn screening by tandem mass spectrometry: a new era. *Clin Chem* 1998;44:2401–2.

Patients' Reports of Counseling on Mammography Screening by Health-Care Providers — North Carolina, 1997

Regular mammography screening combined with timely and appropriate treatment can reduce mortality from breast cancer by 30% in women aged 50–69 years and 16% in women aged 40–49 years (1,2). A physician's recommendation has been strongly associated with a patient having a mammogram (3). This report analyzes data collected during 1997 in North Carolina as part of the Behavioral Risk Factor Surveillance System (BRFSS), which indicated that 23% of women aged ≥ 40 years who had had a routine physical examination during the 2 years preceding the survey did not recall having a discussion about mammography with a health-care provider.

BRFSS is an annual, state-based, standardized, random-digit-dialed telephone survey of noninstitutionalized U.S. adults aged ≥ 18 years (4). The overall survey response rate in 1997 was 78%. In the 1997 BRFSS, women aged ≥ 40 years were asked "Has a doctor or other health professional ever talked with you about having a mammogram as part of your routine health-care?" Women who responded "yes" then were asked how many years ago the discussion had occurred. The sample was restricted to the 1209 (92%) who reported having had a routine physical examination during the previous 2 years. Responses were weighted to reflect the age, race, and sex distribution of adults in North Carolina, and the probability of selection; 95% confidence intervals were calculated using Survey Data Analysis (SAS) software (5).

In this sample of women aged ≥ 40 years who reported having had a routine examination during the previous 2 years, 77% reported that a health-care provider had discussed mammography with them during this time (Table 1). This percentage was highest among women aged 50–59 years (86%) and 60–69 years (86%), and declined to 54% among women aged ≥ 80 years. Reported mammography discussion increased with education, from 63% among women with a grade school education or less to 82% among women with at least some college. Of women with an annual household income of $< \$15,000$, 65% reported a discussion about mammography compared with 80%–82% of women in higher income groups. Women with health-care coverage were more likely than those without to report a discussion on mammography, but this difference was not significant because of the small number of women without coverage. No significant difference by race was observed.

Reported by: E Conlisk, PhD, H Herrick, MSPH, K Passaro, PhD, North Carolina Dept of Health and Human Svcs. Div of Cancer Prevention and Control, Div of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, CDC.

*Mammography Screening — Continued***TABLE 1. Percentage* of women aged ≥ 40 years who reported a recent discussion with a health-care provider about breast cancer screening[†] — North Carolina, 1997**

Characteristic	Provider discussed having a mammogram during previous 2 years	(95% CI [§])
Age group (yrs)		
40–49	75.0	(\pm 4.9)
50–59	85.6	(\pm 5.0)
60–69	85.7	(\pm 4.5)
70–79	67.3	(\pm 6.3)
≥ 80	53.6	(± 10.1)
Education		
Grade school or less	62.8	(\pm 9.2)
Some high school	74.1	(\pm 6.8)
High school graduate	76.5	(\pm 4.7)
Some college	82.4	(\pm 3.6)
Annual household income		
<\$15,000	65.1	(\pm 7.1)
\$15,000–\$24,999	80.1	(\pm 5.6)
\$25,000–\$49,999	82.0	(\pm 4.7)
\geq \$50,000	81.2	(\pm 6.1)
Has health-care coverage		
Yes	77.5	(\pm 2.6)
No	68.3	(± 12.1)
Race[¶]		
Black	79.3	(\pm 3.0)
White	76.5	(\pm 5.5)
Total	76.9	(\pm 2.6)

*Data were weighted to reflect the age and race distribution of the North Carolina female population and the probability of selection in the survey.

[†]Sample restricted to women who reported having seen a provider for a routine examination during the previous 2 years.

[§]Confidence interval.

[¶]Numbers for races other than white and black were too small for meaningful analysis.

Editorial Note: Despite strong evidence that regular mammography screening reduces breast cancer mortality, one fourth of women aged ≥ 40 years who received a routine physical examination in the 2 years before the survey did not recall a health-care provider discussing mammography. The percentage varied by age and might reflect the conflicting recommendations regarding mammography screening for women aged 40–49 years and the unknown benefit of screening women aged ≥ 70 years. The lower percentage among older women also might reflect that older women are less likely to receive a routine physical examination from an obstetrician/gynecologist, the specialist most likely to recommend mammography screening (6).

The 1997 North Carolina BRFSS data indicated that black women were as likely as white women to report a discussion with their health-care provider about mammography. Other data indicated that black women were as likely as white women to have

Mammography Screening — Continued

had a mammogram during the previous 2 years, a finding consistent with the 1994 National Health Interview Survey (7). BRFSS data also indicated that reported mammography was lower for women without health-care coverage, with less education, and with annual household incomes of <\$15,000, suggesting that presumed financial barriers may make providers less likely to discuss screening. Providers need to be aware of changes in Medicare and Medicaid mammography screening schedules and the availability of inexpensive and no-cost screening through the National Breast and Cervical Cancer Early Detection Program (8). Because the percentage of women who had had a routine physical examination during the previous 2 years declines with income, education, and health-care coverage in the BRFSS sample, women with these characteristics are even less likely to learn of the importance of regular screening.

The findings in this report are subject to at least three limitations. First, these data are based on respondent recall and may not reflect accurately the actual discussions. Also, the respondent was asked only whether a discussion had occurred and not whether a recommendation was made. Second, the survey was conducted by telephone, excluding approximately 5% of North Carolina households with no telephone. Third, the sample size in some subgroups was small, making it difficult to control for confounding factors in the analysis.

The importance of provider recommendation is evident from other data in the survey. For example, 86% of women who reported a provider discussion of mammography during the previous 2 years also reported having had a mammogram during the previous 2 years versus 44% of women who did not report such a discussion. Also, one third of women who did not have a recent mammogram cited lack of provider recommendation as the main reason they had not been screened. Health-care providers in North Carolina should recommend mammography screening for all women aged ≥ 40 years.

References

1. Fletcher SW, Black W, Harris R, Rimer BK, Shapiro S. Report of the international workshop on screening for breast cancer. *J Natl Cancer Inst* 1993;85:1644–56.
2. National Institutes of Health Consensus Development Panel. National Institutes of Health Consensus Development Conference Statement: breast cancer screening for women ages 40–49, January 21–23, 1997. *J Natl Cancer Inst* 1997;89:1015–26.
3. Zapka JG, Stoddard A, Maul L, Costanza ME. Interval adherence to mammography screening guidelines. *Med Care* 1991;29:697–707.
4. Gentry EM, Kalsbek WD, Hogelin GC, et al. The Behavioral Risk Factor Surveys: II. Design, methods, and estimates from combined data. *Am J Prev Med* 1985;1:9–14.
5. Shah B, Barnwell B, Bieler G. SUDAAN user's manual, release 7.5. Research Triangle Park, North Carolina: Research Triangle Institute, 1997.
6. Herman C, Lengerich E, Stoodt G. Variation in recommendations for breast and cervical cancer screening among primary care physicians in North Carolina, 1991. *South Med J* 1996;89:583–90.
7. National Center for Health Statistics. Health, United States, 1998 with socioeconomic status and health chartbook. Hyattsville, Maryland: US Department of Health and Human Services, CDC, National Center for Health Statistics, 1998:293–4.
8. Henson RM, Wyatt SW, Lee NC. The National Breast and Cervical Cancer Early Detection Program: a comprehensive public health response to two major health issues for women. *Journal of Public Health Management* 1996;2:36–47.

Assessment of Public Health Computer Readiness for 2000 — United States, 1999

Computer software, equipment, and other devices that contain embedded microchips that store and process dates may use two-digit years (e.g., 99 for 1999) to reduce data entry burden and save electronic storage space; these devices may not work properly when the year 2000 (Y2K) arrives (1). Many aspects of health-care delivery, public health surveillance and research, and critical infrastructure components (e.g., utilities and transportation services) depend on vulnerable computers. To ensure that critical public health functions will not be compromised because of Y2K problems, CDC assessed state public health agency readiness for Y2K. This report describes the findings of the assessment, which indicate that state health agencies that responded are substantially ready for Y2K and plan to reach full readiness in 1999.

In November 1998, CDC sent surveys to health officials in all states, territories, and the District of Columbia using a standardized questionnaire; responses were received from December 1998 through February 1999. Questions were asked about the degree of Y2K assessment performed and the degree of Y2K readiness achieved in 10 functional areas essential to public health and potentially vulnerable to Y2K problems. CDC received completed surveys from 29 states, representing 75% of the U.S. population.

The 29 public health agencies reported an average of 92% (median: 93%; range: 85%–99%) completion for the Y2K assessment across the 10 functional areas listed in the survey (Table 1). The level of Y2K readiness averaged 77% (median: 75%; range: 66%–93%) across the 10 areas; one state reported Y2K readiness in all areas. All states (with one exception in one functional area) reported intentions to reach full readiness during 1999 across all functional areas (Table 2). However, there were 35 responses of “unknown” in various functional areas, with the greatest number (14) regarding the readiness of local public health agencies. Thirty-four percent of the respondents lacked a contingency plan, 49% had plans to develop one, and 17% did not intend to develop one.

Reported by: Information Resources Management Office, Office of the Director, CDC.

Editorial Note: The survey results indicate substantial Y2K readiness of many computer-based functions, with plans to reach full Y2K readiness in 1999, in state health agencies that responded to the survey. Because 21 states, all the U.S. territories, and the District of Columbia did not respond, the survey findings do not reflect Y2K readiness in these locations. In addition, the lack of information about local public health agency readiness further limits the assessment of public health system readiness overall. Given the fixed deadline (December 31, 1999) for preparedness, states that do not plan to be ready until the fourth quarter of 1999 may have increased their risk for not completing the work in time. Finally, the lack of an intent to develop a contingency plan in some states further increases the risk for a longer interruption in service or operations than would be the case with adequate planning.

CDC has achieved Y2K readiness for all its major information systems and is in the final stages of ensuring that its infrastructure is ready (e.g., facilities, laboratory equipment, desktop computers and networking devices, telecommunications, and commercial software products). CDC also has implemented a toll-free hotline to provide Y2K information on health care and public health, telephone (877) 232-2020. The system

*Public Health Computer Readiness — Continued***TABLE 1. Average of state responses on year 2000 (Y2K) assessment and readiness — United States, 1999***

Functional area	Average level of Y2K assessment	Average level of Y2K readiness	No. states responding "unknown"
Information systems supporting patient-care and/or disease-prevention services	99%	72%	0
Biomedical devices with date-sensitive embedded microchips	82%	93%	4
Laboratory equipment and associated systems with date-sensitive embedded microchips	84%	85%	5
Health information systems	98%	74%	1
Public health surveillance systems	98%	76%	1
Electronic data exchanges with external sources/recipients	93%	67%	3
Information technology infrastructure	93%	78%	2
Facilities, infrastructure systems, and/or devices with embedded microchips [†]	92%	88%	5
Mission-critical management and administrative systems [§]	96%	74%	0
Summary of readiness of local county, city, district, or other public sector public health agencies	85%	66%	14

*Based on responses from 29 states.

[†]E.g., security systems, telecommunications, environmental controls, power supply, and elevators.

[§]E.g., financial management, billing, grants administration, and regulatory compliance.

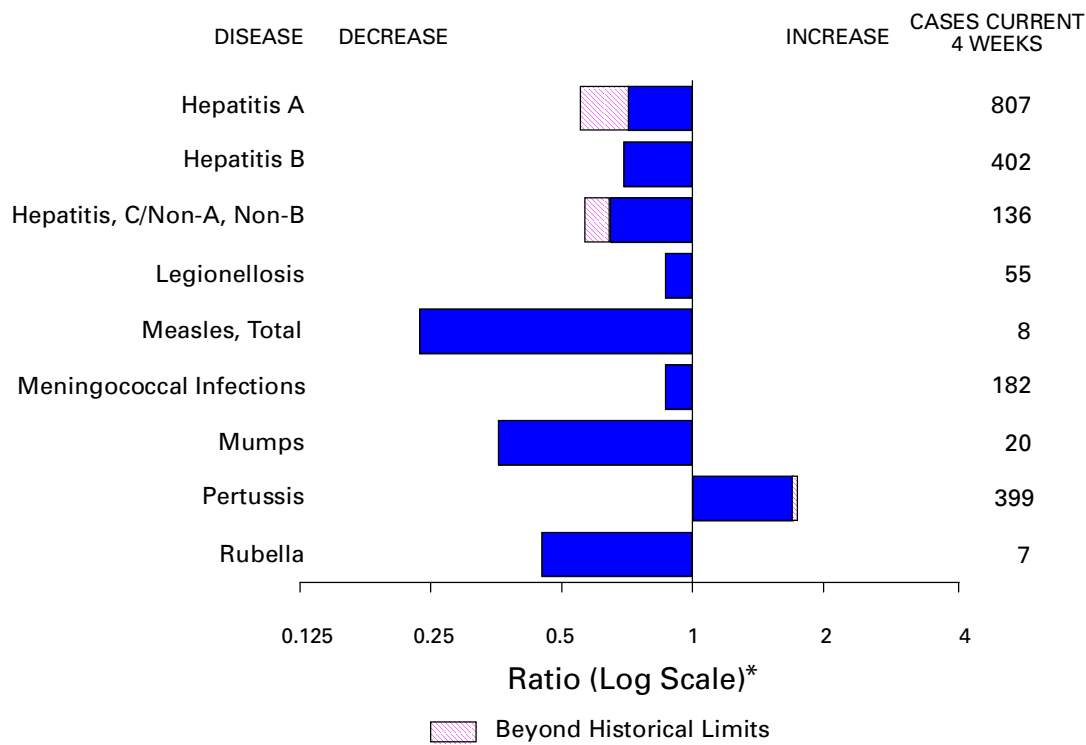
provides an automated fax transmission consisting of a Y2K fact sheet and resource guide, including Internet addresses for additional information on topics such as medical devices, health-care sector Y2K readiness, assessment checklists, and contingency planning templates.

The President's Council on Year 2000 Conversion reports that the nation's major infrastructure services (e.g., telecommunications, electric power production and distribution, banking and other financial services, and transportation), will be ready and that no major service disruptions will occur (1). Additional information is available from the council, telephone (888) 872-4925 ([888] USA-4-Y2K), and on the World-Wide Web, <http://www.y2k.gov>.

Health-care providers and government health agencies must maintain a full commitment to Y2K preparations, readiness, testing, and contingency planning. Public health and safety and the quality of health care are paramount during the Y2K transition. All public health partners are encouraged to develop rigorous contingency plans and business continuity plans to assess and quickly respond to any problems. To track

(Continued on page 367)

FIGURE I. Selected notifiable disease reports, comparison of provisional 4-week totals ending May 1, 1999, with historical data — United States



*Ratio of current 4-week total to mean of 16 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE I. Summary — provisional cases of selected notifiable diseases, United States, cumulative, week ending May 1, 1999 (17th Week)

	Cum. 1999		Cum. 1999
Anthrax	-	Plague	-
Brucellosis	12	Poliomyelitis, paralytic	-
Cholera	-	Psittacosis	11
Congenital rubella syndrome	2	Rabies, human	-
Cryptosporidiosis*	368	Rocky Mountain spotted fever (RMSF)	46
Diphtheria	-	Streptococcal disease, invasive Group A	698
Encephalitis: California*	3	Streptococcal toxic-shock syndrome*	14
eastern equine*	-	Syphilis, congenital [¶]	30
St. Louis*	-	Tetanus	5
western equine*	-	Toxic-shock syndrome	33
Hansen Disease	24	Trichinosis	5
Hantavirus pulmonary syndrome* [†]	2	Typhoid fever	87
Hemolytic uremic syndrome, post-diarrheal*	7	Yellow fever	-
HIV infection, pediatric* [‡]	57		

-:no reported cases

*Not notifiable in all states.

[†] Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases (NCID).

[‡] Updated monthly from reports to the Division of HIV/AIDS Prevention—Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention (NCHSTP), last update April 25, 1999.

[¶] Updated from reports to the Division of STD Prevention, NCHSTP.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending May 1, 1999, and May 2, 1998 (17th Week)

Reporting Area	AIDS		Chlamydia		Escherichia coli O157:H7		Gonorrhea		Hepatitis C/NA,NB	
	Cum. 1999*	Cum. 1998	Cum. 1999	Cum. 1998	NETSS†	PHLIS‡	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998
					Cum. 1999	Cum. 1999				
UNITED STATES	14,890	15,998	165,825	184,213	366	168	89,283	107,480	784	1,498
NEW ENGLAND	779	483	6,352	6,842	50	35	2,033	1,871	65	27
Maine	15	10	193	295	4	-	15	12	-	-
N.H.	23	12	317	331	3	2	22	31	-	-
Vt.	5	10	162	123	6	1	17	8	2	2
Mass.	500	206	2,973	2,800	22	19	885	678	62	25
R.I.	52	42	738	816	1	1	193	112	1	-
Conn.	184	203	1,969	2,477	14	12	901	1,030	-	-
MID. ATLANTIC	3,612	4,629	24,509	22,695	25	2	12,482	12,727	54	118
Upstate N.Y.	406	547	N	N	22	-	1,480	2,272	35	101
N.Y. City	1,894	2,654	12,399	11,613	-	1	5,267	5,083	-	-
N.J.	765	820	3,522	3,751	3	1	1,738	2,253	-	-
Pa.	547	608	8,587	7,331	N	-	3,997	3,119	19	17
E.N. CENTRAL	1,105	1,291	24,968	27,766	55	34	16,808	20,486	174	169
Ohio	183	247	6,992	8,803	28	8	4,236	5,359	-	5
Ind.	147	271	-	-	5	8	726	2,037	-	4
Ill.	505	487	9,205	7,302	11	7	6,563	5,995	5	20
Mich.	215	217	6,785	7,213	11	5	4,578	5,346	169	140
Wis.	55	69	1,986	4,448	N	6	705	1,749	-	-
W.N. CENTRAL	285	281	5,851	11,583	78	21	1,935	5,439	40	9
Minn.	44	48	2,006	2,334	23	14	746	788	-	-
Iowa	35	14	862	1,390	8	2	200	408	-	3
Mo.	102	138	-	4,073	9	4	-	2,923	38	4
N. Dak.	4	4	102	331	3	-	7	31	-	-
S. Dak.	12	7	540	554	1	1	51	90	-	-
Nebr.	26	31	852	963	27	-	344	375	-	2
Kans.	62	39	1,489	1,938	7	-	587	824	2	-
S. ATLANTIC	4,155	4,065	36,488	36,262	44	17	26,785	28,960	71	37
Del.	50	44	938	841	2	-	583	453	-	-
Md.	467	488	2,693	2,693	2	-	2,495	2,943	21	3
D.C.	160	339	N	N	-	-	906	1,132	-	-
Va.	231	285	4,279	3,085	11	4	2,788	2,134	7	1
W. Va.	24	34	727	1,624	1	1	170	529	11	3
N.C.	269	271	7,741	7,364	8	6	6,656	6,292	-	7
S.C.	402	275	6,444	6,186	6	1	3,313	3,995	12	-
Ga.	583	504	5,479	8,211	2	-	4,061	6,608	1	8
Fla.	1,969	1,825	8,187	6,258	12	5	5,813	4,874	19	15
E.S. CENTRAL	634	586	13,768	12,802	28	7	10,934	12,043	75	46
Ky.	104	85	2,541	2,001	11	-	1,158	1,134	6	7
Tenn.	286	180	4,638	4,148	10	3	3,587	3,505	33	36
Ala.	112	183	3,660	3,317	4	3	3,421	4,167	1	3
Miss.	132	138	2,929	3,336	3	1	2,768	3,237	35	-
W.S. CENTRAL	1,553	1,949	17,770	27,380	11	7	10,608	16,263	89	326
Ark.	56	71	1,806	1,174	3	2	847	1,337	1	3
La.	162	330	5,672	4,049	3	3	4,533	3,424	77	1
Okla.	46	107	2,615	3,317	4	2	1,343	1,818	2	-
Tex.	1,289	1,441	7,677	18,840	1	-	3,885	9,684	9	322
MOUNTAIN	545	513	9,197	9,889	28	14	2,434	2,592	56	189
Mont.	4	12	431	352	1	-	16	20	4	4
Idaho	8	12	501	624	1	1	26	51	4	76
Wyo.	3	1	270	222	1	3	10	11	17	43
Colo.	103	91	2,310	2,586	10	4	671	769	11	10
N. Mex.	21	76	1,172	1,117	2	-	209	201	4	29
Ariz.	274	198	3,021	3,447	7	3	1,087	1,186	12	1
Utah	54	44	550	722	6	2	56	74	2	14
Nev.	78	79	942	819	-	1	359	280	2	12
PACIFIC	2,222	2,201	26,922	28,994	47	31	5,264	7,099	160	577
Wash.	117	162	3,837	3,639	11	14	690	619	4	8
Oreg.	50	64	1,849	-	14	10	253	-	4	8
Calif.	2,016	1,928	19,826	23,935	22	6	4,110	6,232	152	519
Alaska	6	11	643	666	-	-	119	102	-	1
Hawaii	33	36	767	754	-	1	92	146	-	41
Guam	1	-	-	107	N	-	-	7	-	-
P.R.	493	661	U	U	4	U	102	130	U	U
V.I.	13	15	N	N	N	U	U	U	U	U
Amer. Samoa	-	-	U	U	N	U	U	U	U	U
C.N.M.I.	-	-	N	N	N	U	-	14	-	U

N: Not notifiable U: Unavailable -: no reported cases C.N.M.I.: Commonwealth of Northern Mariana Islands

*Updated monthly from reports to the Division of HIV/AIDS Prevention-Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention, last update April 25, 1999.

†National Electronic Telecommunications System for Surveillance.

‡Public Health Laboratory Information System.

TABLE II. (Cont'd.) Provisional cases of selected notifiable diseases, United States, weeks ending May 1, 1999, and May 2, 1998 (17th Week)

Reporting Area	Legionellosis		Lyme Disease		Malaria		Syphilis (Primary & Secondary)		Tuberculosis		Rabies, Animal
	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999*	Cum. 1998*	Cum. 1999
UNITED STATES	304	388	1,263	1,351	325	381	1,888	2,336	1,627	2,587	1,650
NEW ENGLAND	20	22	196	307	12	17	26	26	111	123	276
Maine	2	1	-	2	-	-	-	1	6	3	50
N.H.	2	2	-	5	-	2	-	1	-	2	15
Vt.	3	1	-	2	1	-	1	1	-	1	48
Mass.	5	8	115	72	3	13	16	19	57	63	55
R.I.	2	4	10	23	-	2	1	-	15	14	32
Conn.	6	6	71	203	8	-	8	4	33	40	76
MID. ATLANTIC	73	84	795	845	83	111	83	97	604	633	336
Upstate N.Y.	22	23	311	399	25	26	9	12	77	90	224
N.Y. City	5	22	5	22	22	57	37	18	380	383	U
N.J.	5	3	118	111	24	16	11	33	147	160	69
Pa.	41	36	361	313	12	12	26	34	U	U	43
E.N. CENTRAL	66	146	24	21	30	38	340	329	98	126	14
Ohio	27	52	17	14	5	2	29	57	U	U	5
Ind.	5	25	5	4	4	1	32	56	U	U	-
Ill.	9	20	1	1	11	19	227	137	U	U	-
Mich.	24	22	1	2	8	14	49	52	72	91	9
Wis.	1	27	U	U	2	2	3	27	26	35	-
W.N. CENTRAL	12	23	15	11	13	21	9	64	148	115	173
Minn.	-	3	8	3	2	8	4	4	69	39	32
Iowa	8	4	2	7	3	3	-	-	12	-	37
Mo.	3	7	-	-	7	7	-	48	54	50	6
N. Dak.	-	-	1	-	-	1	-	-	1	3	48
S. Dak.	1	-	-	-	-	-	-	1	3	4	25
Nebr.	-	7	-	-	-	-	1	4	4	4	1
Kans.	-	2	4	1	1	2	3	7	5	15	24
S. ATLANTIC	36	43	139	118	88	79	670	922	276	493	625
Del.	2	6	2	3	-	1	1	9	-	8	3
Md.	5	9	106	96	24	29	143	247	U	U	126
D.C.	-	3	1	4	7	4	14	30	14	37	-
Va.	7	4	5	4	18	9	52	66	44	89	155
W. Va.	N	N	4	4	1	-	2	-	15	19	37
N.C.	6	4	16	1	7	7	180	256	123	247	133
S.C.	6	4	1	-	-	3	91	116	80	93	51
Ga.	-	-	-	2	7	13	90	103	U	U	61
Fla.	10	12	4	4	24	13	97	95	U	U	59
E.S. CENTRAL	46	13	29	14	7	11	383	394	108	206	85
Ky.	40	7	13	2	2	1	41	41	U	U	19
Tenn.	5	3	7	7	3	5	197	197	U	U	26
Ala.	1	1	6	5	2	3	98	80	102	120	40
Miss.	-	2	3	-	-	2	47	76	6	86	-
W.S. CENTRAL	1	7	2	4	8	11	264	295	71	677	29
Ark.	-	-	-	3	-	1	26	46	40	38	-
La.	1	-	-	-	6	3	82	98	U	U	-
Okla.	-	3	2	-	1	1	71	14	31	38	29
Tex.	-	4	-	1	1	6	85	137	-	601	-
MOUNTAIN	17	20	3	1	14	18	46	89	54	72	56
Mont.	-	1	-	-	2	-	-	-	5	2	21
Idaho	-	-	-	-	1	1	-	-	-	3	-
Wyo.	-	1	1	-	-	-	-	-	1	1	20
Colo.	1	4	-	-	5	6	-	4	U	U	1
N. Mex.	1	2	1	-	2	6	-	10	20	18	-
Ariz.	1	3	-	-	4	2	43	67	U	U	14
Utah	8	8	1	-	-	1	1	3	13	19	-
Nev.	6	1	-	1	-	2	2	5	15	29	-
PACIFIC	33	30	60	30	70	75	67	120	157	142	56
Wash.	7	3	1	1	5	6	16	6	88	72	-
Oreg.	1	-	1	3	7	7	-	-	U	U	-
Calif.	24	27	58	26	53	61	49	114	U	U	51
Alaska	1	-	-	-	-	-	1	-	19	13	5
Hawaii	-	-	-	-	5	1	1	-	50	57	-
Guam	-	1	-	-	-	1	-	-	-	37	-
P.R.	-	-	-	-	-	-	63	74	-	46	25
V.I.	U	U	U	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	-	-	-	-	-	-	98	-	54	-

N: Not notifiable U: Unavailable -: no reported cases

*Cumulative reports of provisional tuberculosis cases for 1998 and 1999 are unavailable ("U") for some areas using the Tuberculosis Information Management System (TIMS).

TABLE III. Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending May 1, 1999, and May 2, 1998 (17th Week)

Reporting Area	<i>H. influenzae</i> , invasive		Hepatitis (Viral), by type				Measles (Rubeola)					
	Cum. 1999*	Cum. 1998	A		B		Indigenous		Imported†		Total	
			Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	1999	Cum. 1999	1999	Cum. 1999	Cum. 1999	Cum. 1998
UNITED STATES	408	410	4,767	7,393	1,891	2,833	-	17	1	10	27	21
NEW ENGLAND	29	29	64	107	34	45	-	-	-	1	1	1
Maine	2	2	2	10	-	-	-	-	-	-	-	-
N.H.	5	1	7	6	4	5	-	-	-	1	1	-
Vt.	4	2	3	7	1	-	-	-	-	-	-	-
Mass.	12	22	17	32	18	23	-	-	-	-	-	1
R.I.	-	2	6	7	11	6	-	-	-	-	-	-
Conn.	6	-	29	45	-	11	-	-	-	-	-	-
MID. ATLANTIC	53	58	320	538	248	428	-	-	-	2	2	9
Upstate N.Y.	31	19	80	118	61	104	-	-	-	2	2	-
N.Y. City	5	16	50	197	56	125	-	-	-	-	-	-
N.J.	17	21	42	95	33	76	-	-	-	-	-	8
Pa.	-	2	148	128	98	123	-	-	-	-	-	1
E.N. CENTRAL	47	65	1,109	1,023	160	545	-	-	-	-	-	2
Ohio	24	27	279	122	32	26	-	-	-	-	-	-
Ind.	1	13	29	89	4	245	-	-	-	-	-	1
Ill.	18	24	150	269	-	86	-	-	-	-	-	-
Mich.	4	-	626	451	124	157	-	-	-	-	-	1
Wis.	-	1	25	92	-	31	-	-	-	-	-	-
W.N. CENTRAL	38	29	241	623	105	125	-	-	-	-	-	-
Minn.	12	17	18	28	12	11	-	-	-	-	-	-
Iowa	9	1	55	292	19	17	-	-	-	-	-	-
Mo.	11	7	132	242	64	81	-	-	-	-	-	-
N. Dak.	-	-	-	2	-	2	-	-	-	-	-	-
S. Dak.	1	-	8	3	-	1	-	-	-	-	-	-
Nebr.	3	-	15	15	6	4	-	-	-	-	-	-
Kans.	2	4	13	41	4	9	-	-	-	-	-	-
S. ATLANTIC	101	73	589	515	356	277	-	1	1	3	4	6
Del.	-	-	1	1	-	-	-	-	-	-	-	1
Md.	27	21	116	127	59	55	-	-	-	-	-	1
D.C.	2	-	23	23	7	6	-	-	-	-	-	-
Va.	10	10	45	91	36	32	-	1	-	2	3	2
W. Va.	1	3	5	-	8	2	-	-	-	-	-	-
N.C.	16	10	46	33	69	76	-	-	-	-	-	-
S.C.	2	1	8	12	36	-	-	-	-	-	-	-
Ga.	20	18	152	114	41	57	-	-	-	-	-	1
Fla.	23	10	193	114	100	49	-	-	1	1	1	1
E.S. CENTRAL	37	23	173	151	146	151	-	-	-	-	-	-
Ky.	5	5	30	8	15	16	-	-	-	-	-	-
Tenn.	19	12	85	86	73	107	-	-	-	-	-	-
Ala.	11	5	32	32	34	28	-	-	-	-	-	-
Miss.	2	1	26	25	24	-	U	-	U	-	-	-
W.S. CENTRAL	23	24	502	1,266	155	388	-	1	-	2	3	-
Ark.	1	-	15	16	15	29	-	-	-	-	-	-
La.	5	11	36	12	47	10	-	-	-	-	-	-
Okla.	15	11	167	180	38	16	-	-	-	-	-	-
Tex.	2	2	284	1,058	55	333	-	1	-	2	3	-
MOUNTAIN	45	64	487	1,132	198	263	-	1	-	-	1	-
Mont.	1	-	7	16	8	3	-	-	-	-	-	-
Idaho	1	-	18	84	10	13	-	-	-	-	-	-
Wyo.	1	-	3	15	1	2	-	-	-	-	-	-
Colo.	5	12	91	86	32	35	-	1	-	-	1	-
N. Mex.	10	3	19	62	78	99	-	-	-	-	-	-
Ariz.	23	31	281	713	37	62	-	-	-	-	-	-
Utah	3	3	22	69	10	23	-	-	-	-	-	-
Nev.	1	15	46	87	22	26	-	-	-	-	-	-
PACIFIC	35	45	1,282	2,038	489	611	-	14	-	2	16	3
Wash.	-	1	92	329	18	42	-	-	-	-	-	-
Oreg.	14	23	91	159	29	66	-	8	-	-	8	-
Calif.	16	18	1,095	1,520	431	493	-	6	-	2	8	3
Alaska	4	1	3	5	7	4	-	-	-	-	-	-
Hawaii	1	2	1	25	4	6	-	-	-	-	-	-
Guam	-	-	-	-	-	1	U	-	U	-	-	-
P.R.	-	2	39	16	44	194	-	-	-	-	-	-
V.I.	U	U	U	U	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	-	-	1	-	28	U	-	U	-	-	-

N: Not notifiable U: Unavailable -: no reported cases

*Of 78 cases among children aged <5 years, serotype was reported for 31 and of those, 4 were type b.

†For imported measles, cases include only those resulting from importation from other countries.

TABLE III. (Cont'd.) Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending May 1, 1999, and May 2, 1998 (17th Week)

Reporting Area	Meningococcal Disease		Mumps			Pertussis			Rubella		
	Cum. 1999	Cum. 1998	1999	Cum. 1999	Cum. 1998	1999	Cum. 1999	Cum. 1998	1999	Cum. 1999	Cum. 1998
UNITED STATES	893	1,094	5	120	311	66	1,708	1,388	2	19	181
NEW ENGLAND	42	56	-	1	-	9	145	268	-	3	30
Maine	3	4	-	-	-	-	-	5	-	-	-
N.H.	-	1	-	1	-	9	30	21	-	-	-
Vt.	3	1	-	-	-	-	10	26	-	-	-
Mass.	28	24	-	-	-	-	97	210	-	3	6
R.I.	2	3	-	-	-	-	3	-	-	-	-
Conn.	6	23	-	-	-	-	5	6	-	-	24
MID. ATLANTIC	79	116	-	15	161	21	418	165	-	2	88
Upstate N.Y.	20	28	-	2	3	20	372	91	-	2	80
N.Y. City	19	14	-	3	153	-	10	9	-	-	4
N.J.	16	31	-	-	2	-	-	8	-	-	4
Pa.	24	43	-	10	3	1	36	57	-	-	-
E.N. CENTRAL	126	162	-	15	26	1	135	162	-	-	-
Ohio	60	56	-	6	11	1	93	53	-	-	-
Ind.	7	26	-	-	2	-	2	40	-	-	-
Ill.	40	46	-	3	3	-	22	12	-	-	-
Mich.	19	16	-	6	10	-	18	19	-	-	-
Wis.	-	18	-	-	-	-	-	38	-	-	-
W.N. CENTRAL	111	95	1	4	18	-	23	105	-	-	2
Minn.	26	16	-	-	9	-	-	58	-	-	-
Iowa	26	13	1	3	6	-	11	24	-	-	-
Mo.	40	40	-	1	2	-	9	9	-	-	1
N. Dak.	-	-	-	-	1	-	-	-	-	-	-
S. Dak.	5	5	-	-	-	-	2	4	-	-	-
Nebr.	4	4	-	-	-	-	1	4	-	-	-
Kans.	10	17	-	-	-	-	-	6	-	-	1
S. ATLANTIC	156	164	3	27	17	6	90	93	-	2	4
Del.	2	1	-	-	-	-	-	-	-	-	-
Md.	25	17	-	3	-	1	28	19	-	1	-
D.C.	1	-	-	1	-	-	-	1	-	-	-
Va.	20	18	1	8	4	-	12	6	-	-	-
W. Va.	2	5	-	-	-	-	1	1	-	-	-
N.C.	18	24	-	5	6	-	22	40	-	1	3
S.C.	19	28	-	2	3	1	8	10	-	-	-
Ga.	24	37	-	-	1	-	7	1	-	-	-
Fla.	45	34	2	8	3	4	12	15	-	-	1
E.S. CENTRAL	80	84	-	1	3	2	33	41	-	-	-
Ky.	23	15	-	-	-	1	3	17	-	-	-
Tenn.	27	31	-	-	-	1	21	11	-	-	-
Ala.	18	26	-	1	1	-	6	12	-	-	-
Miss.	12	12	U	-	2	U	3	1	U	-	-
W.S. CENTRAL	54	109	-	14	23	4	48	74	-	5	42
Ark.	14	15	-	-	-	-	5	11	-	-	-
La.	26	22	-	1	1	-	3	-	-	-	-
Okla.	12	21	-	1	-	-	2	6	-	-	-
Tex.	2	51	-	12	22	4	38	57	-	5	42
MOUNTAIN	70	66	-	8	13	1	183	241	2	5	5
Mont.	-	2	-	-	-	-	1	1	-	-	-
Idaho	7	3	-	-	1	-	85	86	-	-	-
Wyo.	2	3	-	-	1	-	2	7	-	-	-
Colo.	20	16	-	3	1	-	35	54	-	-	-
N. Mex.	8	10	N	N	N	-	13	50	-	-	1
Ariz.	24	22	-	-	4	-	21	23	2	5	1
Utah	4	6	-	4	1	1	24	12	-	-	2
Nev.	5	4	-	1	5	-	2	8	-	-	1
PACIFIC	175	242	1	35	50	22	633	239	-	2	10
Wash.	24	26	1	1	4	22	396	84	-	-	8
Oreg.	30	42	N	N	N	-	8	15	-	-	-
Calif.	114	169	-	28	31	-	223	136	-	2	1
Alaska	3	1	-	1	2	-	2	-	-	-	-
Hawaii	4	4	-	5	13	-	4	4	-	-	1
Guam	-	-	U	-	2	U	-	-	U	-	-
P.R.	2	2	-	-	1	-	-	2	-	-	-
V.I.	U	U	U	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	-	U	-	2	U	-	1	U	-	-

N: Not notifiable

U: Unavailable

-: no reported cases

**TABLE IV. Deaths in 122 U.S. cities,* week ending
May 1, 1999 (17th Week)**

Reporting Area	All Causes, By Age (Years)						P&J†	Total	Reporting Area	All Causes, By Age (Years)						P&J†	Total
	All Ages	>65	45-64	25-44	1-24	<1				All Ages	>65	45-64	25-44	1-24	<1		
NEW ENGLAND	604	443	105	31	12	13	45	S. ATLANTIC	1,106	747	210	94	26	26	71		
Boston, Mass.	180	122	34	12	6	6	11	Atlanta, Ga.	U	U	U	U	U	U	U		
Bridgeport, Conn.	51	42	6	1	1	1	1	Baltimore, Md.	178	106	43	24	2	3	19		
Cambridge, Mass.	9	8	1	-	-	-	-	Charlotte, N.C.	108	74	17	9	3	3	15		
Fall River, Mass.	22	20	2	-	-	-	2	Jacksonville, Fla.	128	84	30	9	2	3	3		
Hartford, Conn.	53	36	9	5	2	1	6	Miami, Fla.	122	76	21	19	4	2	1		
Lowell, Mass.	20	17	3	-	-	-	4	Norfolk, Va.	44	33	6	3	1	1	5		
Lynn, Mass.	12	9	2	1	-	-	-	Richmond, Va.	71	47	15	2	2	5	4		
New Bedford, Mass.	26	19	5	2	-	-	-	Savannah, Ga.	53	38	7	4	2	2	4		
New Haven, Conn.	37	24	7	3	-	3	2	St. Petersburg, Fla.	76	56	15	2	2	1	8		
Providence, R.I.	70	51	14	3	1	1	-	Tampa, Fla.	196	147	30	10	7	2	8		
Somerville, Mass.	10	8	1	-	1	-	1	Washington, D.C.	105	64	26	9	1	4	4		
Springfield, Mass.	34	25	7	1	-	1	6	Wilmington, Del.	25	22	-	3	-	-	-		
Waterbury, Conn.	17	14	2	-	1	-	-	E.S. CENTRAL	1,006	709	203	58	15	17	85		
Worcester, Mass.	63	48	12	3	-	-	12	Birmingham, Ala.	210	147	41	14	4	3	25		
MID. ATLANTIC	2,222	1,542	435	179	32	34	100	Chattanooga, Tenn.	82	61	13	5	3	-	11		
Albany, N.Y.	51	39	4	5	-	3	9	Knoxville, Tenn.	103	76	17	4	2	4	10		
Allentown, Pa.	U	U	U	U	U	U	U	Lexington, Ky.	83	68	10	3	-	2	11		
Buffalo, N.Y.	74	50	17	4	1	2	3	Memphis, Tenn.	231	141	61	16	5	5	14		
Camden, N.J.	26	19	6	1	-	-	3	Mobile, Ala.	100	79	14	6	-	1	-		
Elizabeth, N.J.	U	U	U	U	U	U	U	Montgomery, Ala.	88	68	14	5	1	-	10		
Erie, Pa.	51	40	8	3	-	-	6	Nashville, Tenn.	109	69	33	5	-	2	4		
Jersey City, N.J.	40	28	8	4	-	-	-	W.S. CENTRAL	1,525	980	334	131	44	36	110		
New York City, N.Y.	1,080	734	220	95	14	17	23	Austin, Tex.	87	56	15	12	3	1	8		
Newark, N.J.	59	32	16	7	1	3	4	Baton Rouge, La.	40	23	8	7	1	1	-		
Paterson, N.J.	30	18	9	3	-	-	-	Corpus Christi, Tex.	65	42	15	3	-	5	3		
Philadelphia, Pa.	416	277	90	37	10	2	27	Dallas, Tex.	214	124	59	16	11	4	5		
Pittsburgh, Pa.‡	59	48	7	1	-	3	2	El Paso, Tex.	75	51	13	8	2	1	6		
Reading, Pa.	31	26	3	1	-	1	3	Ft. Worth, Tex.	114	70	30	8	1	5	14		
Rochester, N.Y.	131	101	23	5	2	-	10	Houston, Tex.	355	202	92	43	12	6	31		
Schenectady, N.Y.	21	17	3	1	-	-	4	Little Rock, Ark.	56	37	14	1	2	2	1		
Scranton, Pa.	32	29	2	1	-	-	1	New Orleans, La.	76	50	17	5	3	1	4		
Syracuse, N.Y.	65	44	8	7	3	3	4	San Antonio, Tex.	237	171	38	20	7	1	16		
Trenton, N.J.	39	27	9	2	1	-	1	Shreveport, La.	78	60	10	2	2	4	15		
Utica, N.Y.	17	13	2	2	-	-	-	Tulsa, Okla.	128	94	23	6	-	5	7		
Yonkers, N.Y.	U	U	U	U	U	U	U	MOUNTAIN	872	597	166	72	20	16	64		
E.N. CENTRAL	2,251	1,544	434	153	47	68	168	Albuquerque, N.M.	105	81	14	6	3	1	4		
Akron, Ohio	52	41	7	1	-	3	1	Boise, Idaho	44	29	11	3	-	1	2		
Canton, Ohio	36	28	7	-	-	1	4	Colo. Springs, Colo.	48	33	11	2	-	2	4		
Chicago, Ill.	447	286	85	41	8	24	45	Denver, Colo.	118	73	19	14	5	6	12		
Cincinnati, Ohio	157	107	33	9	4	4	26	Las Vegas, Nev.	205	128	53	18	5	1	13		
Cleveland, Ohio	116	77	26	6	4	3	-	Ogden, Utah	21	14	5	2	-	-	3		
Columbus, Ohio	207	140	43	13	5	6	24	Phoenix, Ariz.	47	34	5	5	2	1	5		
Dayton, Ohio	145	104	32	7	-	2	11	Pueblo, Colo.	33	25	7	-	1	-	2		
Detroit, Mich.	200	104	59	21	9	7	9	Salt Lake City, Utah	104	72	17	12	3	-	10		
Evansville, Ind.	U	U	U	U	U	U	U	Tucson, Ariz.	147	108	24	10	1	4	9		
Fort Wayne, Ind.	66	53	8	-	4	-	3	PACIFIC	1,848	1,369	317	99	32	31	174		
Gary, Ind.	23	14	3	3	2	-	1	Berkeley, Calif.	16	12	3	1	-	-	3		
Grand Rapids, Mich.	53	41	6	3	-	3	3	Fresno, Calif.	165	139	15	7	4	-	27		
Indianapolis, Ind.	254	166	54	23	5	6	2	Glendale, Calif.	25	18	6	1	-	-	-		
Lansing, Mich.	53	41	7	4	-	1	3	Honolulu, Hawaii	75	60	9	4	1	1	4		
Milwaukee, Wis.	117	85	21	8	-	3	9	Long Beach, Calif.	83	63	10	4	2	4	13		
Peoria, Ill.	51	46	2	1	2	-	6	Los Angeles, Calif.	464	329	89	35	5	6	34		
Rockford, Ill.	60	47	8	4	1	-	10	Pasadena, Calif.	22	15	6	1	-	-	3		
South Bend, Ind.	62	49	5	5	1	2	4	Portland, Oreg.	188	136	33	9	3	7	14		
Toledo, Ohio	97	71	19	4	1	2	7	Sacramento, Calif.	166	122	32	5	3	4	21		
Youngstown, Ohio	55	44	9	-	1	1	-	San Diego, Calif.	151	111	29	8	3	-	10		
W.N. CENTRAL	591	403	108	42	13	25	46	San Francisco, Calif.	U	U	U	U	U	U	U		
Des Moines, Iowa	66	49	8	6	-	3	9	San Jose, Calif.	150	111	27	5	5	2	26		
Duluth, Minn.	34	27	7	-	-	-	2	Santa Cruz, Calif.	27	24	3	-	-	-	2		
Kansas City, Kans.	U	U	U	U	U	U	U	Seattle, Wash.	164	118	27	11	3	5	5		
Kansas City, Mo.	119	73	24	9	6	7	6	Spokane, Wash.	41	29	9	1	-	2	4		
Lincoln, Nebr.	40	28	6	3	1	2	4	Tacoma, Wash.	111	82	19	7	3	-	8		
Minneapolis, Minn.	120	88	23	6	1	2	16	TOTAL	12,025‡	8,334	2,312	859	241	266	863		
Omaha, Nebr.	113	79	16	12	2	4	6										
St. Louis, Mo.	99	59	24	6	3	7	3										
St. Paul, Minn.	U	U	U	U	U	U	U										
Wichita, Kans.	U	U	U	U	U	U	U										

U: Unavailable - : no reported cases

*Mortality data in this table are voluntarily reported from 122 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

†Pneumonia and influenza.

‡Because of changes in reporting methods in this Pennsylvania city, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

¶Total includes unknown ages.

*Public Health Computer Readiness — Continued***TABLE 2. Number of states not ready for year 2000 (Y2K) that plan to reach full readiness, by quarter — United States, 1999***

Functional area	Jan–Mar 1999	Apr–Jun 1999	Jul–Sept 1999	Oct–Dec 1999	Jan 2000 and later
Information systems supporting patient-care and/or disease-prevention services	5	5	9	1	
Biomedical devices with date-sensitive embedded microchips	3	3		1	
Laboratory equipment and associated systems with date-sensitive embedded microchips	4	5	4	2	
Health information systems	6	4	6	4	
Public health surveillance systems	5	6	4	3	
Electronic data exchanges with external sources/recipients	3	6	7	1	1
Information technology infrastructure	2	6	9	3	
Facilities, infrastructure systems, and/or devices with embedded microchips [†]	1	9	3		
Mission-critical management and administrative systems [§]	7	4	8	3	
Summary of readiness of local county, city, district, or other public sector public health agencies		2	4	1	
Develop contingency plan [¶]	5	7	2	1	

*Based on responses from 29 states.

[†]E.g., security systems, telecommunications, environmental controls, power supply, and elevators.

[§]E.g., financial management, billing, grants administration, and regulatory compliance.

[¶]Five state health agencies have no stated goal to have a contingency plan.

progress and identify vulnerable areas, CDC will repeat the state public health agency readiness assessment in June 1999.

Reference

1. President's Council on Year 2000 Conversion. Welcome to President's Council on Year 2000 Conversion. Available at <http://www.y2k/gov>. Accessed May 3, 1999.

**Contributors to the Production of the *MMWR* (Weekly)
Weekly Notifiable Disease Morbidity Data and 122 Cities Mortality Data**

Samuel L. Groseclose, D.V.M., M.P.H.

State Support Team

Robert Fagan
Jose Aponte
Gerald Jones
David Nitschke
Carol A. Worsham

CDC Operations Team

Carol M. Knowles
Deborah A. Adams
Willie J. Anderson
Patsy A. Hall
Amy K. Henion

The *Morbidity and Mortality Weekly Report (MMWR)* Series is prepared by the Centers for Disease Control and Prevention (CDC) and is available free of charge in electronic format and on a paid subscription basis for paper copy. To receive an electronic copy on Friday of each week, send an e-mail message to listserv@listserv.cdc.gov. The body content should read *SUBscribe mmwr-toc*. Electronic copy also is available from CDC's World-Wide Web server at <http://www.cdc.gov/> or from CDC's file transfer protocol server at <ftp.cdc.gov>. To subscribe for paper copy, contact Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402; telephone (202) 512-1800.

Data in the weekly *MMWR* are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the following Friday. Address inquiries about the *MMWR* Series, including material to be considered for publication, to: Editor, *MMWR* Series, Mailstop C-08, CDC, 1600 Clifton Rd., N.E., Atlanta, GA 30333; telephone (888) 232-3228.

All material in the *MMWR* Series is in the public domain and may be used and reprinted without permission; citation as to source, however, is appreciated.

Director, Centers for Disease Control
and Prevention
Jeffrey P. Koplan, M.D., M.P.H.
Deputy Director, Centers for Disease
Control and Prevention
Claire V. Broome, M.D.

Director, Epidemiology Program Office
Stephen B. Thacker, M.D., M.Sc.
Editor, *MMWR* Series
John W. Ward, M.D.
Managing Editor,
MMWR (weekly)
Karen L. Foster, M.A.

Writers-Editors,
MMWR (weekly)
Jill Crane
David C. Johnson
Teresa F. Rutledge
Caran R. Wilbanks
Desktop Publishing
Morie M. Higgins
Peter M. Jenkins