



- 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.

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

^{*}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.

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 \geq 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

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

	Discharges	(thou	sands)	% of all arthritis	Days of care	tho	usands)	% of all arthritis	Average length of
Characteristic	No. (95% CI*)		discharges	No.	(95	% CI)	days of care	•	
All conditions Arthritis and other rheu-	30,914 (±1		740)	_	157,458	(±10,523)		_	5.1
matic conditions Age (yrs)	744	(±	88)	100.0	3,835	(±	714)	100.0	5.2
<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.

^{*}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 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

	Phy	ysician's of	fice	Outpat	tient depa	rtment	Emerg	ency depa	rtment	Combined settings		
	Visits		% of all	Vis	sits	% of all	Vis	sits	% of all	Vis	sits	% of all
	No. (millions)	(95% CI*)	arthritis	No. (millions)	(95% CI)	arthritis visits	No. (millions)	(95% CI)	arthritis visits	No. (millions)	(95% CI)	arthritis visits
All visits Arthritis and other rheu-	787	(±56)	_	77	(±14)	_	95	(± 8)	_	959	(±59)	_
matic conditions Age (yrs)	39	(± 7)	100	3	(± 0.8)	100	2	(± 0.3)	100	44	(± 7)	100
<15	t	_	†	t		t	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	$(\pm \ 0.2)$	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

 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 surveil-lance 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 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 electroscopy 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

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

Editorial Note: Despite strong evidence that regular mammography screening reduces breast cancer mortality, one fourth of women aged \geq 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 \geq 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

[†]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.

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.
- 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		33,5	·
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	000/	000/	_
microchips [†]	92%	88%	5
Mission-critical management and administrative systems§	96%	74%	0
Summary of readiness of local county, city, district, or other pub-		/	
lic sector public health agencies	85%	66%	14

^{*}Based on responses from 29 states.

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.

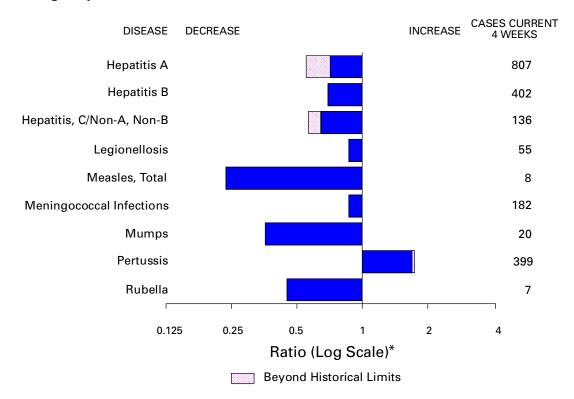
The President's Council on Year 2000 Conversion reports that the nation's major infrastructure services (e.g., telecommunications, electric power production and distribution, banking and other financial services, and transportation), will be ready and that no major service disruptions will occur (1). 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

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

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

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

^{-:} no reported cases

^{*}Not notifiable in all states.

^{*}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)

			, ,		Escherichia -			-		
					coli O	157:H7		_		atitis
	Cum.	DS Cum.	Chla Cum.	mydia Cum.	NETSS [†] Cum.	PHLIS [§] Cum.	Gond Cum.	orrhea Cum.	C/N/ Cum.	A,NB Cum.
Reporting Area	1999*	1998	1999	1998	1999	1999	1999	1998	1999	1998
UNITED STATES	14,890	15,998	165,825	184,213	366	168	89,283	107,480	784	1,498
NEW ENGLAND Maine	779 15	483 10	6,352 193	6,842 295	50 4	35	2,033 15	1,871 12	65	27
N.H.	23	12	317	331	3	2	22	31	-	-
Vt. Mass.	5 500	10 206	162 2,973	123 2,800	6 22	1 19	17 885	8 678	2 62	2 25
R.I.	52	42	738	816	1	1	193	112	1	-
Conn. MID. ATLANTIC	184 3,612	203 4,629	1,969 24,509	2,477 22,695	14 25	12 2	901 12,482	1,030 12,727	- 54	- 118
Upstate N.Y.	406	547	N	N	22	-	1,480	2,272	35	101
N.Y. City N.J.	1,894 765	2,654 820	12,399 3,522	11,613 3,751	3	1 1	5,267 1,738	5,083 2,253	-	-
Pa.	547	608	8,587	7,331	Ň	-	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 Ind.	183 147	247 271	6,992	8,803	28 5	8 8	4,236 726	5,359 2,037	-	5 4
III. Mich.	505 215	487 217	9,205 6,785	7,302 7,213	11 11	7 5	6,563 4,578	5,995 5,346	5 169	20 140
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. Iowa	44 35	48 14	2,006 862	2,334 1,390	23 8	14 2	746 200	788 408	-	3
Mo. N. Dak.	102 4	138 4	102	4,073 331	9 3	4	- 7	2,923 31	38	4
S. Dak.	12	7	540	554	1	1	51	90	-	-
Nebr. Kans.	26 62	31 39	852 1,489	963 1,938	27 7	-	344 587	375 824	2	2
S. ATLANTIC	4,155	4,065	36,488	36,262	44	17	26,785	28,960	71	37
Del. Md.	50 467	44 488	938 2,693	841 2,693	2 2	-	583 2,495	453 2,943	- 21	3
D.C.	160	339	N	N	-	-	906	1,132	-	-
Va. W. Va.	231 24	285 34	4,279 727	3,085 1,624	11 1	4 1	2,788 170	2,134 529	7 11	1 3
N.C.	269	271	7,741	7,364	8	6	6,656	6,292	-	7
S.C. Ga.	402 583	275 504	6,444 5,479	6,186 8,211	6 2	1 -	3,313 4,061	3,995 6,608	12 1	8
Fla.	1,969	1,825	8,187	6,258	12	5	5,813	4,874	19	15
E.S. CENTRAL Ky.	634 104	586 85	13,768 2,541	12,802 2,001	28 11	7	10,934 1,158	12,043 1,134	75 6	46 7
Tenn.	286	180	4,638	4,148	10	3	3,587	3,505	33	36
Ala. Miss.	112 132	183 138	3,660 2,929	3,317 3,336	4 3	3 1	3,421 2,768	4,167 3,237	1 35	3
W.S. CENTRAL	1,553	1,949	17,770	27,380	11	7	10,608	16,263	89	326
Ark. La.	56 162	71 330	1,806 5,672	1,174 4,049	3 3	2 3	847 4,533	1,337 3,424	1 77	3 1
Okla.	46	107	2,615	3,317	4	2	1,343	1,818	2	-
Tex. MOUNTAIN	1,289 545	1,441 513	7,677 9,197	18,840 9,889	1 28	- 14	3,885 2.434	9,684 2,592	9 56	322 189
Mont.	4	12	431	352	1	-	16	20	4	4
Idaho Wyo.	8 3	12 1	501 270	624 222	1 1	1 3	26 10	51 11	4 17	76 43
Colo.	103	91	2,310	2,586	10	4	671	769	11	10
N. Mex. Ariz.	21 274	76 198	1,172 3,021	1,117 3,447	2 7	3	209 1,087	201 1,186	4 12	29 1
Utah	54 78	44 79	550 942	722 819	6	2 1	56 359	74 280	2 2	14 12
Nev. 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. Calif.	50 2,016	64 1,928	1,849 19,826	23,935	14 22	10 6	253 4,110	6,232	4 152	8 519
Alaska Hawaii	6 33	11 36	643 767	666 754	-	1	119 92	102 146	-	1 41
Guam	33 1	-	-	754 107	N	-	3∠ -	7	-	41
P.R.	493	661	U	U	4	U	102	130	-	-
V.I. Amer. Samoa	13 -	15 -	N U	N U	N N	U U	U U	U U	U U	U U
C.N.M.I.	-	-	Ň	Ň	N	Ū	-	14	-	

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)

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

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

N: Not notifiable

U: Unavailable

^{-:} no reported cases

 $^{^*\}raisebox{-0.05ex}{$\circ$}$ 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)

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

N: Not notifiable

U: Unavailable

-: no reported cases

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

			5	- A C		, .,		7 (17 til VVCCK)		AII 0		. A	· · ·		
Reporting Area		All Cau	ses, By	/ Age (Y	ears)		P&I [†] Total	Reporting Area				Age (Y			P&I [†] Total
	All Ages	>65	45-64	25-44	1-24	<1	iotai	noporting / nou	All Ages	>65	45-64	25-44	1-24	<1	Total
NEW ENGLAND Boston, Mass. Bridgeport, Conn. Cambridge, Mass. Fall River, Mass. Hartford, Conn. Lowell, Mass. Lynn, Mass. New Bedford, Mass New Bedford, Mass New Haven, Conn. Providence, R.I. Somerville, Mass. Springfield, Mass. Waterbury, Conn.	604 180 51 9 22 53 20 12 s. 26 37 70 10 34 17	443 122 42 8 20 36 17 9 19 24 51 8 25	105 34 6 1 2 9 3 2 5 7 14 1 7 2	31 12 1 - - 5 - 1 2 3 3	12 6 1 - - 2 - - 1 1 1	13 6 1 - 1 - 3 1 -	45 11 1 2 6 4 - 2	S. ATLANTIC Atlanta, Ga. Baltimore, Md. Charlotte, N.C. Jacksonville, Fla. Miami, Fla. Norfolk, Va. Richmond, Va. Savannah, Ga. St. Petersburg, Fla. Tampa, Fla. Washington, D.C. Wilmington, Del.	196 105 25	747 U 106 74 84 76 33 47 38 56 147 62	210 U 43 17 30 21 6 15 7 15 30 26	94 U 24 9 9 19 3 2 4 2 10 9 3	26 U 2 3 2 4 1 2 2 2 7 1	26 U 3 3 3 2 1 5 2 1 2 4	71 U 19 15 3 1 5 4 4 8 8
Worcester, Mass. MID. ATLANTIC Albany, N.Y. Allentown, Pa. Buffalo, N.Y. Camden, N.J. Elizabeth, N.J. Erie, Pa. Jersey City, N.J. New York City, N.Y. Newark, N.J. Paterson, N.J.	63 2,222 51 U 74 26 U 51 40 1,080 59 30	48 1,542 39 U 50 19 U 40 28 734 32 18	12 435 4 U 17 6 U 8 8 220 16 9	3 179 5 U 4 1 U 3 4 95 7	32 U 1 - U - 14 1	34 3 U 2 - U - 17 3	12 100 9 U 3 3 U 6 - 23 4	E.S. CENTRAL Birmingham, Ala. Chattanooga, Tenn. Knoxville, Tenn. Lexington, Ky. Memphis, Tenn. Mobile, Ala. Montgomery, Ala. Nashville, Tenn. W.S. CENTRAL Austin, Tex. Baton Rouge, La.	103 83 231 100 88 109 1,525 87 40	709 147 61 76 68 141 79 68 69 980 56 23	203 41 13 17 10 61 14 14 33 334 15	58 14 5 4 3 16 6 5 5 131 12 7	15 4 3 2 5 1 - 44 3 1	17 3 4 2 5 1 2 36 1	85 25 11 10 11 14 - 10 4 110 8
Philadelphia, Pa. Pittsburgh, Pa.§ Reading, Pa. Rochester, N.Y. Schenectady, N.Y. Scranton, Pa. Syracuse, N.Y. Trenton, N.J. Utica, N.Y. Yonkers, N.Y.	416 59 31 131 21 32 65 39 17 U	277 48 26 101 17 29 44 27 13 U	U	37 1 5 1 7 2 U	10 - 2 - 3 1 - U	2 3 1 - - 3 - - U	27 2 3 10 4 1 4 1	Corpus Christi, Tex. Dallas, Tex. El Paso, Tex. Ft. Worth, Tex. Houston, Tex. Little Rock, Ark. New Orleans, La. San Antonio, Tex. Shreveport, La. Tulsa, Okla. MOUNTAIN	65 214 75 114 355 56 76 237 78 128	42 124 51 70 202 37 50 171 60 94	15 59 13 30 92 14 17 38 10 23	3 16 8 43 1 5 20 2 6	11 2 1 12 2 3 7 2	5 4 1 5 6 2 1 1 4 5	3 5 6 14 31 1 4 16 15 7
E.N. CENTRAL Akron, Ohio Canton, Ohio Chicago, III. Cincinnati, Ohio Cleveland, Ohio Columbus, Ohio Dayton, Ohio Detroit, Mich. Evansville, Ind. Fort Wayne, Ind.	2,251 52 36 447 157 116 207 145 200 U	1,544 41 28 286 107 77 140 104 104 U 53	7 7 85 33 26 43 32 59 U 8	153 1 - 41 9 6 13 7 21 U	47 - 8 4 4 5 - 9 U	68 3 1 24 4 3 6 2 7 U	168 1 4 45 26 24 11 9 U	Albuquerque, N.M. Boise, Idaho Colo. Springs, Colo Denver, Colo. Las Vegas, Nev. Ogden, Utah Phoenix, Ariz. Pueblo, Colo. Salt Lake City, Utah Tucson, Ariz.	105 44 . 48 118 205 21 47 33	81 29 33 73 128 14 34 25 72	14 11 11 19 53 5 5 7 17 24	14 18 2 5 12	3 - 5 5 - 2 1 3 1	1 1 2 6 1 - 1 - 4	4 2 4 12 13 3 5 2 10 9
Gary, Ind. Grand Rapids, Mich Indianapolis, Ind. Lansing, Mich. Milwaukee, Wis. Peoria, Ill. Rockford, Ill. South Bend, Ind. Toledo, Ohio Youngstown, Ohio	23 1. 53 254 53 117 51 60 62 97 55	14 41 166 41 85 46 47 49 71	3 6 54 7 21 2 8 5 19 9	3 23 4 8 1 4 5 4	2 5 - 2 1 1 1	3 6 1 3 - 2 2 1	1 3 3 9 6 10 4 7	PACIFIC Berkeley, Calif. Fresno, Calif. Glendale, Calif. Honolulu, Hawaii Long Beach, Calif. Los Angeles, Calif. Pasadena, Calif. Portland, Oreg. Sacramento, Calif.	1,848 16 165 25 75 83 464 22 188 166	1,369 12 139 18 60 63 329 15 136 122	317 3 15 6 9 10 89 6 33 32 29	99 1 7 1 4 4 35 1 9 5	32 4 1 2 5 3 3	31 - - 1 4 6 - 7 4	174 3 27 4 13 34 3 14 21
W.N. CENTRAL Des Moines, lowa Duluth, Minn. Kansas City, Kans. Kansas City, Mo. Lincoln, Nebr. Minneapolis, Minn. Omaha, Nebr. St. Louis, Mo. St. Paul, Minn. Wichita, Kans.	591 66 34 U 119 40 120 113 99 U	403 49 27 U 73 28 88 79 59 U	8 7 U 24 6	42 6 · U 9 3 6 12 6 U U	13 - - U 6 1 1 2 3 U U	25 3 - U 7 2 2 4 7 U	46 9 2 0 6 4 16 6 3 0 0	San Diego, Ćalif. San Francisco, Calif. San Jose, Calif. Santa Cruz, Calif. Seattle, Wash. Spokane, Wash. Tacoma, Wash.	151	111 U 111 24 118 29 82	U 27 3 27 9 19	8 U 5 - 11 1 7 859	3 U 5 - 3 - 3 241	U 2 5 2 -	10 U 26 2 5 4 8 8

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*

	Jan-Mar	Apr–Jun	Jul-Sept	Oct-Dec	Jan 2000
Functional area	1999	1999	1999	1999	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	4	_	4	•	
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	1	9	3		
microchips†	1	9	3		
Mission-critical management and	7	4	8	3	
administrative systems§	,	4	0	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	
pevelop contingency plan	Ü	,		1	

^{*}Based on responses from 29 states.

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.

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[†]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.

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