Sickle cell disease (SCD) is a common single-gene disorder that affects three of every 1000 black newborns and approximately 50,000 persons in the United States.1 Children affected with SCD are at increased risk for severe morbidity (e.g., severe hemolytic anemia, splenic dysfunction, pain crises, and bacterial infections) and mortality, especially during the first 3 years of life.1,2 In 1993, California, Illinois, and New York collectively accounted for approximately 20% of all births to blacks. All three states offer universal newborn screening for hemoglobinopathies. To assess the effectiveness of newborn screening programs for SCD and for receipt of and compliance with early medical interventions (e.g., penicillin prophylaxis and pneumococcal vaccination and other vaccination patterns), a 3-year collaborative follow-up study was conducted from 1995 through 1998 in California, Illinois, and New York.3 This report summarizes the results of this study, which demonstrate the difficulty in retrospectively finding children who were screened at birth so that data for evaluating program effectiveness can be assessed.

The study comprised children born in 1992 and 1993 and in whom SCD was diagnosed during 1992-1993. Follow-up information about these children was ascertained through complementary surveys administered to parents and physicians of affected children. State health departments administered physician surveys, which were mailed to the child's last known provider. Parental surveys were administered by Battelle/Survey Research Associates, Inc., which conducted telephone interviews and, along with the respective health departments, made repeated attempts to locate the children.

During 1992-1993, SCD was diagnosed in 1042 children in California (265 cases), Illinois (254), and New York (523). Fourteen children (six in California, three in Illinois, and five in New York) died before the study began. Completed physician surveys were returned for 752 (72%) of the children (144 in California, 254 in Illinois, and 354 in New York). Parental surveys were completed for 252 (24%) children (87 in California, 52 in Illinois, and 113 in New York). When data from both surveys were merged, physician and parental surveys were completed for 184 (18%) children.

Among physician respondents, 575 (76%) reported providing antibiotic (penicillin) prophylaxis to their SCD patients; 253 (44%) patients complied with the prophylaxis antibiotic regimen. One hundred eighty-nine (25%) patients received pneumococcal vaccine, and 179 (24%) received at least the first dose of Haemophilus influenzae type b vaccine (Hib).

U.S. Department of Health & Human Services
Among parental respondents, 111 (44%) were informed of SCD services available for their children, and 68 (27%) had used these services. Parents reported that 234 (93%) of their children with SCD regularly received penicillin prophylaxis; 189 (75%) received pneumococcal vaccine, and 164 (65%) received a full series of Hib.

Merged results from physician and parental surveys provided discrepant results regarding provision of and compliance with standard medical interventions for children with SCD. Although provision of penicillin prophylaxis was high in both surveys, physician-reported compliance for their patients' medical intervention was low.

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mococcal vaccination) and prophylactic administration of penicillin.5-7,9

The findings in this report are subject to at least three limitations. First, because of the poor contact rate, especially for parental surveys, results of this analysis are limited in generalizability and reflect the difficulty of ascertaining retrospective follow-up. Second, discrepant compliance rates should be interpreted with caution. The high compliance rate reported by parents was derived from a selected population (e.g., parents who were contacted successfully). However, the low compliance rate recorded by providers needs further investigation to ensure that they followed the children past age 2 years when the interventions actually were administered. Finally, ascertaining information retrospectively introduces possible recall bias.

A model program that allows program evaluation is the Cystic Fibrosis Foundation (CFF) Patient Registry, in which children diagnosed with cystic fibrosis are registered at health-care centers nationwide. The CFF Patient Registry prospectively collects annual epidemiologic, clinical, and laboratory data that can be used readily to assess the effectiveness of interventions and cystic fibrosis programs. SCD and other disorders identified by newborn screening would benefit from prospective evaluations of data related to morbidity, mortality, and receipt of preventive services. As the role of public health genetics programs expands beyond newborn screening, these types of long-term outcome data will be essential for developing effective programs and policies.

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*National Sickle Cell Anemia Control Act of 1972 (Public law no. 92-294).

State-Specific Cholesterol Screening Trends—United States, 1991-1999

MMWR. 2000;49:33:750-755
1 table, 1 figure omitted

HIGH BLOOD CHOLESTEROL (HBC) increases the risk for heart disease, the leading cause of death in the United States. To reduce the prevalence of HBC in the United States, the National Heart, Lung, and Blood Institute initiated the National Cholesterol Education Program1 in 1985 and recommended that all adults aged ≥20 years have their cholesterol levels checked at least once every 5 years. One of the national health objectives for 2000 was to increase to 73% the proportion of adults aged ≥20 years screened for HBC during the preceding 5 years (objective 15.14).2 This objective was revised for 2010 to recommend that 80% of adults in this age group be screened during the preceding 5 years.3 To monitor progress during the 1990s and to determine whether the 2000 objective was attained, data from CDC’s Behavioral Risk Factor Surveillance System (BRFSS) were used to examine the state-specific trends in cholesterol screening from 1991 through 1999. This report summarizes the results of this analysis and provides a projected estimate of the 2010 screening rates for HBC in each state. The findings indicate that few states attained the 2000 objective and that more emphasis on cholesterol screening will be needed to attain the 2010 objective.

BRFSS is a random-digit-dialed telephone survey of the noninstitutionalized U.S. population aged ≥18 years. For this study, BRFSS data from 1991, 1993, 1995, 1997, and 1999 were analyzed for 563,742 persons aged ≥20 years from 50 states and the District of Columbia (DC). Survey participants were asked whether they had ever had their blood cholesterol checked and, if so, when they had last had it checked. Persons who reported that they had been screened during the preceding 5 years were classified as having been screened for HBC. Data were weighted to account for the age, race, and sex distribution in each state. SUDAAN 7.0 was used to account for the complex sampling design and to achieve accurate variance estimates.

A state-specific method and an aggregate method were used to project the prevalence of cholesterol screening during 2010. The state-specific method was limited to DC and the 47 states that participated in BRFSS from 1991 through 1999; for each state, the 9-year change in the percentage of adults screened for HBC during 1991-1999 was added to that state’s 1999 value to project the 2010 screening rate. The aggregate method added the median 9-year change in cholesterol screening among all states combined from 1991 through 1999 to the state-specific 1999 cholesterol screening value for each of the 50 states and DC.

In the 47 states and DC that participated in BRFSS from 1991 through 1999, the proportion of adults screened for HBC increased from 67.3% in 1991 to 70.8% in 1999. The estimated state-specific cholesterol screening rate increased for DC and 40 states, ranging from a 0.4% increase in Idaho to an 11.6% increase in Arizona (median: 3.6%). For seven states, the screening rate declined during 1991-1999. DC (80%) and nine states (Arizona [76%],...
Connecticut [76%], Delaware [75%], Florida [76%], Maryland [77%], Massachusetts [77%], New Jersey [76%], North Carolina [75%], and Rhode Island [76%]) attained the 2000 objective in 1999.

On the basis of state-specific increases, the projected 2010 screening rates ranged from 51.5% (Minnesota) to 91.7% (DC), and projected screening rates for seven states and DC were greater than the 2010 objective of 80%. On the basis of a median increase of 3.6%, the projected screening rates ranged from 64.0% (Minnesota) to 84.0% (DC), and projected screening rates for five states and DC are greater than the 2010 objective.

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CDC Editorial Note: The findings in this report indicate that the overall percentage of U.S. adults who received cholesterol screening during the 5 years preceding the survey increased during the 1990s. However, these increases were moderate, and most states did not attain the 2000 health objective.

Data from the 1988-1991 BRFFS projected that 31 of 47 states (Kansas, Nevada, and Wyoming were excluded) and DC would have cholesterol screening rates greater than the 2000 objective. However, this report indicates that nine of 30 states and DC attained a cholesterol screening rate of ≥75% in 1999. In addition, 14 states had at least a 10% difference between the 2010 objective of 80% and the 2010 projected screening rates using the state-specific method. This finding suggests that these states will need to substantially increase cholesterol screening rates to attain the 2010 objective.

The trend of decreasing cholesterol screening rates in seven states is of particular concern. In the 1988-1991 BRFFS analysis, all states had increases in cholesterol screening rates. Changes in the sampling frame or weighting protocol within a state during the 9 years may have contributed to the decline. However, response rates did not appear to explain the decreases, and changes in the questionnaire would be expected to affect all states rather than a select few. Other factors that may be associated with declining cholesterol screening rates within a community include lower perception of the risk for heart disease and the protective effect of reducing cholesterol levels, lack of availability of quality health care, and fewer socioeconomic resources. The nine states that achieved the 2000 objective in 1999 and Arizona, Massachusetts, and North Carolina participate in CDC’s WISEWOMAN (Well-Integrated Screening and Evaluation for Women Across the Nation) demonstration program, which provides cholesterol screening and other services to some participants in the National Breast and Cervical Cancer Early Detection program. In addition, several local health departments in Connecticut conducted cholesterol screening during the 1990s under block grant funding, and four Healthy Heart program initiatives were funded in New Jersey during 1990-1996 (M. Adams, Connecticut, G. Boeselager, New Jersey, BRFFS coordinators, personal communication, 2000).

The findings in this report are subject to at least two limitations. First, because BRFFS is telephone-based, persons of low socioeconomic status are less likely to have a telephone and may not have been included. Second, data are self-reported. As a result, some participants may not have been aware they were screened for elevated cholesterol.

HBC is a major modifiable risk factor for heart disease. A 10% decrease in cholesterol levels may result in an estimated 30% reduction in the incidence of coronary heart disease. Cholesterol screening is an important step in reducing the prevalence of elevated cholesterol levels and serves several purposes including (1) assessing persons with heart disease risk; (2) identifying persons who may achieve lower cholesterol levels through dietary modification, physical activity, weight control, or drug treatment; and (3) heightening public awareness and reinforcing educational messages. Substantial progress has been made in lowering cholesterol levels since the mid-1980s; however, the findings of this report suggest that increased emphasis on cholesterol screening is necessary if states are to achieve the 2010 objective.

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8 available

Publication of Surgeon General’s Report on Smoking and Health

MMWR. 2000;49:718,727

The Surgeon General’s Report Reducing Tobacco Use was released on August 9, 2000. This report is the first in the series to offer a composite review of the various methods used to reduce and prevent tobacco use.

The six major conclusions of the report are:

1. Efforts to prevent the onset or continuance of tobacco use face the pervasive, countervailing influence of tobacco promotion by the tobacco industry, a promotion that takes place despite overwhelming evidence of adverse health effects from tobacco use.

2. The available approaches to reducing tobacco use-educational, clini-
funded by excise taxes on tobacco products. Prevention of tobacco use in the United States as spermicides (N-9). \(^1\) N-9 products are licensed for use in the United States as spermicides (N-9). \(^1\) N-9 products are licensed for use in the United States as spermicides (N-9).  

**Approaches with the largest span of impact** (economic, regulatory, and comprehensive) are likely to have the greatest long-term population impact. Those with a smaller span of impact (educational and clinical) are of greater importance in helping persons resist or abandon the use of tobacco.

4. Each of the modalities reviewed provides evidence of effectiveness.

- Educational strategies, conducted in conjunction with community- and media-based activities, can postpone or prevent smoking onset in 20% to 40% of adolescents.
- Pharmacologic treatment of nicotine addiction, combined with behavioral support, will enable 20% to 25% of users to remain abstinent at 1 year posttreatment. Even less intense measures, such as physicians advising their patients to quit smoking, can produce cessation proportions of 5% to 10%.
- Regulation of advertising and promotion, particularly that directed at young persons, is very likely to reduce both prevalence and uptake of smoking.
- Clean air regulations and restriction of minors’ access to tobacco products contribute to a changing social norm with regard to smoking and may influence prevalence directly.
- An optimal level of excise taxation on tobacco products will reduce the prevalence of smoking, the consumption of tobacco, and the long-term health consequences of tobacco use.

5. The impact of these various efforts, as measured with a variety of techniques, is likely to be underestimated because of the synergistic effect of these modalities. The potential for combined effects underscores the need for comprehensive approaches.

6. State tobacco control programs, funded by excise taxes on tobacco products and settlements with the tobacco industry, have produced early, encouraging evidence of the efficacy of the comprehensive approach to reducing tobacco use.

Additional information about the report or a free copy of the executive summary is available from the CDC’s Office on Smoking and Health, National Center for Chronic Disease Preven-

## CDC Statement on Study Results of Product Containing Nonoxynol-9

**MMWR. 2000;49:717-718**  
**DURING THE XIII INTERNATIONAL AIDS CONFERENCE HELD IN DURBAN, SOUTH AFRICA, JULY 9-14, 2000, RESEARCHERS FROM THE JOINT UNITED NATIONS PROGRAM ON AIDS (UNAIDS) PRESENTED RESULTS OF A STUDY OF A PRODUCT, COL-1492, \(^*\) WHICH CONTAINS NONOXYNOL-9 (N-9). \(^1\)** N-9 products are licensed for use in the United States as spermicides and are effective in preventing pregnancy, particularly when used with a diaphragm. The study examined the use of COL-1492 as a potential candidate microbicide, or topical compound to prevent the transmission of human immunodeficiency virus (HIV) and sexually transmitted diseases (STDs). The study found that N-9 did not protect against HIV infection and may have caused more transmission. The women who used N-9 gel became infected with HIV at approximately a 50% higher rate than women who used the placebo gel.

CDC has released a “Dear Colleague” letter that summarizes the findings and implications of the UNAIDS study. The letter is available on the World-Wide Web, http://www.cdc.gov/hiv; a hard copy is available from the National Prevention Information Network, telephone (800) 458-5231. Future consultations will be held to re-evaluate guidelines for HIV, STDs, and pregnancy prevention in populations at high risk for HIV infection. A detailed scientific report will be released on the Web when additional findings are available.

## Erratum: Vol 49, No. 29 (JAMA. 2000;284:953)

**MMWR. 2000;49:696**  
**IN THE NOTICE TO READERS “VOLUNTARY RECALL OF IMOVAX® RABIES I. D. (Rabies Vaccine) Used for Pre-Exposure Prophylaxis,” on page 671, an incorrect lot number was given. The involved lot should have been listed as P0313-3; lots P0030-2 and N1204-2 are being recalled as a precautionary measure.