tis public health experts, states, and health officials, CDC began to focus on doctor-diagnosed arthritis to estimate population burden starting in 2002 and to report possible arthritis separately. The shift to using doctor-diagnosed arthritis is consistent with the approach used by other programs (e.g., asthma surveillance) to estimate burden.7

The findings in this report are subject to at least three limitations. First, the estimates use self-reported data that were not confirmed by a physician. Second, BRFSS is a telephone survey and does not include persons without telephone service or those in the military or in institutions. Finally, the median response rate for the survey was 58.3%; however, the distribution of demographic characteristics in the BRFSS sample was similar to the distribution based on U.S. census data (i.e., by sex, age, and race/ethnicity).

The CDC Arthritis Program funds programs in 36 states that rely on BRFSS data to monitor the burden of arthritis and to target programmatic interventions. BRFSS and the National Health Interview Survey (NHIS) have used identical arthritis questions since 2002 to define doctor-diagnosed arthritis and possible arthritis. To maintain consistency and allow comparison, states should use doctor-diagnosed arthritis to define the burden of arthritis when reporting prevalence for 2002 and beyond for BRFSS and NHIS data. Efforts are under way to better characterize persons with possible arthritis and to identify the best approach to incorporate them into measuring the burden of arthritis.

Evidence-based intervention programs (e.g., the Arthritis Foundation’s People with Arthritis Can Exercise [PACE] or aquatics programs) and self-management education programs (e.g., the Arthritis Self-Help Course, which has helped persons with arthritis and joint symptoms experience less pain and reduce the number of clinical visits)8 should continue to be offered to persons with doctor-diagnosed arthritis; persons with possible arthritis also might benefit. Additional information about these programs is available at http://www.arthritis.org/events/getinvolved/programservices.

Acknowledgment

This report is based on data contributed by state BRFSS coordinators and arthritis program contacts.

REFERENCES

8 available

Update: Direct and Indirect Costs of Arthritis and Other Rheumatic Conditions—United States, 1997

MMWR. 2004;53:388-389

1 table omitted

The medical and societal impact of arthritis and other rheumatic conditions (AORC) has been characterized with respect to disability,1 ambulatory care,2 hospitalization,3 and economic burden.4,5 CDC’s estimates of the national and state-specific costs of AORC in the United States in 1997 have been published previously.6 However, CDC has re-estimated indirect costs by enhancing the statistical methods. This report summarizes the results of that analysis, which indicated that indirect costs were $30.1 billion less than previously estimated. The total cost of AORC in the United States in 1997 was $86.2 billion (including $51.1 billion in direct costs and $35.1 billion in indirect costs), approximately 1% of the U.S. gross domestic product. Total costs attributable to AORC by state ranged from $121 million in Wyoming to $8.4 billion in California. Although indirect costs were lower than estimated previously, costs for arthritis remain high and underscore the need for better interventions to reduce the economic burden of arthritis.

Data from the 1997 Medical Expenditure Panel Survey and 2002 Behavioral Risk Factor Surveillance System were used to derive estimated costs; these data also were used in the previous report.4 In this analysis, direct costs were medical-care expenditures, and indirect costs were lost earnings attributable to AORC. A total of 22,435 respondents aged ≥18 years had complete data for all covariates. As with the previous study, a series of two- and four-stage Duan econometric regression models7 were used to derive individual-level direct and indirect cost estimates. Direct cost models adjusted for six sociodemographic factors (i.e., categorized age [18-44 years [referent group], 45-64 years, and ≥65 years], sex, race, Hispanic ethnicity, marital status, and education level), health insurance status, and nine of the most costly comorbidities (i.e., hypertension, other forms of heart disease, pulmonary conditions, stroke, other neurologic conditions, diabetes, cancer, mental illness, and nonarthritis musculoskeletal conditions). Indirect costs also were estimated by using the Duan two- and four-stage models with adjustments for the same sociodemographic and comorbidity variables as used for the direct cost estimates. However, the indirect models did not include health insurance. Two modifications were made to the original indirect models. First, age was included in the updated model as a categorical rather than a continuous variable (using the age groups 18-34 years [referent group], 35-44 years, 45-54 years, and 55-64 years). Age was modeled in categorical form to reflect a non-linear relation between age and indirect costs. Second, nine costly comorbidities were included in the indirect model; these variables were omitted in the previous analysis. Results from the enhanced analysis reflect a model that adjusts for sociodemographic variables and nine costly comorbidities. Methods for generating the increment and total costs attributable to AORC were the same as described previously.8

No changes were made to the cost estimates or attributable fractions for direct costs. The national indirect cost estimates decreased by $30.1 billion. The revised total cost of AORC in the United States was $86.2 billion (i.e., $51.1 bil-
lion in direct costs plus $35.1 billion in indirect costs). By state, indirect costs for AORC ranged from $49 million in Wyoming to $3.4 billion in California (median: $499 million), and total costs ranged from $121 million in Wyoming to $8.4 billion in California (Table).

CDC Editorial Note: This report presents enhanced population-based indirect and total cost estimates of AORC for states and the nation in 1997, based on a revised statistical model. Direct cost estimates are unchanged from those in the previous report for AORC, but the revised indirect cost estimates are now less than the direct costs, which is the opposite of what was found in the original analysis. Because the indirect costs only included value of time lost from work among persons aged 18-64 years, these estimates might be considered conservative.

The strengths and limitations discussed in the previous report also apply to these estimates. The statistical enhancement proved important in reducing residual confounding in the model on which the indirect cost estimates were based, and illustrates how simple choices, such as the variable form (e.g., continuous versus categorical), can result in substantially different cost estimates. In this study, inclusion of a categorized, rather than continuous, age variable resulted in a 17% decrease in the national estimate of total AORC costs.

Review of the current cost-of-illness (COI) literature indicates that many COI studies are limited to estimating direct costs, although indirect costs are an important measure of societal burden of disease. In addition, few methodologic standards are available for the statistical estimation of indirect costs. Developing a consensus on methodologic standards for COI studies will help ensure that study results are valid and comparable across disease groupings and therefore of greatest value to policy makers.

REFERENCES
6 available

Recommended Childhood and Adolescent Immunization Schedule—United States, July–December 2004

MMWR. 2004;53:Q1-Q3

CDC’S ADVISORY COMMITTEE ON IMMUNIZATION PRACTICES (ACIP) periodically reviews the recommended childhood and adolescent immunization schedule to ensure that the schedule is current with changes in manufacturers’ vaccine formulations and reflects revised recommendations for the use of licensed vaccines, including those newly licensed. Recommendations and format of the childhood and adolescent immunization schedule for January–June 2004 were approved by ACIP, the American Academy of Family Physicians (AAFP), and the American Academy of Pediatrics (AAP) and published in January 2004. This report updates that schedule with the recommendation that, beginning in fall 2004, children aged 6–23 months, as well as household and out-of-home caregivers for such children, receive annual influenza vaccine. This month is reflected in the revised childhood and adolescent immunization schedule for July–December 2004 (FIGURE). A catch-up immunization schedule for children and adolescents who start late or who are >1 month behind remains unchanged from that published in January 2004 (TABLE).

Changes in the Schedule for July–December 2004

The childhood and adolescent immunization schedule for July–December 2004 differs from the previous schedule in the following ways:

The range of recommendations bar for influenza vaccine for children aged 6-23 months has been moved above the dotted red line, indicating that these children should be vaccinated annually.

The influenza vaccine footnote has been updated to highlight the recommendation that healthy children aged 6-23 months and close contacts of healthy children aged 0-23 months receive influenza vaccine because children in this age group are at substantially increased risk for influenza-related hospitalizations.

The influenza vaccine footnote has been updated to highlight the recommendation that health-care workers and other persons (including household members) in close contact with persons in groups at high risk be vaccinated annually.

Vaccine Information Statements

The National Childhood Vaccine Injury Act requires that all health-care providers provide parents or patients with copies of Vaccine Information Statements before administering each dose of the vaccines listed in the schedule. Additional information is available from state health departments and at http://www.cdc.gov/nip/publications/vis.

Detailed recommendations for using vaccines are available from the manufacturers’ package inserts, ACIP statements on specific vaccines, and the 2003 Red Book. ACIP statements for each recommended childhood vaccine can be viewed, downloaded, and printed from CDC’s National Immunization Program website at http://www.cdc.gov/nip/publications/acip-list.htm. Instructions on the use of Vaccine Information Statements are available at http://www.cdc.gov/nip/publications/vis/vis-instructions.pdf. In addition, guidance on how to obtain and complete a Vaccine Adverse Event Reporting System (VAERS) form is available at http://www.vaers.org or by telephone, 800-822-7967.

REFERENCES
3 available