Use of complementary and alternative medicine among adults with skin disease: Results from a national survey

Nana Smith, MD, MSCE,[a,c] Daniel B. Shin, BA,[b] Jeremy A. Brauer, MD,[e] Jun Mao, MD, MSCE,[c,d] and Joel M. Gelfand, MD, MSCE[b,c]
Rochester and New York, New York; and Philadelphia, Pennsylvania

Background: Complementary and alternative medicine (CAM) is commonly used for a variety of diseases in the United States. Limited population-based data exist on CAM use among patients with dermatologic conditions

Objective: We sought to determine the extent and the nature of CAM use in the United States among people with skin problems.

Methods: We conducted a cross-sectional survey using the 2002 National Health Interview Survey and the Alternative Health Supplement.

Results: Among those reporting skin problems in the past year, 49.4% (95% confidence interval 47.2-51.6) had used CAM. Only 6.0% of this group (95% confidence interval 4.2-7.7) used CAM specifically for skin disease. Those reporting skin problems were more likely to use CAM than those who did not report skin problems (odds ratio 1.7, $P \leq .001$, 95% confidence interval 1.6-1.8). The most commonly used CAM modality was nonvitamin, nonmineral, natural products (ie, herbals).

Limitations: Because of the nature of a cross-sectional study, it is not possible to know whether the skin problem or the CAM use came first (except in situations where they used CAM specifically for skin problems). Because this is not a dermatology-focused database, the definition of skin disease is vague.

Conclusion: CAM use among adults with skin problems in the Unites States is common. Dermatologists should have candid discussions with their patients regarding CAM use. (J Am Acad Dermatol 2009;60: 419-25.)

Skin disease is responsible for a substantial portion of the annual cost of health care in the United States, accounting for at least $39 billion in 2004 alone. Many skin diseases are both chronic and emotionally taxing on the patient, which, in part, explains the need for many patients to look outside of Western medicine for both complementary and alternative treatments.[1] The National Center for Complementary and Alternative Medicine (NCCAM), a division of the National Institutes of Health, defines complementary and alternative medicine (CAM) as "a group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional

Abbreviations used:

CAM:	complementary and alternative medicine
CI:	confidence interval
NCCAM:	National Center for Complementary and Alternative Medicine
NHIS:	National Health Interview Survey

From the Department of Dermatology, University of Rochester[a]; Department of Dermatology,[b] Center for Clinical Epidemiology and Biostatistics,[c] and Department of Family Medicine and Community Health,[d] University of Pennsylvania; and Department of Medicine, Lenox Hill Hospital, New York.[e]

Supported by a National Institutes of Health/National Center for Complementary and Alternative Medicine Ruth L. Kirschstein National Research Service Award T32-AT00600 (Dr Smith).
Conflicts of interest: None declared.
Accepted for publication November 12, 2008.

Reprint requests: Nana Smith, MD, MSCE, University of Rochester, Department of Dermatology, 601 Elmwood Ave, Box 697, Rochester, NY 14642. E-mail: nanasmithmd@gmail.com.

Published online January 21, 2009.
0190-9622/$36.00

doi:10.1016/j.jaad.2008.11.905

medicine."[2] Currently, NCCAM separates CAM into the following categories: alternative medical systems (acupuncture, ayurveda, homeopathy, and naturopathy), biologically based therapies (chelation, folk medicine, nonvitamin nonmineral natural products, diet-based therapies, megavitamin therapy), manipulative and body-based therapies (chiropractic care, massage), and mind-body therapies (biofeedback, relaxation techniques, hypnosis, yoga, Tai Chi, Qi Gong, healing rituals, energy healing, or Reiki). Estimates of CAM use among adults with dermatologic diseases in the United States have varied from 50% to 62%.[3-5] Each of these 3 studies was conducted at a single institution and represented a limited patient population (ie, those with psoriasis, presenting for Mohs micrographic surgery, or with atopic dermatitis.) None of these studies used the current NCCAM definition of CAM.

The purpose of this study was to estimate the prevalence of CAM use among adults with skin disease and to describe the demographic characteristics of this group. We also described the group of adults who use CAM specifically for skin disease. Given the paucity of efficacy evidence and risk of adverse events of CAM, including skin disease (eg, contact dermatitis),[6-8] it is important to understand the scope and nature of CAM use among people with dermatologic conditions.

METHODS

Survey development, administration, and sampling techniques

This cross-sectional study was a subpopulation analysis of data collected from the 2002 National Health Interview Survey (NHIS). The NHIS is conducted annually by the Centers for Disease Control and Prevention's National Center for Health Statistics and is a nationally representative sample of the civilian noninstitutionalized household population of the United States. A report was published in 2004 analyzing the results from the larger cohort of the 2002 NHIS.[9] The NHIS asks questions to gather basic information regarding health, disease, and demographic characteristics (the sample adult core component). In 2002 the NHIS included a supplement questionnaire called the alternative health/CAM supplement, which asked questions about various types of CAM use. These modalities were consistent with the NCCAM definitions listed above because the development of the alternative health supplement was supported by NCCAM. This alternative health supplement was not repeated until 2007 and the results and data set have only recently become public knowledge. We hope, in a future study, to analyze these data as well and to track changes in CAM use over time among adults with skin disease. Details of the survey development and methodology have been previously published and the database is publicly available.[10] For this reason, this study was approved and determined exempt from review by our institutional review board.

Briefly, data are collected continuously throughout the year in all 50 states and the District of Columbia. The NHIS uses a multistage clustered sample design to produce nationally representative estimates. Interviews are conducted in the home using a computer-assisted personal interview questionnaire. The sample adult core component of the NHIS represents self-response to the survey questions by persons 18 years of age and older.

In our study, adults were classified as having skin disease if they answered "yes" to the question: "During the past 12 months, have you had skin problems?" In addition to many other dermatologic conditions that were not further classified, this group included adults with melanoma, with nonmelanoma skin cancer, and who reported having skin cancer but did not know which type. Adults were classified as CAM users if they answered "yes" to questions regarding use of any of the CAM modalities for health reasons in the past 12 months. The classification of CAM users was also recoded to exclude "prayer for health reasons," as this factor was found to significantly change the estimates of CAM use among adults in the 2002 report.

Data analysis

The statistics shown in this study are based on merging of data form sample adult core component and the alternative health supplement of the 2002 NHIS. The prevalence of CAM use among those with skin disease was determined by a software command (STATA, STATA Corp, College Station, TX) that divided the number of adults who met our definition of CAM use and met the definition of skin disease by the number of adults who met the definition of skin disease. Other, more detailed, prevalence statistics reported were performed in a similar manner. Estimates were weighted using the sample adult record weight to represent the US adult population. Weights were determined for various demographic factors based on the 2000 US Census data.

Because the NHIS uses a multistage sample design to represent the civilian noninstitutionalized population of the United States, all estimates were weighted using the sample adult record weights, which were modified by adjusting them to 2000 Census control totals for sex, age, and race. Descriptive analyses were performed to determine the demographic characteristics of the study population. Logistic regression