come and education. ${ }^{5,7-9}$ However, Keegan reported that many low-income Latinos use folk practitioners such as the curandero (healer), the yerbero (herbalist), the sobador (masseur), or practices such as spiritual healing rather than treatments offered by health clubs or health food stores. ${ }^{6}$ These patterns of CAM use are different than those of the majority population and deserve closer scrutiny.

The purpose of this brief was to understand CAM use by family practice patients in the unique cultural setting of south Texas. This brief estimates CAM use prevalence and assesses the influence of patient characteristics, including measures of ethnicity and acculturation, on CAM use.

## METHODS

Investigators conducted a cross-sectional survey in the Residency Research Network of South Texas (RRNeST), a network of 6 family practice residency programs located in San A ntonio, Corpus Christi, M cAllen, Harlingen, and Laredo. Clinic staff surveyed 100 consecutive adult patients at each clinic site in fall 1998; 575 usable surveys were returned. The refusal rate was $22 \%$; refusers were older than participants.
The self-administered survey elicited the reason for a patient's visit, medication use, demographic information, and measures of ethnic background and acculturation, ${ }^{10}$ as well as CAM use during the 12 months prior to the survey. The CAM checklist included 23 items that addressed mind/ body treatments, manual healing, herbal remedies, folk practices, and other treatments. Open-ended questions assessed specific products used. Surveys were available in both Spanish and English.

Bivariate and multivariate analyses examined characteristics of CAM users, comparing them with those who used no CAM whatsoever. Logistic regression analyses with forward stepwise inclusion determined the strongest predictors of CAM use while controlling for multicollinearity among the predictors.

## RESULTS

Of the 575 respondents, most were Latino ( $80 \%$ ), women ( $74 \%$ ), high school graduates (69\%), and married (57\%); 69\% of all re-

TABLE 1-Complementary and
Alternative Medicine Use by 575
Patients Surveyed: South Texas, 1998

| Treatment | $\mathrm{n}=575$ |
| :--- | :---: |
| Mind-body |  |
| Relaxation | $28 \%$ |
| Meditation | $15 \%$ |
| Yoga | $2 \%$ |
| Imagery | $6 \%$ |
| Biofeedback | $2 \%$ |
| Hypnosis | $1 \%$ |
| Self-help group | $4 \%$ |
| Spiritual healing | $8 \%$ |
| Manual healing |  |
| Massage | $14 \%$ |
| Acupressure | $2 \%$ |
| Therapeutic Touch | $2 \%$ |
| Chiropractic | $5 \%$ |
| Reflexology | $2 \%$ |
| Herbal remedies |  |
| Aromatherapy | $4 \%$ |
| Herbs | $24 \%$ |
| Folk practices | $13 \%$ |
| Home remedy | $2 \%$ |
| Folk healer | $1 \%$ |
| Curandero | $1 \%$ |
| Other practices | $1 \%$ |
| Acupuncture | $0.5 \%$ |
| Homeopathy |  |
| Bioelectromagnetic |  |
| Light therapy |  |
| Colonic irrigation |  |
| Any complementary/alternative |  |
| medicine treatment |  |
|  |  |

spondents had private or government health insurance. The mean age of respondents was 41.5 years.

Table 1 displays responses to CAM survey items. Overall, 332 respondents ( $58 \%$ ) used at least 1 of the treatments on this list. On average, CAM users checked 2.4 CAM items in the survey. Among CAM users, only $43 \%$ reported that they told their doctor about CAM use; $13 \%$ left this item blank.

W hat CAM products did respondents use? The most popular remedy was tea, especially manzanilla (chamomile). Only 12 (2\%) reported use of popular health store products such as St. John's wort, aloe vera, and Ginkgo

## TABLE 2-Characteristics of Users and Nonusers of Complementary and Alternative Medicines Among 575 Patients Surveyed: South Texas, 1998

|  | Nonusers | Any CAM | Mind-Body | Manual Healing | Herbal Remedies | Folk Practices |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| N | 243 | 332 | 225 | 108 | 150 | 80 |
| Mean age ${ }^{\text {a }}$ | 40.6 | 42.1 | 42.8 | 42.7 | 43.8 | 41.2 |
| Sex ${ }^{\text {b }}$ |  |  |  |  |  |  |
| Female, \% | 69 | 77* | 74 | 77 | 83** | 85** |
| Male, \% | 31 | 23* | 26 | 23 | $17^{* *}$ | 15** |
| Education ${ }^{\text {b }}$ |  |  |  |  |  |  |
| <12 y, \% | 31 | 27 | 25 | 21 | 28 | 28 |
| 12 y , \% | 41 | 41 | 43 | 47 | 36 | 41 |
| >12 y, \% | 28 | 31 | 31 | 31 | 36 | 31 |
| Married ${ }^{\text {b }}$ |  |  |  |  |  |  |
| Currently, \% | 68 | 58* | 55* | 57 | 53** | 61 |
| Never, \% | 16 | 19* | 19* | 19 | $17^{* *}$ | 14 |
| Previously, \% | 16 | 23* | 25* | 24 | 30** | 25 |
| Mean no. prescriptions ${ }^{\text {a }}$ | 1.1 | $1.7 * *$ | 1.8** | 2.0** | 1.8** | 1.8** |
| Mean no. over-the-counter |  |  |  |  |  | 3.0** |
| Ethnicity ${ }^{\text {b }}$ |  |  |  |  |  |  |
| Non-Hispanic White, \% | 12 | 15* | 19** | 24** | 12 | 10 |
| Latino, \% | 84 | 77* | 72** | 69** | 82 | 85 |
| Other, \% | 4 | 8* | 9** | 7** | 6 | 5 |
| Born in Mexico, \% ${ }^{\text {b }}$ | 20 | 15 | $11^{* *}$ | 14 | 22 | 26 |
| Spanish surveys, \% ${ }^{\text {b }}$ | 21 | 18 | 14 | 19 | 23 | 26 |
| Mean acculturation score ${ }^{\text {a,c }}$ | 15.2 | 16.2 | 17.0** | 16.7 | 14.9 | 14.6 |

Note. CAM = complementary and alternative medicine.
${ }^{\text {a }}$ T tests assessed differences in means, comparing CAM users with the nonuser group.
${ }^{\text {b }}$ Chi-square analysis assessed differences in proportions, comparing CAM users with the nonuser group.
${ }^{\text {'High acculturation score indicates closer affiliation to US culture; range is } 5-25 \text { points. }}$
*P<.05; **P>.01.
biloba. Home remedies included soups, warm milk, lemon juice, garlic, honey, vinegar, baking soda, and onion in various combinations.
Respondents also used prescriptions ( $62 \%$ ) and over-the-counter medicines (77\%) for their health problems. Older people used more prescription medicines ( $r=$ .473 ; $P=.000$ ), while younger people used more over-the-counter medicines ( $r=-.125$; $P=.003$ ). In the 12 months prior to the survey, $7 \%$ of respondents used no products or treatments, while $33 \%$ used all 3 types: CAM as well as prescription and over-thecounter medicines.
Table 2 lists characteristics of CAM users and compares them to respondents who used no CAM whatsoever. Users of mind-body treatments and manual healing were more ac-
culturated to mainstream US culture than CAM nonusers. In contrast, users of herbal remedies and folk practices were strongly affiliated to Latino culture, as were CAM nonusers. CAM users reported higher use of prescription and over-the-counter medications than CAM nonusers. Being unmarried was associated with mind-body and herbal remedies; being female was associated with use of herbal and folk remedies.

Logistic regression analyses revealed that prescription and over-the-counter medicine use were the strongest predictors of all types of CAM use (P .018). In addition, acculturation to the United States predicted use of mind-body treatments ( $\mathrm{P}=.018$ ). Higher education predicted use of manual healing ( $\mathrm{P}=$ .030). Unmarried status predicted use of
herbal remedies ( $P=.015$ ), while female sex predicted use of folk practices ( $\mathrm{P}=.019$ ).

## DISCUSSION

In south Texas, many Latino patients in family practices use CAM to improve their health, but most are not using treatments promoted by health clubs or health food stores. Non-Hispanic $W$ hites were more likely to use those methods, in the form of mind-body and manual treatments, a finding consistent with other studies. ${ }^{1,9,11}$ The strongest predictor of CAM use was use of other medicines, demonstrating that patients will seek several means to treat health problems. Use of mainstream (i.e., prescription and over-the-counter) products may be a marker of illness burden or propensity to seek treatment. Other investigators have likewise found that CAM users had poorer health status ${ }^{11,12}$ and more frequent physician visits. ${ }^{4,13,14}$ This study found that many patients do not disclose CAM use to their physicians, ${ }^{2,6,7,15}$ a factor that increases the risk for treatment interactions. We encourage physicians to learn more about CAM products and treatments and to routinely screen all patients for CAM use.

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## Contributors

This study was developed by the entire team of RRNeST members: T.L. Albright, E. Bajorek, S.K. Burge, M. Click, L. Cigarroa, J.J. Trevino, and D. W hite as well as J. Morgan-Kidd and R. Wood. All 9 conceived the research question, developed the study protocol, interpreted the results, and reviewed drafts. T.L. Albright, E. Bajorek, M. Click, L. Cigarroa, J.J. Trevino, D. W hite, and J. Morgan-Kidd supervised data collection, while R.

Wood and J. Morgan-Kidd managed the data files. S.K. Burge and R. Wood analyzed the data. S.K. Burge and T.L. Albright were the principal writers of the brief.

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## Human Participation Protection

This study was approved by the Institutional Review Board of the University of Texas Health Science Center in San Antonio.

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