Use of Complementary Alternative Medicine in the Largest Mexican-American Border City

Armando Gonzalez Stuart, Ph.D.
Research Coordinator

Jose C. Rodriguez, CPhT
Research Coordinator

Herbal products are not approved by FDA.

Dietary Supplement Health and Education Act of 1994 allows products to be labeled with certain statements (could say help, but not cure).

NEJM 1993 - Approximately 25% of Americans are using CAM. 70% of CAM users do not tell their physicians (only 6% of participants were Hispanics).
CAM Background

- **JAMA 1998** – Most common CAM: Relaxation techniques, 16.3%; Herbal products, 12.1%; Massage, 11.1%; Chiropractic, 11%; Spiritual healing, 7%; Megavitamins, 5.5%; (Folk remedies, 4%).

- **J.Hol.Nurs. 1996** – Most common CAM among Mexican-Americans: Herbal medicine, 44.1%; Spiritual healing, 29.5%; Massage, 28.3%; Relaxation techniques, 22.5%; Chiropractic, 19%; *Curandero (Healer)*, 13.6%; and Megavitamins, 8.6%.
Acknowledgements

- Grant from Paso del Norte Health Foundation, Center for Border Health Research ($37,000).
- Grant from Paso del Norte Health Foundation, *Herbal Product Use Initiative*, ($260,000). Follow up in-depth study and educational program.
Objectives

To identify:
- Most common Complementary and Alternative Medicine (CAM) providers used in the region.
- Most common herbal products and home remedies used.
- Most common nutritional and commercial products used.
- Herbal products, home remedies, nutritional and commercial products that:
  - Could interact with drugs.
  - Could interact with disease states.
  - Could cause serious adverse reactions.

Primary endpoints of study

- To determine the extent of CAM use in the El Paso del Norte region
- To identify the most common types of CAM used in our region
Secondary endpoints of study

- To determine patterns of CAM use in the El Paso del Norte region
- To compare participants perceptions of conventional and CAM providers
- To highlight the importance of conducting more complete medical histories
- To establish possible herbal-drug, herbal-disease interactions, and herbal toxicity
Questionnaire

Three different categories of CAM
- CAM providers
- Herbal products and home remedies
- Nutritional and commercial products

Where did they learn of, where did they obtain products/services, how effective, did they inform physician?
Questionnaire

Participants perceptions of conventional and CAM providers: cost, ethnicity, Spanish language, provider skills, distance, helping to understand, information provided, attitude toward questions, meeting emotional needs, and including participant in decisions

Demographic information

Surgery during the previous 12 months

Purchase of medications in México
Results

- A total of 547 subjects participated in the study.
- 77% of our sample reported using some form of CAM.
48% of participants reported using a CAM provider
59% of participants reported using an herbal product or home remedy
76% of participants reported using a nutritional or commercial product
CAM Providers

- Massage Therapist (Sobador) 19.4%
- Herbalist (Yerbero) 12.4%
- Chiropractor 11.8%
- Lifestyle Diet 7.8%
- Acupuncture 6.8%
- Naturalist 6.6%
- Meditation 6.2%
## Where did you learn about this?

<table>
<thead>
<tr>
<th>Source</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friend</td>
<td>48%</td>
</tr>
<tr>
<td>Family</td>
<td>40%</td>
</tr>
<tr>
<td>Doctor</td>
<td>8%</td>
</tr>
<tr>
<td>Book</td>
<td>4%</td>
</tr>
<tr>
<td>Advertisement</td>
<td>1%</td>
</tr>
</tbody>
</table>

Complementary Alternative Providers
### Most Common Herbal Products

<table>
<thead>
<tr>
<th>Herbal Product</th>
<th>Usage Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chamomile</td>
<td>13.1%</td>
</tr>
<tr>
<td>Aloe Vera</td>
<td>8.5%</td>
</tr>
<tr>
<td>Peppermint</td>
<td>8.1%</td>
</tr>
<tr>
<td>Lime</td>
<td>6.6%</td>
</tr>
<tr>
<td>Garlic</td>
<td>6.4%</td>
</tr>
<tr>
<td>Oregano</td>
<td>5.1%</td>
</tr>
</tbody>
</table>
Tarahumar women selling herbs in Juarez, Mexico
Herb stand in Juarez, Mexico
Popular herbal products sold in El Paso, Texas
How did you learn?

- Family: 83%
- Friend: 11%
- Book: 5%
- Advertisement: 1%
- Doctor: 1%
Did you tell your doctor?

- Yes: 31%
- No: 69%
<table>
<thead>
<tr>
<th>Nutritional and Commercial Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-vitamins</td>
</tr>
<tr>
<td>Calcium</td>
</tr>
<tr>
<td>Vit.C</td>
</tr>
<tr>
<td>Iron</td>
</tr>
<tr>
<td>Vit. &amp; minerals</td>
</tr>
<tr>
<td>Vit.E</td>
</tr>
<tr>
<td>Vit.B12</td>
</tr>
</tbody>
</table>
How did you learn?

- Family: 16.8%
- Friend: 27.3%
- Advertisement: 31.9%
- Book: 9.8%
- Doctor: 15.6%
Home remedies that have been known to cause negative outcomes

- Lead-based products such as azarcon, greta, and albayalde (all used for empacho) have been associated with acute and chronic lead toxicity.
- Gordolobo and chaparral, used for respiratory and gastrointestinal problems, have been associated with liver injury.
Herbal Products that have been Associated with Drug Interactions.

- Garlic
- Ginger
- Ginseng
- Ginkgo biloba
- Glucosamine
- Mahuang
- St. John’s Wort
Herbal and Commercial Products that have been Associated with Adverse Reactions.

- Mullein (gordolobo)
- Chaparral (gobernadora)
- Rue (ruda)
- Peyote
- Wormwood (estafiate)
- Echinacea
Herbal and Commercial Products that have been Associated with Disease State Interactions.

- Garlic
- Ginger
- Ginseng
- Ginkgo Biloba
- Glucosamine
- Mahuang
- St John’s Wort
Do you buy drugs in Mexico?

- Yes: 50.6%
- No: 49.4%
Pharmacy in Juarez, popular with U. S. tourists
Patients who had surgery (N=50)

<table>
<thead>
<tr>
<th>Herb</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garlic</td>
<td>10</td>
<td>20%</td>
</tr>
<tr>
<td>St. John’s Wort</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Ginger</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>24%</td>
</tr>
</tbody>
</table>
ASA Recommendations Concerning Herbal Products

- All herbal products should be stopped 2-3 weeks before surgery.
- St. John’s wort can intensify or prolong the effects of some narcotic drugs and anesthetic agents.
- Ginkgo biloba and feverfew can interfere with blood clotting.
- Ginseng has been associated with episodes of hypertension and tachycardia.
Additional findings

Education was associated with CAM use.

- More education was associated with increased overall CAM use and nutritional and commercial product use.
- Less education was associated with increased use of herbal products and home remedies.

No other demographic variable was associated with CAM use.
Income and cumulative %

- Less than 10,000: 25%
- 11,000 to 20,000: 50%
- 21,000 to 30,000: 68%
- 31,000 to 40,000: 78%
- 41,000 to 50,000: 87%
- 51,000 to 60,000: 92%
Additional findings

- Identified 599 instances of potential drug interactions, disease interactions, or adverse reactions secondary to herbal product use.
Our Study Has Shown…..

- Wide range of CAM use
- Mexican-Americans appear to have a higher usage rate of CAM as compared to national trends
- Education was the only demographic variable associated with CAM use
Furthermore:

- Patients are most influenced by friends in terms of CAM providers.
- Patients are most influenced by family members in terms of herbal product use.
- Patients are most influenced by books when using commercial and nutritional products.
Conclusion

Since many of the herbal products used can have significant effects on different disease states and drug therapies, it is imperative that health care providers evaluate patients for herbal product use.
Herbal Product Use Initiative

- Additional research initiatives:
  - Surgical patients
  - Herbal product providers
  - General population of El Paso and Cd. Juárez

- Extensive educational programs (presentations, publications, web site, etc.):
  - Health care providers
  - General population
Questions?