



Chewer's Choice: Interactive Smokeless Tobacco Cessation©

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Abbreviated Abstract

Over 7 million Americans use snuff or chewing tobacco daily, but there are few programs to assist them in quitting this addiction. The Phase II project developed, produced, and evaluated an interactive cessation program to help smokeless tobacco (ST) users quit. The Chewer's Choice© interactive cessation program was designed to provide individualized quitting support through both a touch screen kiosk and in a desktop computer. Chewer's Choice© will assess the user's dependence and stage of readiness, motivate them to quit, and provide them with personalized quitting advice tailored to their use profiles and choices they made throughout the program. During Phase I, a prototype program was developed and evaluated. Results obtained demonstrated the efficacy of this interactive cessation program. In Phase II a functional, full featured touch screen version of the Chewer's Choice© prototype created in Phase I was developed. It was evaluated in a randomized trial with adult ST users in clinic, dental, and worksite settings. Based on that evaluation, final changes were made to the program, and a desktop version (both MacOS and Windows platforms) was developed for commercial release.

Primary Investigator

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Herbert H. Severson received his Ph.D. from the University of Wisconsin, Madison. He is a Senior Research Scientist at Oregon Research Institute, and is President/Director of Research of Deschutes Research, Inc. He has been involved with tobacco cessation for over 30 years.

With grants from the National Cancer Institute, he developed two interactive CD-ROM smokeless tobacco cessation programs: "Chewer's Choice: Interactive Smokeless Tobacco Cessation for Adults"© and "X-Chew Challenge: Interactive Smokeless Tobacco Cessation for Adolescents"©. With a grant from the National Institute of Dental and Craniofacial Research, he developed "Helping Your Patients Quit Tobacco", an interactive CD-ROM for training dentists and dental hygienists.

Dr. Severson is one of the authors of the 1994 Surgeon General's Preventing Tobacco Use Among Young People and a 1994 report by the Institute of Medicine, Growing Up Tobacco Free: Preventing Nicotine Addiction in Children and Youths. He also co-authored Enough Snuff: A Guide for Quitting

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Smokeless Tobacco, which received the 2004 Excellence Award from SAMHSA, the U.S. Department of Health and Human Services Substance Abuse and Mental Health Services Administration, for proving to be an exceptionally sound and internally consistent evidence-based program.

Dr. Severson produced an award-winning video on smokeless entitled Big Dipper©. He co-produced the video In Good Taste: Quit Chewing Tobacco to Improve Your Oral Health, which was used in dental office-based tobacco cessation projects at Oregon Research Institute. He was the 2006 recipient of the Research Laureate Award from the American Academy of Health Behavior.

Research Team & Affiliations

Herbert H. Severson, Ph.D. President, Deschutes Research, Inc. and Applied Behavior Science Press

Chris Widdop, M.S. Research Assistant, Deschutes Research, Inc.

Steve Christiansen, B.A. President, InterVision Media

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Total Budget

\$749,764.00

Research Objectives

Aim 1: Develop a functional, full featured touch screen version (Alpha) of our Chewer's Choice© prototype created in Phase I.

Aim 2: Conduct a pilot evaluation of the Alpha version of the program to test for functionality and user interface for touch screen.

Aim 3: Modify Alpha version and develop Beta version of the touch screen interactive program.

Aim 4: Evaluate the Beta version of the touch screen program in a randomized trial with adult chewers.

Aim 5: Make final changes to the program, create final version both MacOS™ and Windows™ platforms) for commercial release, and develop associated materials.

Theory/Hypothesis

Experimental Design

From November 2000 through October 2002, 170 daily smokeless tobacco (ST) users were recruited to use Chewer's Choice© between two site locations in Eugene, OR and in Jackson, MS. Display and classified ads in local newspapers, flyers, radio spots, seminar presentations, mass mailings and contacts in the industry were various advertising methods used by both sites to recruit ST users who were interested in quitting and willing to participate in the evaluation study. The criteria for participation were that the subject had to be a user of snuff or chewing tobacco for a year or more, over the age of 18, interested in quitting ST use, and not currently in any tobacco cessation treatment or using nicotine replacement products. Individuals were screened by phone and scheduled for one-hour office visits at their convenience. Of the approximate 450+ inquiries to Eugene, Oregon, 6% were screened out as not meeting criteria (most misunderstood and thought this study was to quit smoking), 47% were unreachable (i.e. they did not return calls to schedule appointments, no answers, left



messages, disconnected number, etc.) or changed their minds and/or were not interested in participating, and 6% did not keep their appointment and did not reschedule.

Subjects were paid up to \$40 for completion of the program. They would receive \$20 for completing the consent form, baseline survey, computer program and user evaluation survey and \$10 for each follow up survey (one and three month) they completed and returned.

Final Sample Size & Study Demographics

The subjects were mostly male (164 male, 6 female), married (59.6%), white (95.1%) and had completed at least some college (34.5%). Subjects had used ST for a mean of 14 years, and primarily used moist snuff tobacco (76.5%) rather than loose-leaf chew. The subjects reported using a can of chew an average of every two to three days. For this sample, 10.2% reported current use of cigarettes. This compares to approximately 20% in a previous dental study (Stevens et al., 1995).

Data Collection Methods

Baseline and follow up surveys presented directly to the users.

Outcome Measures

Measures included current and past use of tobacco products, readiness to quit, attitudes and knowledge about tobacco use, perceived risk of tobacco use, self efficacy for quitting, motivation for quitting, and reasons for quitting.

Evaluation Methods

Subjects had to be users of snuff or chewing tobacco for a year or more, over the age of 18, interested in quitting ST use, and not currently in any tobacco cessation treatment or using nicotine replacement products. Individuals were screened by phone and scheduled for one-hour office visits at their convenience. When they arrived at the office, participants signed an informed consent and filled out a baseline survey, which gathered demographic information as well as information on use patterns, brand preferences, alcohol use, a depression screener and information on computer usage. Subjects were briefly oriented to the program and then asked to begin. They sat alone at computers and used a mouse to operate the program, which was run on an Apple iMac® computer in Eugene, Oregon and surrounding areas and a Windows compatible PC in Mississippi. A staff member monitored their progress through the program and was available for assistance.

After completing the Chewer's Choice© program, which varied from 15 to 45 minutes (mean = 22 minutes), the user was asked to complete our written consumer evaluation survey (see Table 1). Before departing, the user was briefly interviewed about his/her overall reaction to the program and were reminded that we would be contacting them by mail, approximately one and three months from the day they participated in the interactive computer program, with follow up surveys for them to fill out and return in prepaid envelopes. The subjects were paid \$20 for their computer participation and \$10 for each follow up survey returned.



Research Results

The evaluation of Chewer's Choice[©] with ST users found the program both efficacious and effective. Furthermore, the self-reported quit rate at one-month follow up was 27% and at three-month, this rate rose to 35.2%. The increase in cessation rates between one and three-month follow-up could be attributed to subjects setting quit dates after the one-month survey was administered. Additionally, while 23.3% of the subjects reported a current oral health problem due to ST use, the majority was not currently experiencing such problems. It would appear that their motivation to quit was not due to current oral health problems. There were some differences between sites with regard to quit rates. However, the increase in cessation was consistent across sites. See table below.

Quit rate (no use in past week)

Site	1-Month	3-Month
Oregon	30.9%	38.8%
Mississippi	21.3%	28.9%

$P \leq .25378$ (1-month) $.30953$ (3-month)

Barriers & Solutions

The program requires access to a computer with a CD drive, but this has been a minimal issue as most people have access to a computer and almost all newer computers come with a CD drive.

Product(s) Developed from This Research

Chewer's Choice – The Interactive Way to Quit Spit Tobacco[©]