

# **Effective Ways That Communities Can Help Chewers Quit**

**Presented to the  
Best of the West**

**Educating, Training, Collaborating on Tobacco Control  
September 8, 2006**

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# Goals for Presentation

- What have we learned about helping ST users quit?
- Nuggets and Kernels for helping ST users quit.
- Low intensity cessation programs
  - Dental office based interventions
  - Self-help quitting programs
- New directions in ST cessation
  - Internet delivered programs: [Chewfree.com](http://Chewfree.com)
- Harm Reduction: Can ST be used to assist smokers in quitting?
- New ST products and new challenges



# Prevalence of ST Use Among 9<sup>th</sup> – 12<sup>th</sup> Grades

- Prevalence of most snuff use by teen males grew rapidly from 1970 to 1980s and has stabilized since
- More common in rural areas
- Most common in white, non-Hispanic
- Very high prevalence in American Indian & Alaskan Natives
- Wide regional variability in smokeless tobacco use –

Very high prevalence in  
(High Schools both genders)\*

<b>Wyoming</b>	<b>23%*</b>
<b>Montana</b>	<b>21%*</b>
<b>South Dakota</b>	<b>18%*</b>
<b>North Dakota</b>	<b>14%*</b>

Males Only:

Colorado	15%
New Mexico	15%
Arizona	8%

\*Male prevalence over 30% for each of these states

Source: YRBSS

Every day 2,200 American  
Youths age 11 – 19 try snuff  
or chewing tobacco for the  
first time.

Every day approximately 830  
become regular users of  
smokeless tobacco.<sup>1</sup>

<sup>1</sup>Tomar & Grovino, 1998.

- Initial use of smokeless tobacco significantly increase the likelihood of becoming a smoker
- Almost 60% of ST users, who have never had a puff of a cigarette, will become smokers 2 years later

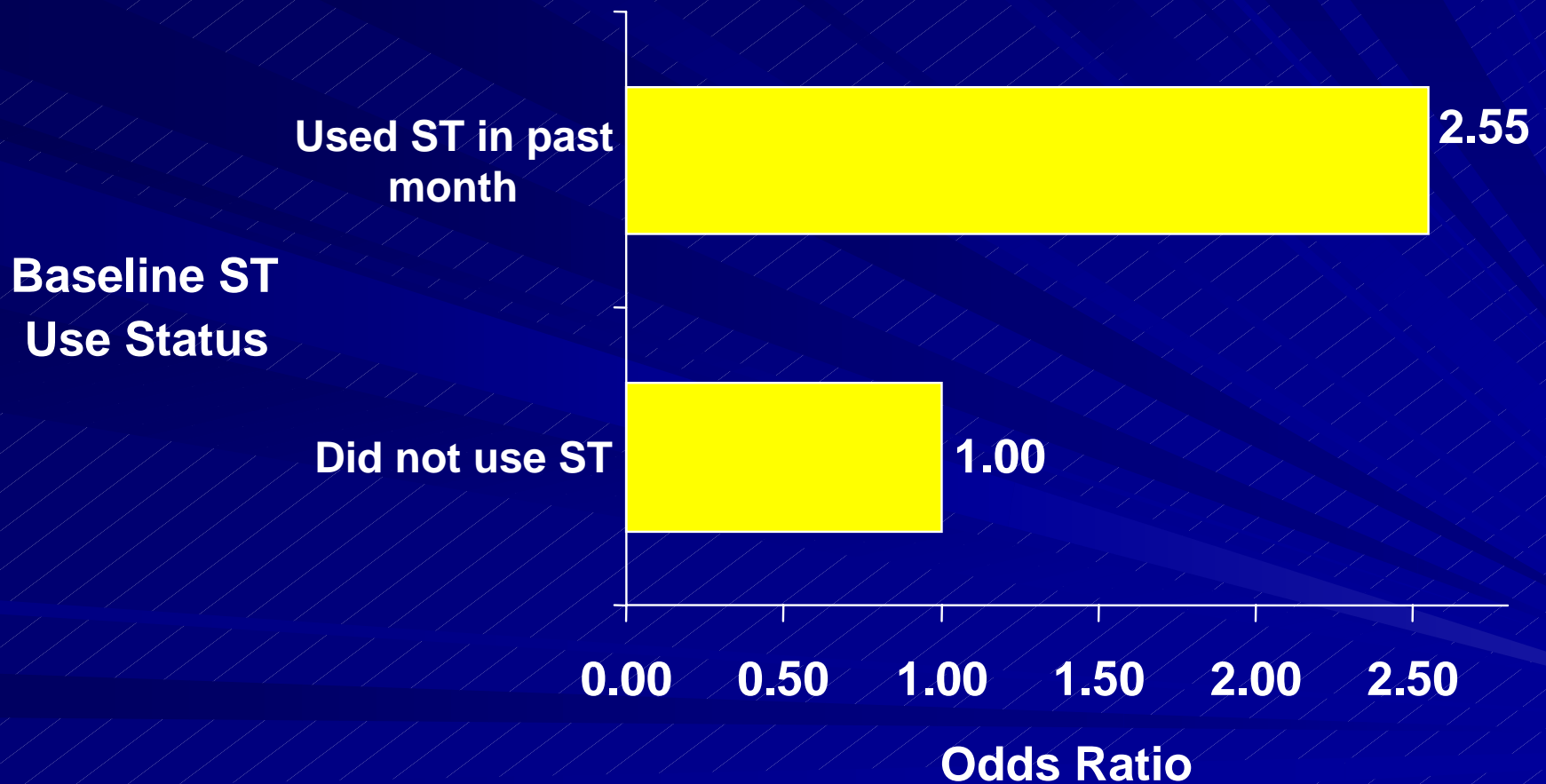
# Logistic Regression Model Predicting Weekly Smoking at 2-Year Follow Up for Males Who Use ST in Grades 7<sup>th</sup> – 9<sup>th</sup>

Baseline Variable	B (S.E.)	Odds Ratio	95% CI
School grade (1=9 <sup>th</sup> grade)	-.17 (.18)	0.84	(0.59-1.19)
Parent smokes (1=Yes)	.43 (.18)	1.54**	(1.09-2.16)
Sibling smokes (1=Yes)	.59 (.21)	1.80**	(1.18-2.74)
Close friend smokes (1=Yes)	.02 (.23)	1.02	(0.65-1.59)
Deviant Behavior Construct <sup>a</sup>	.56 (.19)	1.75**	(1.21-2.52)
Low school grades (1=C or below)	.72 (.18)	2.06***	(1.46-2.97)
Alcohol, any use past 30-days (1=Yes)	.65 (.29)	1.92*	(1.09-3.39)
<b>Use ST Monthly (1=Yes)</b>	<b>.96 (.35)</b>	<b>2.62**</b>	<b>(1.31-5.22)</b>

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$

<sup>a</sup>The deviant behavior construct is measured as a continuous variable; therefore, the Odds Ratio represents the change in odds per unit change in the deviant behavior scale.

# Odds\* of Smoking at 2-Year Follow-up, by Baseline ST Status, Males in Grades 7 and 9



\*Logistic regression, adjusted for school grade, parental smoking, sibling smoking, close friend smoking, deviant behavior construct, low school performance, and past-month alcohol use. Excludes males who smoked at baseline.  
Source: Severson et al. *Nicotine Tob Res* [in press].

# Who Do We Focus On?

- Most initiation and addiction to smokeless tobacco (ST) begins early – 90% of all ST users are regular users before age 18
- Highest use – 18 – 24 year old males
- Most cessation / quitting is among 35 – 40 year old males
- Best evidence for cessation is middle aged male – can we have success with younger ST users?

# Spit Tobacco Interventions: What Have We Learned Over the Past 20 Years?

Severson, H. H. (2003) What have we learned from 20 years of research on smokeless tobacco cessation? *The American Journal of the Medical Sciences* 326(4): 206-211.

# Nuggets & Kernels for ST Cessation

- Almost all users are male
  - Nugget = use competition and calculation in quitting
- High support by spouse/partner for quitting
  - Nugget = work with partner to give positive support
- High co-use of cigarettes
  - Nugget = need to focus on quitting all tobacco

# Nuggets & Kernels for ST Cessation

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- High association with sports, occupations, and recreation
- Seasonal variability of ST use
  - Nugget = carefully assess context for use
- ST is an oral tobacco
  - Kernel = most ST users want oral substitutes to be prepared with several non-tobacco products

# Nuggets & Kernels for ST Cessation

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- Oral lesions present in 75% of users
  - Kernel = oral lesions provide motivation to quit and reinforcement for abstinence
- ST users will experience nicotine withdrawal
  - Kernel = NRT is less effective for quitting but helps reduce withdrawal
  - Nicotine gum and lozenge are best

# SLT Cessation Rates<sup>1</sup> & Odds Ratio by Channel of Intervention

			Quit Rates (%)			Months to assessment
			Treatment	Control	OR(95CI)	
Dental Clinics	Severson et al,	N=633	10.2 <sup>2</sup>	3.3 <sup>2</sup>	3.2(1.5-7.0)	12
	Stevens et al,	N=518	18.4 <sup>2</sup>	12.5 <sup>2</sup>	1.6(1.0-2.6)	12
Sports	Walsh et al,	N=365	34.5	15.9	2.8(1.7-4.6)	12
Group Support	Williams et al,	N=130	14.7	10.6	1.4 (0.5-4.0)	3
	Hatsukami et al,	N=210	30.5	22.9	1.5(0.8-2.7)	12
Self-Help	Severson et al, (a)	N=1,069	23.4	18.4	1.6(1.1-2.3)	6
	Severson et al, (b)	N=172	24.0 <sup>2</sup>	18.4 <sup>2</sup>	1.4 (0.7-2.9)	6

<sup>1</sup>All cessation rates reflect “intent-to-treat” model

<sup>2</sup>Sustained quit rates

# Impact of Interventions

Impact = Reach x Effectiveness

Reach = % of tobacco users who receive treatment

Effectiveness = long-term abstinence rates associated with the treatment

# Impact of Self-Help Treatments

Range of reach and effectiveness in between clinical and public health interventions. Can reach a large % of motivated tobacco users at low cost. Modest cessation rates (10% - 25%).

# Self-Help Smokeless Tobacco Cessation Trial

## Study Purpose:

Compare two low-cost, self-help interventions for smokeless tobacco (ST) cessation that can be easily disseminated

# Conditions

- **Manual Only (MAN)**
  - Users were mailed a copy of *Enough Snuff: A guide for quitting smokeless tobacco*
- **Assisted Self-Help (ASH)**
  - *Enough Snuff* Manual
  - *Enough Snuff* Video
  - Two supportive phone calls from counselors

**Video Tape  
and  
Cessation  
Guide Sent  
to  
Participants**

# Enough



# SMUFF



**QUITTING SMOKELESS TOBACCO:  
A GUIDE FOR MILITARY PERSONNEL**

**Herbert H. Severson, PhD, Judith S. Gordon, PhD**

Applied Behavior Science Press

# Outcomes of Three Self-Help Smokeless Tobacco Cessation Interventions

Condition*	6 months	
	ASH (%)	MAN (%)
Participants completing survey	31.5	23.1 <sup>1</sup>
All participants (Intent to treat model)	21.1	16.5

<sup>1</sup>ASH vs. MAN,  $p < .05$

<sup>2</sup>ASH vs. MV,  $< .05$

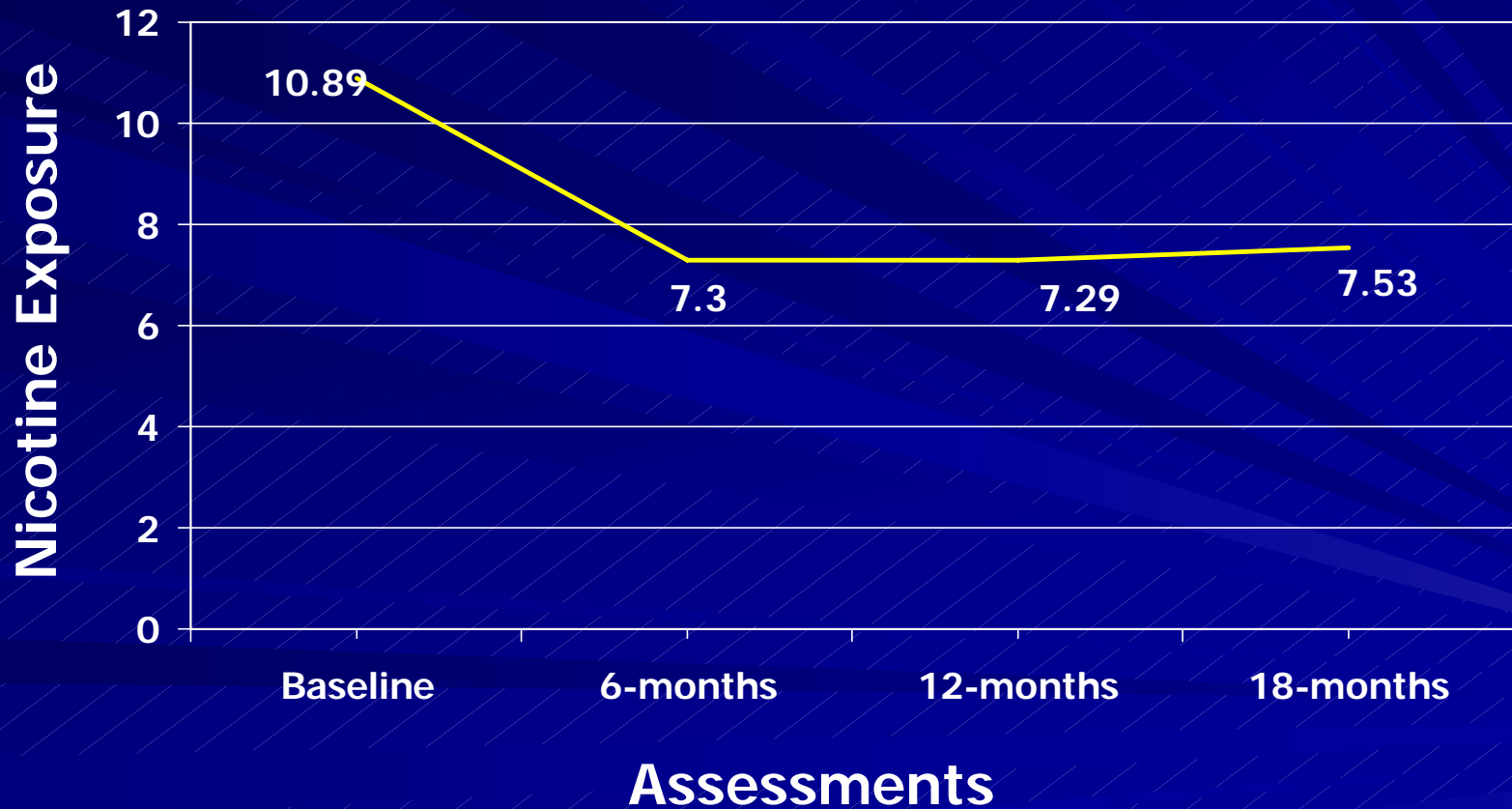
• ASH = assisted self-help condition, MAN = manual only condition, MV = manual + video condition

\*\*Quasi-experimental comparison group

# After the Smokeless Tobacco Intervention:

## Intervention:

# What Happens To Users Who Don't Quit



# Conclusions

- Phone counselors were influential in encouraging subjects to try cessation techniques
- Self-help cessation for SLT users can provide a low-cost, model for public health which can be easily disseminated



# Tobacco Cessation Through Dental Office Settings

**“Seventy-five percent of oral and throat cancers are attributed to the use of smoked and [smokeless] tobacco.”**

Antonio Novello, M.D.  
Former U.S. Surgeon General

# Tobacco Interventions in Dental Settings

- Dentistry has history of prevention and education
- 50% of tobacco users see a dentist in any given year
- Tobacco use related to oral health
- Provides a “teachable moment”

# Brief Dental Office-Based Tobacco Cessation Programs

- Ask about patients tobacco use
- Advise against tobacco use
  - Relate oral health findings
  - Give direct advice to quit
- Assess willingness to quit
- Assist patient to quit
  - Set quit date
  - Give materials
- Arrange follow up
  - Reschedule
  - Refer

# Private Dental Practices

Study Purpose:

To develop & test effectiveness of intervention for both ST and smoking in 75 private dental practices in Oregon

# Private Dental Practices Results

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## Sustained (3 & 12 month) Quit Rates for ST Users

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	Usual Care (n=239)	Intervention (n = 394)
All Subjects	3.3%	10.2%

*p*<.01

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# **New Directions in Dental Interventions for ST Cessation**

- Public Health Dental Clinics
- Interactive Computer Based Training of Oral Health Professionals
- 5A's Model vs 3A's + Telephone Help Line

## HELP PATIENTS QUIT

### Introduction to "5 A's"

Ask

Advise

Relate Findings

Smokers

Smokeless Users

 **Hygienist / Patient 1**

 **Hygienist / Patient 2**

 **Identify and Record**

 **Testimonial / Hygienist**

 **Testimonial / Patient**

Give Direct Advice

 **Motivational Interviewing**

 **Respond to Patients**

**Assess**

**Assist**

**Arrange**

**Review**

**Next Steps**

## Advise Relate Findings



# Interactive Computer-Based Spit Tobacco Cessation Program

- Individualized, tailored cessation
- Reduced obstacles to access to treatment
- Low-cost, repeated contact intervention
- Minimized demand for professional counselor

# CHEWFREE.COM

**CHEWFREE.COM**

HOME **PQA** RESOURCES FORUM LINKS

**Reasons: Personal**

The reasons most people give for wanting to quit chew or snuff fall into four categories: health, social, cost, and personal.

Please explore these categories to look at other people's reasons for quitting. Later, you'll be able to select your reasons, which will be added to your Quit Plan.

Health Social **Cost** Personal

- Addictive  
Spit tobacco is addictive and you may have to rearrange your life to accommodate your tobacco habit.
- Loss of Control
- Restricted Use

Next

MY QUIT PLAN LOG OUT BACK CONTINUE

*PLANNING TO QUIT* *STAYING QUIT*

- Readiness*
- Reasons***
- Dependence*
- Strategies*
- Tough Situations*
- Choose Method*
- Get Support*
- Set Quit Date*

# CHEWFREE.COM

Randomized Clinical trial for ST Cessation with Adults

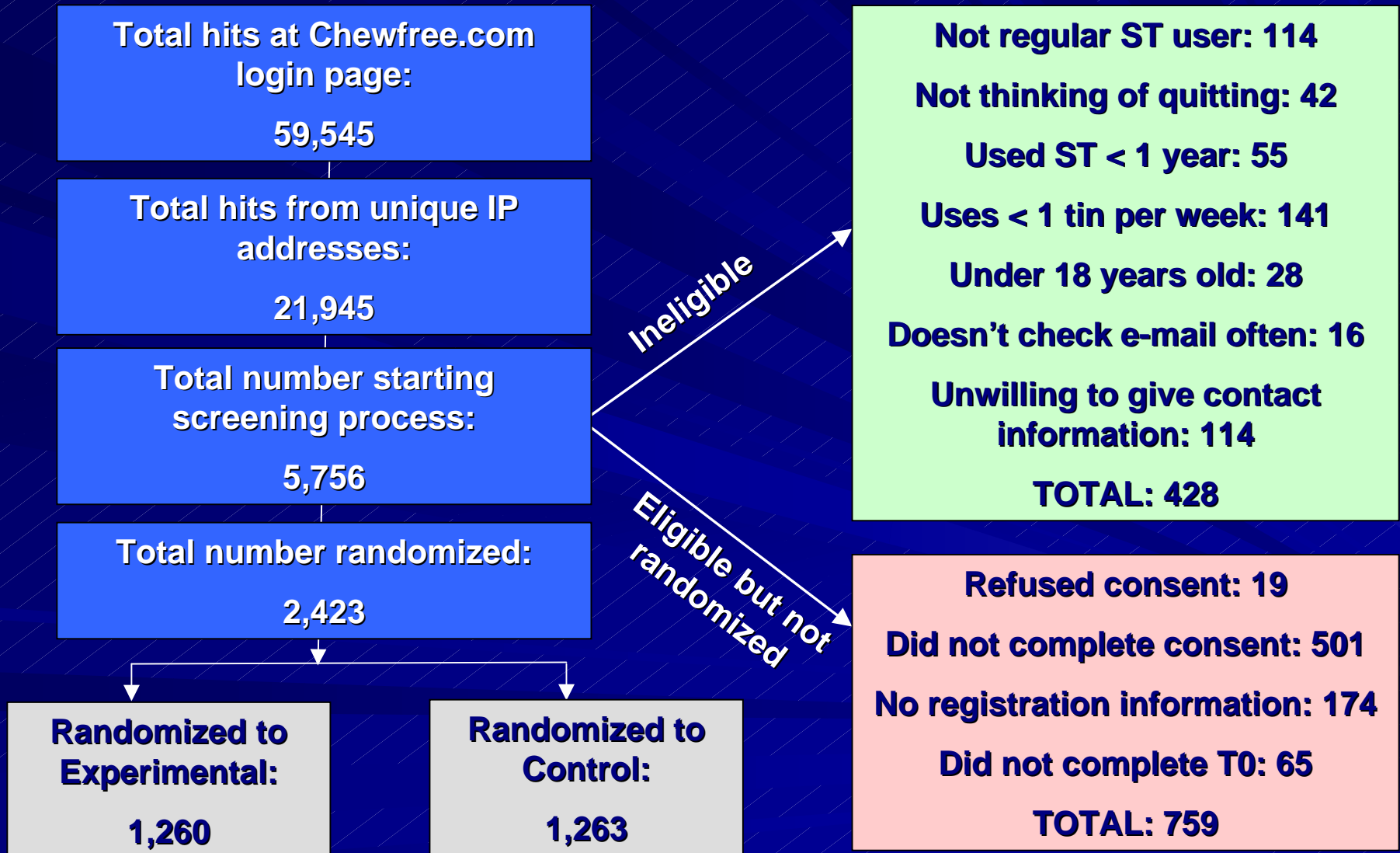
Participants enroll and are randomized to tailored & non-tailored condition

Tailored has a Personal Quit Assistant (PQA) and person develops a Plan for quitting and uses the program to stay quit (relapse prevention)

All participants get help in quitting

Follow-up at 6-weeks and 6-months

# Participant Enrollment



# Comparison of Enhanced & Basic Conditions for ChewFree.com

Feature	Enhanced Condition	Basic Condition
SLT Cessation Behavior Change Content	☒	☒
SLT Health Information	☒	☒
Links to outside Websites	☒	☒
Video Testimonials	☒	
Guided Path for Accessing Content †	☒	
Web Forums for Support	☒	
Tailored E-mail Reminders	☒	

† The Enhanced condition used a hybrid approach that combined a guided path (tunnel design) with unrestricted access to website content (matrix design) while the Basic Condition used primarily a matrix design.

# Smokeless Tobacco Use Abstinence at Follow-up Assessments for ChewFree.com

	3 Month No. (%)	6 Month No. (%)	3 & 6 Month No. (%)
<b>Responders</b>			
Enhanced Condition	269/533 <b>(50.5)<sup>†</sup></b>	238/449 <b>(53.0)<sup>†</sup></b>	177/352 <b>(49.3)<sup>†</sup></b>
Basic Condition	205/624 <b>(32.9)</b>	189/525 <b>(36.0)</b>	122/444 <b>(27.5)</b>
<b>Intent-to-Treat</b>			
Enhanced Condition	269/1260 <b>(21.3)<sup>‡</sup></b>	238/1260 <b>(18.9)<sup>*</sup></b>	177/1260 <b>(14.0)<sup>†</sup></b>
Basic Condition	205/1263 <b>(16.2)</b>	189/1263 <b>(15.0)</b>	122/1263 <b>(9.7)</b>

Enhanced and Basic conditions significantly different:

<sup>†</sup>  $p < .001$ ; <sup>‡</sup>  $p = .001$ , <sup>\*</sup>  $p < .01$

# Tobacco Abstinence at Follow-up Assessments for ChewFree.com Study

	3 Month No. (%)	6 Month No. (%)	3 & 6 Month No. (%)
<b>Responders</b>			
Enhanced Condition	239/778 <b>(30.7)<sup>†</sup></b>	212/744 <b>(28.5)<sup>†</sup></b>	149/685 <b>(21.8)<sup>†</sup></b>
Basic Condition	169/866 <b>(19.5)</b>	164/806 <b>(20.3)</b>	95/753 <b>(12.6)</b>
<b>Intent-to-Treat</b>			
Enhanced Condition	239/1260 <b>(19.0)<sup>†</sup></b>	238/1260 <b>(16.0)<sup>‡</sup></b>	149/1260 <b>(11.8)<sup>†</sup></b>
Basic Condition	169/1263 <b>(13.4)</b>	189/1263 <b>(11.7)</b>	95/1263 <b>(7.5)</b>

Enhanced and Basic conditions significantly different:

<sup>†</sup>  $p < .001$ ; <sup>‡</sup>  $p = .001$ , \*  $p < .01$

# Summary

## ■ ChewFree.com:

- is very cost effective (after development)
- minimizes need for professional
- demonstrates comparable results to other self-help cessation programs for ST users
- Assistance is available 24 hours per day
- Can reach remote subjects
- Could supplement other interventions

# Summary of ST Cessation Research

Public Health Model is as Effective as Clinical Interventions

- Phone counseling and mailed materials are effective
- Dental interventions have proven effective
- Computer & Internet programs may extend reach to users
- ST cessation may have higher rates than smoking cessation

# Typical Metaphors of ST Used by Chewers Who Are Quitting

- “The can was a best friend, more than anyone, yet it has no feelings and doesn’t care about me.”
- “I dipped Skoal/Copenhagen for 25 years. It got me through job loss, divorce, re-marriage and many other ups and downs through life. It seemed to be the one thing I could count on. It was the first place I turned when things got tense. Bottom line it was my best friend.

# ST as Bad Friend

- This little can has been like my best friend for many years, but best friends don't try to kill you, and realize it or not that's what I'm doing to myself."
- "What a bad fiend dip really was! When I remind myself of that and try to think about that I say, "With Friends like that, who needs enemies?" Really is just a mind game, but that 'friend' was playing mind games with me for years, now I'm taking back my mind!!"

# ST as Enemy - Quitting as a Battle

- “Be strong don’t let the enemy win.”
- “Don’t let a small can kick you butt. It’s your enemy. Do not let it win, if it does, well the cold hard truth is, it could kill you, it could kill all of us.”
- Cope is my pleasure, or should I say my enemy. Confrontation or excitement are my big problems.”
- “Everyone who has quit and has fought the battle helps others to fight the same battle.”

# ST as Clever Opponent

- You have to be smarter than the can.”
- “We just have to stay smarter and stronger than the leaf.”

# Addiction and Cravings as Demons

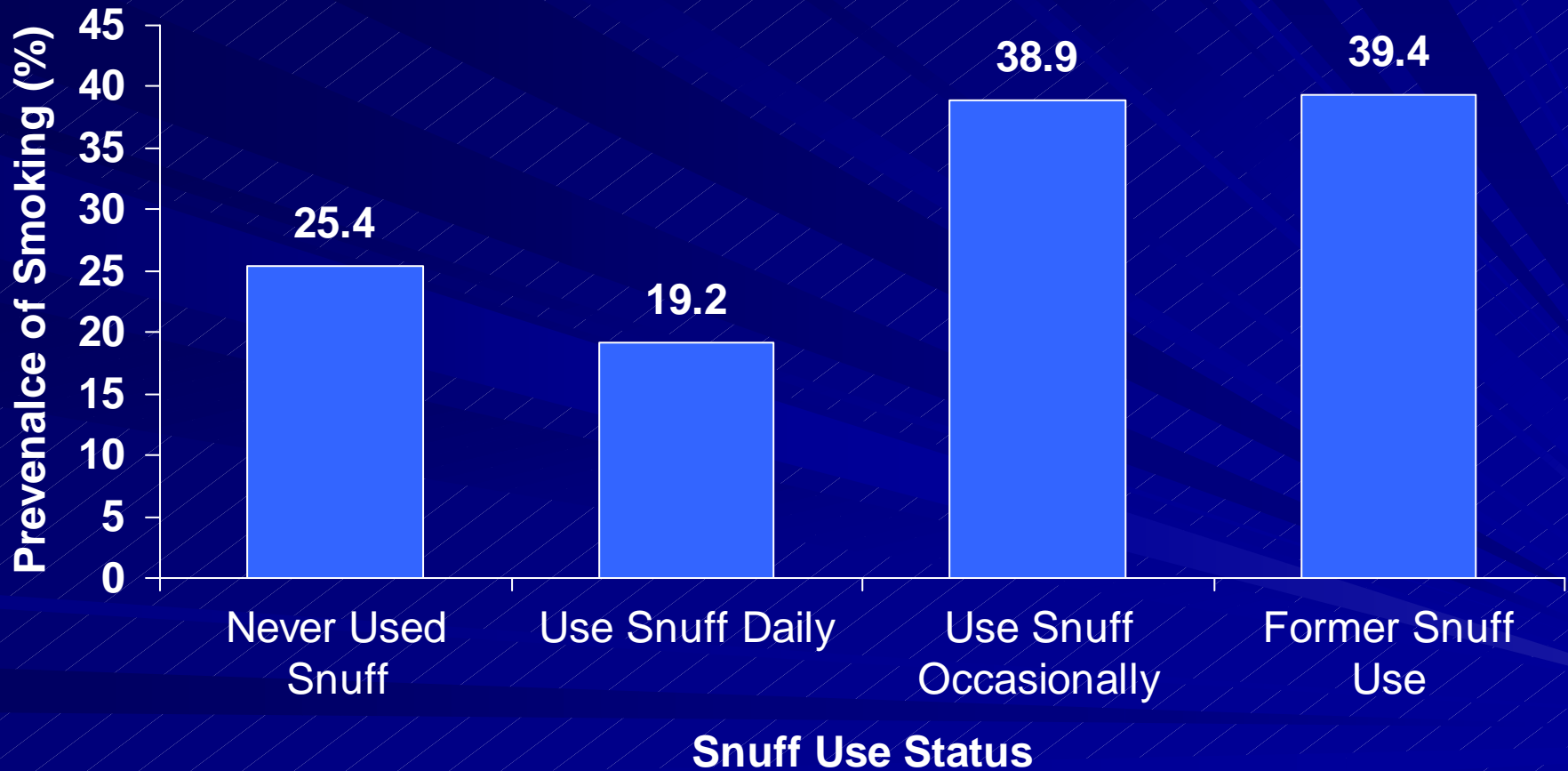
- “This addiction is Demonic, you won’t whip it with a half assed effort.”
- Be aware that there will be times that you feel depressed for no apparent reason, it’s just the nic demon trying to lure you back, don’t let him do it!”
- For me quitting was a release from a demon that plagued me for so many years.”
- My life is at stake. Good luck to me and to everyone else who is battling this devil.”

# Can ST be used to “reduce harm” of smoking?

- Premise: ST use is less harmful than smoking
- Getting smokers to switch from cigarettes to smokeless tobacco will decrease harm.
- ISSUES: Will smokers use ST to quit?
- Or: Will using ST make it LESS likely a smoker quits?

# Dual Use of Cigarettes and Snuff

## Males Age 18+, United States, 1998



# Review of evidence for ST as harm reduction product

- No evidence for ST use preventing smoking initiation and some evidence that ST use increases smoking
- US data suggest very minor role of ST in cessation
- No data on efficacy of snuff use as smoking cessation method
- Substantial prevalence of smoking among snuff users
- Snuff more consistently associated with partial substitution than complete substitution for cigarettes

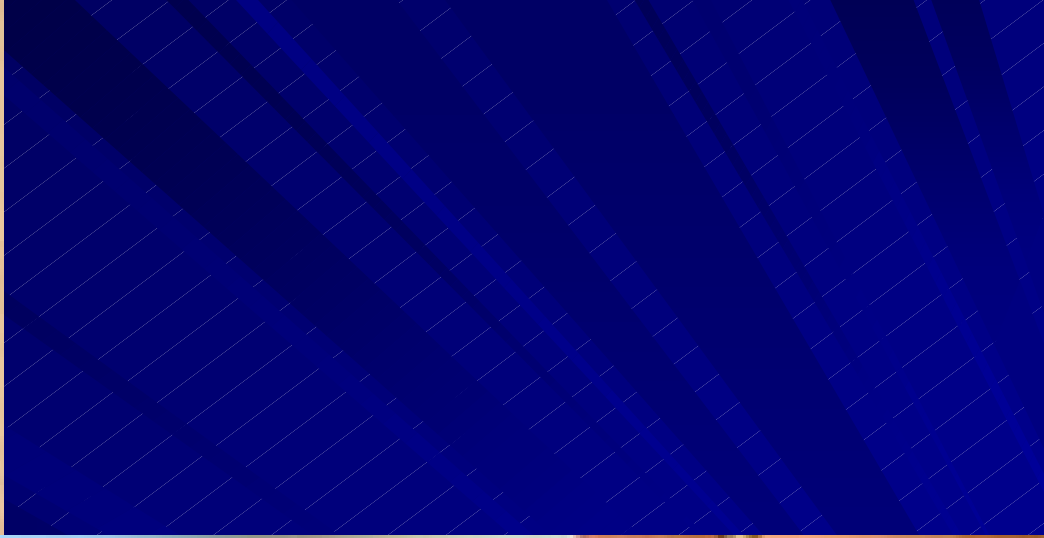
# New Smokeless Products

- New products coming out that are produced by companies that mainly market cigarettes and this may increase the market for smokeless products.

# CAMEL SNUS



# CAMEL SNUS





# What Can Communities do to Reduce ST Use

## ■ Parents:

- Educate parents about ST
- Not a “safe tobacco”
- Highly addictive – increases risk of subsequent smoking

# What Can Communities do to Reduce ST Use

## ■ Community:

- Dentists & Dental Hygienists
  - Oral exams and brief counseling
  - Materials to patients on ST
- Enforce age restrictions on access to tobacco
- Education programs for community leaders and parents on effects of ST

# What Can Communities do to Reduce ST Use

## ■ Schools:

- Offer self-help cessation materials and computer programs to help ST users
- Involve coaches in setting and enforcing non-ST use for participation in sports
- Present ST programs to athletes using peer leaders or dental health care providers.
- Provide diversion/education programs for ST users caught using on school property

# **Thanks for your time!**

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