

Development, Implementation, and Dissemination of the Nurse-Administered Tobacco Tactics Intervention

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The Goals for this Presentation

- ▶ Review data from my prior studies
 - Head and neck cancer longitudinal study
 - RCT of the nurse administered combined depression, alcohol, and smoking intervention
 - Dissemination of the Tobacco Tactics intervention in the Department of Veterans Affairs (VA)
 - Dissemination of the Tobacco Tactics intervention in 5 community hospitals
 - RCT of Tobacco Tactics for Operating Engineers
- ▶ Future directions

Head and Neck SPORE Project Project Grant on PO1

Longitudinal study to determine if health behaviors, comorbidities, and molecular markers are major predictors of quality of life, recurrence, or survival (N=811).



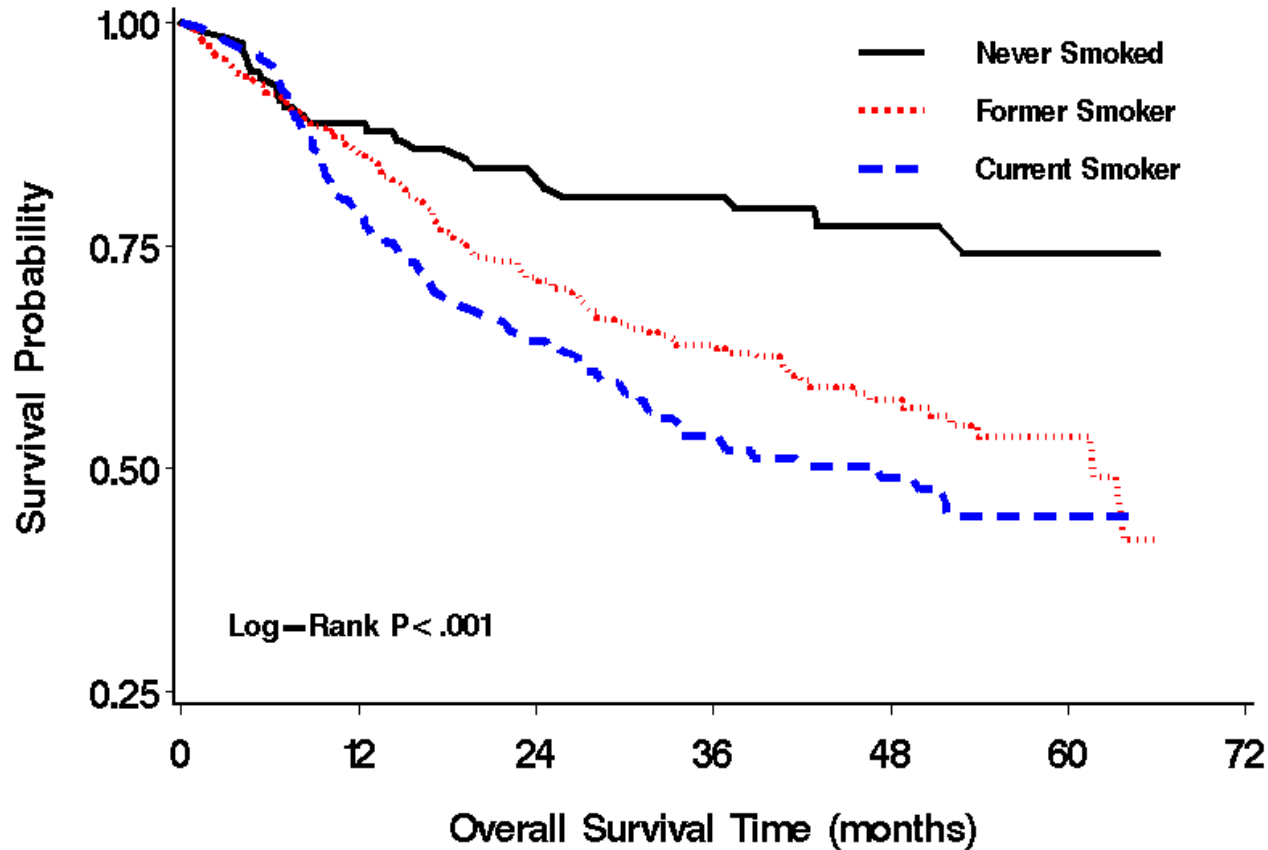
Pre-treatment Health Behaviors and Survival

Variable	Multivariate Model		
	Hazard Ratio	95% CI	P-Value
Smoking Status (vs. Never Smoked)			
Current Smoker	2.36	1.28-4.37	.006*
Former Smoker	2.02	1.16-3.51	.013*
Alcohol Problem	1.32	0.91-1.93	.146
PASE Physical Activity (per 10 pts)	0.98	0.95-1.00	.085
MOS Sleep Scale (per 10 pts)	0.96	0.89-1.04	.350
Low Fruit Intake (none to 1-3 per month)	1.26	0.88-1.81	.208
Low Vegetable Intake (none to 2-4 per week)	0.82	0.59-1.15	.242
Age (in Decades)	1.50	1.25-1.79	<.001*
Female Gender	0.74	0.47-1.16	.183
Non-White	1.09	0.68-1.77	.715
Married	0.87	0.63-1.21	.413
High School Education or Less	1.43	1.03-1.99	.032*
Cancer Site (vs. Oral Cavity/Sinus)			
Larynx Cancer Site	0.41	0.24-0.69	<.001*
Pharynx Cancer Site	0.61	0.39-0.94	.026*
Stage	1.52	1.25-1.85	<.001*
ACE-27 Comorbidity Score	1.15	0.96-1.37	.125
Radiation	0.75	0.42-1.32	.318
Chemotherapy	0.96	0.62-1.47	.835
Surgery	0.69	0.49-0.99	.043*

* Significant at P < .05

Kaplan–Meier Survival Curve – **Pre-treatment** Smoking Status and Survival

A



But Does Quitting After Diagnosis Make a Difference In Cancer Specific Survival?

<u>Multivariate models</u>			
Variable	Hazard ratio	95% CI	p value
Smoking status (vs never)			
Continuing smokers	4.45	1.29–15.37	.018*
Quitters at Dx (stayed quit 2 yrs.)	3.18	0.89–11.43	.076
Former smokers	2.38	0.99–5.74	.054

Controlling for: Age,* Sex, Race, Marital Status, Education, Income, CPD, ETOH, BMI, CA site and stage, Comorbidities, Depression, Radiation, Chemotherapy,* and Surgery*

A Nursing Intervention for Smoking, Alcohol, and Depression (VA IIR and Foundation)

- Head and neck cancer patients who screened positive for smoking, problematic alcohol use, or depression were eligible to be randomized between a nurse-delivered, combined intervention group and an “enhanced usual care” group (N=184).

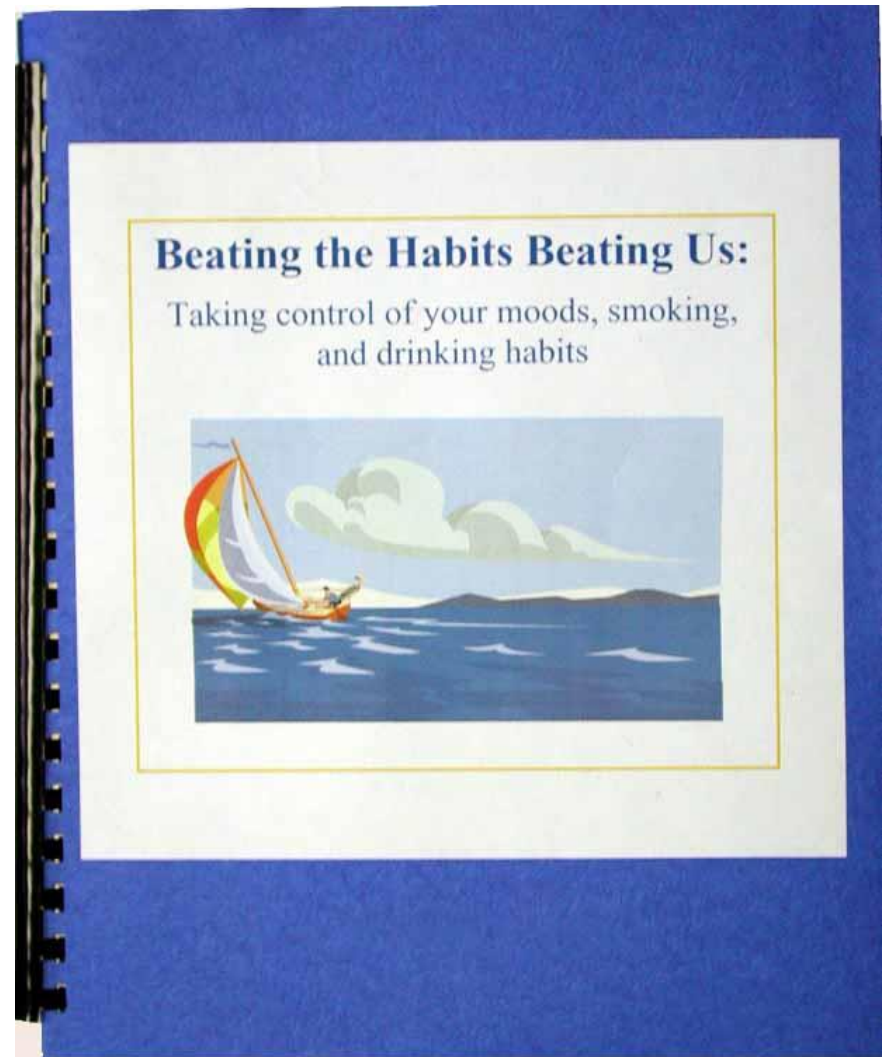
Randomized Control Trial

- ▶ Enhanced Usual Care
 - Patients receive brief counseling from the nurse and are given referrals to specialty care clinics.
- ▶ Intensive Nursing Intervention
 - Delivered by a nurse practitioner
 - Based on Cognitive Behavioral Therapy (CBT)
 - Regularly scheduled phone calls for 6 months
 - Pharmacologic Component



CBT Workbook

- Core Chapters
 - H&N Cancer
 - Emotional impact
 - Body image
 - Behavioral therapy
 - Relaxation
 - Communication
- “Mood Management”
- “Tobacco Tactics”
- “Drinking Decisions”
- Resources/Reference



Pharmacologic Component

- ▶ The nurse practitioner provides medications as needed, including:
 - Antidepressants
 - Smoking Medications
 - Nicotine replacement therapy (NRT)
 - Bupropion (Zyban)
 - Combination NRT and Bupropion
 - Varenicline (Chantix)



Results from Intervention Study

Impact on Smoking, Alcohol, and Depression

Disorder	<u>Usual Care</u> % Improved	<u>Intervention</u> % Improved	P-value [‡]
Smoking n = 136	31% (19/62)	47% (35/74)	.0481
Alcohol Problem n = 52	30% (8/27)	32% (8/25)	.8532
Depressive Symptoms n = 126	24% (15/63)	21% (13/63)	.6682

Results from Patient Evaluation (N=57 surveys and 12 interviews)

- ▶ 89% would recommend the intervention to someone else who was dealing with similar issues (cancer, smoking, drinking, or depression).
- ▶ “If a person reads and studies the manual, it can’t help but change his or her life.”
- ▶ “The program did what I was trying to do for 20 yrs.”
- ▶ “Reinforced the fact that I was not unique in my reactions to cancer, smoking and moods.”

Conclusion

- ▶ Treatment of these behaviors/disorders in combination may be more successful and practical than treating these conditions individually.
- ▶ A 2009 NIH meeting on the Science of Behavior Change acknowledged the idea that risk behaviors often occur in “bundles” and the importance of focusing on clusters that may have common underlying processes (National Institutes of Health, 2009).
- ▶ Problem: Intervention ended when randomized control trial ended.
- ▶ So how do we get these services integrated into health care environments?

*This study was conducted at the University of Michigan, supported by a grant from GlaxoSmith Kline and at the Ann Arbor VAMC, supported by VA grant IIR 98-500.



Tobacco Tactics - Bringing the Program to the Smoker (VA SDP)

- ▶ The objective of this project was to implement and evaluate the effectiveness of an inpatient, nurse-administered Tobacco Tactics program in three Veterans Affairs hospitals.

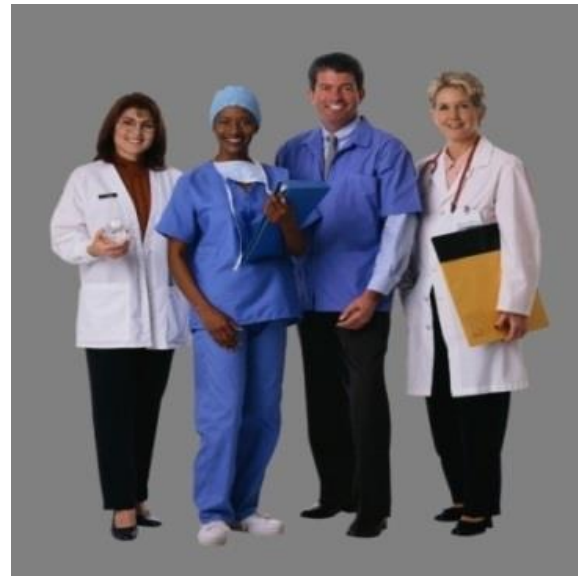


Methods

- ▶ Patients admitted to the Ann Arbor and Detroit VAs received the Tobacco Tactics intervention, while patients admitted to the Indianapolis VA received usual care.
- ▶ Tobacco Tactics toolkits for nurses and patients were developed and training sessions were implemented.
- ▶ Formative (process) evaluation (patient and staff interviews and surveys).
- ▶ Once nurse trainers were withdrawn, sustainability and summative evaluation was conducted.
- ▶ Summative (outcome) evaluation (6-month cessation rates) – Smokers in all sites were surveyed at baseline and 6 months (plus mailed a urine cotinine test) after discharge about their smoking habits.

Tobacco Tactics Toolkit for Nurses

- ▶ One contact hour for training
- ▶ PowerPoint presentation on behavioral and pharmaceutical interventions
- ▶ Behavioral and pharmaceutical protocols
- ▶ Pocket card “Helping Smokers Quit: A Guide for Clinicians”
- ▶ Computerized template for documentation



Behavioral Protocol

- ▶ Assess if patient interested in quitting.
- ▶ If patient not interested, leave brochure at bedside.
- ▶ If patient interested, leave brochure and arrange for patient to view videotape.
- ▶ After videotape, provide patient with patient manual to read if able.
- ▶ Using patient manual, assist patient with behavioral intervention including:
 - Self-assessment
 - Smoker type
 - Smoking costs
 - Handling cravings
 - Relapse prevention
 - Medication options
- ▶ Along with patient, identify and arrange for cessation medications (see pharmaceutical protocol).
- ▶ Arrange for follow-up calls.



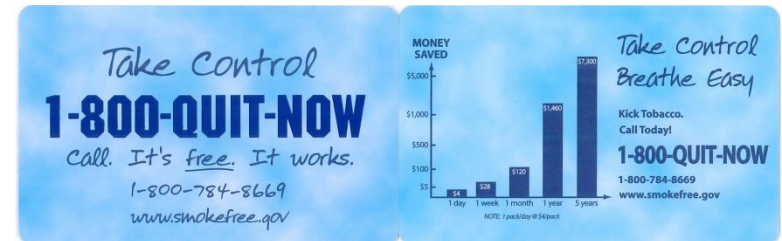
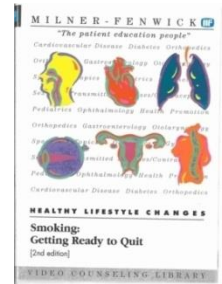
Pharmaceutical Protocol

1. Recommend nicotine replacement (patch, gum, or lozenge) if:
 - Never used patch, gum, or lozenge before.
 - Used patch, gum, or lozenge successfully in the past (smoke-free > 3 months).
2. Recommend nicotine replacement (patch AND gum OR lozenge) if:
 - Smoke greater than 1 pack per day
 - Failed nicotine replacement therapy in past
3. Recommend Bupropion if:
 - Failed nicotine replacement monotherapy in the past (smoke-free <3 months).
 - Patch, gum, or lozenge intolerant (i.e. rash, etc.).
 - History of depression or currently has depressive symptoms.
4. Recommend combination nicotine replacement (patch, gum, or lozenge) and Bupropion if:
 - Failed nicotine replacement and Bupropion monotherapy in the past.
5. Recommend Varenicline if:
 - Intolerance or treatment failure to nicotine replacement and bupropion.



Toolkit for Patients

- ▶ Brochure
- ▶ Videotape – Smoking: Getting Ready to Quit
- ▶ Tobacco Tactics manual
- ▶ 1-800-QUIT-NOW card
- ▶ Pharmaceuticals (physician sign off on meds; reminded physicians to give advice to quit)
- ▶ Volunteer follow-up telephone calls



Documentation (VA Template)

Reminder Dialog Template: NURSING ADMISSION ASSESSMENT

TOBACCO USE SCREENING
(REQUIRED) ASK patient about tobacco use. Patients who have smoked or quit smoking within the last year need to receive a brief counseling about the benefits of quitting tobacco.

Lifetime non-user of tobacco

Patient quit tobacco greater than 1 year ago.

Patient is a current tobacco user and is interested in quitting Or quit within the last 12 months.

Patient interested in quitting:

1. Advised the patient to set a quit date, ideally within 2 weeks
2. Patient advised to remove all tobacco product from the home and work.
3. Potential challenges to quitting, staying off tobacco and planning ahead on how to deal with the challenges was discussed with the patient.
4. Providing the patient with strong messages of support and encouragement.

Quit Smoking brochure provide to the patient.

Stop Smoking Videotape was provided to the patient

Tobacco Tactics Workbook was provided to the patient

Smoking Cessation Aids:

Nicotine replacement therapy:

Patient is interested in bupropion.

Visit Info Finish Cancel

The patient was asked about tobacco use.
Patient is a current tobacco user and is interested in quitting Or quit

Patient Educations: **Smoking Cessation Medications**
Health Factors: **CURRENT SMOKER, CURRENT TOBACCO USER, NDB TOBACCO CURRENT USER, TOBACCO OFFERRED STOP SMOKING CLINIC, TOBACCO SCREEN FY07 BROCHURE, TOBACCO SCREEN FY07 TACTICS WORKBOOK, TOBACCO SCREEN FY07 VIDEOTAPE**

* Indicates a Required Field

Cover Sheet Problems Meds Orders Notes Consults Surgery D/C Summ Labs Reports

start Inbox - Microsoft Out... CPRS - Patient Chart 2:28 PM

Formative (Process) Evaluation

- ▶ Approximately 96% (210/219) of inpatient nurses in the Ann Arbor, MI site and 57% (159/279) in the Detroit, MI site were trained, with an additional 282 non-targeted personnel spontaneously attending.
- ▶ Nurses' self-reported administration of cessation services increased from 57% pre-training to 86% post-training ($p < 0.0001$).

Propensity-adjusted quit rates by site and pre- versus post-intervention time

	Ann Arbor (N=387)			Detroit (N=247)			Indianapolis (N=269)		
	Pre-I n=203	Post-I n=184	P-Value	Pre-I n=201	Post-I n=46	P-Value	Pre-I n=132	Post-I n=137	P-Value
	%	%		%	%		%	%	
Adjusted self-reported 6-month quit rate ^a	6.5%	6.1%	0.87	4.0%	12.7%	0.05	26.4%	12.4%	<0.001
Adjusted cotinine-verified 6-month quit rate ^a	5.4%	4.9%	0.82	3.7%	6.2%	0.48	18.0%	11.6%	0.01

^aPropensity score includes: age, comorbid diabetes, admitted for heart disease, stroke, surgery or psychiatric problems, self-rated health and thinking that quitting smoking will be difficult.

Summative (Outcome) Evaluation

	Self-reported 6-month cessation		Cotinine-verified 6-month cessation	
	Beta (SE)	P-value	Beta (SE)	P-value
Intercept	-1.13 (0.53)	0.03	-1.72 (0.64)	0.009
Ann Arbor site (vs. Indianapolis)	-1.12 (0.39)	0.004	-0.55 (0.47)	0.24
Detroit site (vs. Indianapolis)	-1.03 (0.38)	0.007	-0.79 (0.49)	0.11
Post-intervention time period (vs. pre-intervention)	-2.51 (0.75)	0.001	-1.73 (0.79)	0.03
Ann Arbor site X Post-intervention time period	2.50 (0.88)	0.004	1.71 (0.93)	0.07
Detroit site X Post-intervention time period	3.58 (0.91)	<0.001	2.40 (1.06)	0.02

Sustainability

- ▶ Nurse training has been incorporated into new nurse employee orientation.
- ▶ Program continues to thrive on its own in Ann Arbor, Detroit, and Chicago.
- ▶ In 2011, the Joint Commission released new standards which apply to all inpatient smokers and include tobacco use screening, treatment in the hospital, treatment at discharge, and follow-up telephone contact 1 month after discharge.

Implementation of the Tobacco Tactics intervention versus usual care in Trinity Health community hospitals (UO1)



Tough Enough to Quit!

- ▶ The objective of the study was to test the the nurse-administered Tobacco Tactics intervention versus usual care in 5 Trinity Health community hospitals.

Design, Setting, and Sample

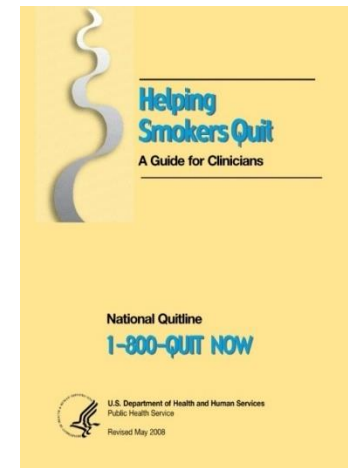
- ▶ Quasi-experimental design.
- ▶ Convenience sample of 5 Michigan Trinity Health community hospitals.
- ▶ Three hospitals received the nurse-administered Tobacco Tactics intervention and 2 received usual care.

	Population Quit Rates Pre-Intervention		Population Quit Rates Post-Intervention
3 Intervention Hospitals	O_1	X_1	O_2
2 Usual Care Control Hospitals	O_1		O_2

- ▶ O=Observation
- ▶ X=Intervention

Description of Tobacco Tactics Intervention Toolkit for Providers

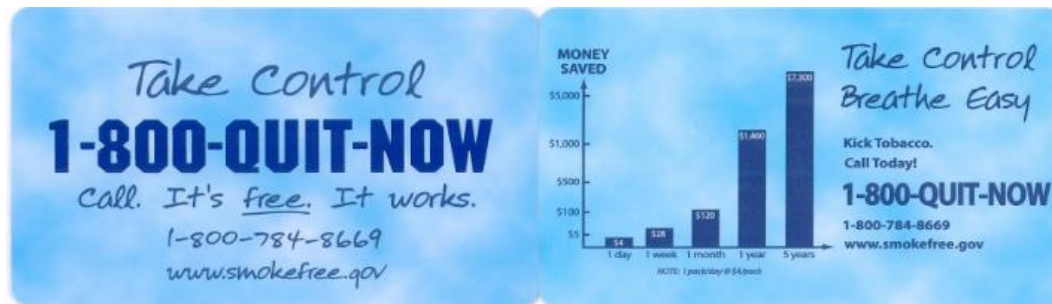
- ▶ 1 continuing education unit (CEU) for training.
- ▶ PowerPoint presentation on behavioral and pharmaceutical protocols.
- ▶ Pocket card “Helping Smokers Quit: A Guide for Clinicians”.
- ▶ Physician reminder to offer brief advice to quit to patients, which was coupled with medication sign-off.
- ▶ Computerized template for nurse documentation based on the components of Joint Commission Smoking Cessation standards.



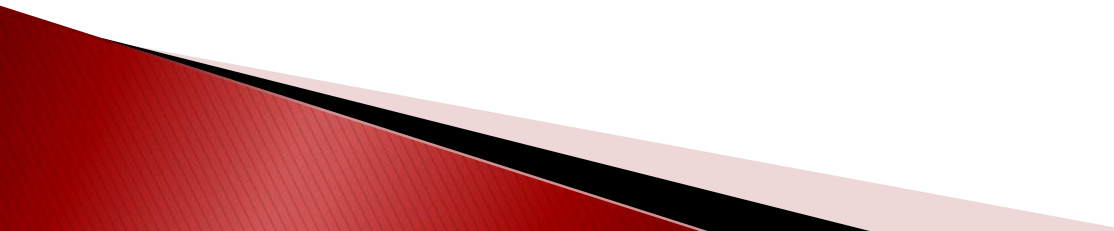
Tobacco Use Cessation Info Offered	Smoking Status	Accepted Tobacco Use Cessation Info
No	Current everyday smoker	No

Toolkit for Patients

- ▶ Brochure.
- ▶ Cessation digital video disc (DVD).
- ▶ Tobacco Tactics patient manual.
- ▶ Nurse behavioral counseling and pharmaceuticals.
- ▶ 1-800-QUIT-NOW card.
- ▶ Follow-up phone calls by trained hospital volunteers.



Description of Usual Care

- ▶ All inpatients were screened for smoking on the nursing assessment.
 - ▶ Nurses were instructed to give smokers brief advice to stop smoking.
 - ▶ There were no systematic protocols in place for medications, which were only sporadically provided.
- 

Process Evaluation

Nurse/Personnel Participation Variables	n	%
Targeted inpatient RN and licensed practical nurses (LPNs) participated in the training	1,028/1,352	76%
Non-targeted providers participated in the training	317	
Extremely/somewhat satisfied with the training	1,336	90%

Changes in Nurses' Self-Reported: Attitudes & Behaviors of Smoking Cessation

Variable	Pre Intervention=1345 Control=375 n (%)	Post Intervention=849 Control=296 n (%)	Chi-Square P value
Smoking cessation is very or extremely important			
Intervention	1015 (75.9)	567 (83.6)	<0.001
Control	249 (75.0)	145 (54.9)	<0.001
Very or extremely confident in ability to provide smoking cessation			
Intervention	382 (28.6)	387 (57.1)	<0.001
Control	141 (43.1)	80 (30.3)	<0.001
Currently provide smoking cessation services			
Intervention	1134 (84.9)	635 (92.4)	<.001
Control	273 (82.0)	195 (73.0)	0.009

Changes in Nurses' Self-Reported: Provision of Smoking Cessation Services

Variable	Pre Intervention=1345	Post Intervention=849	Chi-Square P value
	Control=375 n (%)	Control=296 n (%)	
Advice			
Intervention	940 (83.9)	588 (93.5)	<.001
Control	242 (90.3)	161 (83.9)	0.039
Individual counseling			
Intervention	267 (23.8)	255 (40.7)	<.001
Control	91 (34.1)	53 (27.7)	0.150
Group counseling			
Intervention	48 (4.3)	43 (6.9)	0.019
Control	21 (7.9)	24 (12.6)	0.095
Medications			
Intervention	845 (75.7)	533 (85.6)	<.001
Control	227 (84.7)	157 (81.8)	0.404
Hand-outs			
Intervention	1022 (91.1)	593 (94.3)	0.017
Control	200 (74.6)	148 (77.1)	0.545
DVD			
Intervention	94 (8.4)	88 (14.0)	<.001
Control	16 (5.9)	13 (6.8)	0.709
Phone calls			
Intervention	35 (3.2)	43 (6.9)	<.001
Control	9 (3.4)	7 (3.7)	0.866

Changes in Nurses' Self-Reported: Barriers to Smoking Cessation Services

Variable	Pre Intervention=1345 Control=375 n (%)	Post Intervention=849 Control=296 n (%)	Chi-Square P value
Face barriers that make it difficult to provide smoking cessation services			
Intervention	1042 (78.9)	431 (64.2)	<0.001
Control	199 (59.9)	148 (56.1)	0.340
Barriers indicated:			
Lack of confidence			
Intervention	198 (14.7)	74 (8.7)	<0.001
Control	24 (6.4)	16 (5.4)	0.589
Not enough training			
Intervention	435 (32.3)	42 (4.9)	<0.001
Control	78 (20.8)	67 (22.6)	0.566
Not enough time			
Intervention	665 (49.4)	246 (29.0)	<0.001
Control	104 (27.7)	87 (29.4)	0.636
Hesitant to upset patients			
Intervention	378 (28.1)	134 (15.8)	<0.001
Control	49 (13.1)	53 (17.9)	0.083
Not my job			
Intervention	50 (3.7)	8 (0.9)	<0.001
Control	15 (4.0)	22 (7.4)	0.053

Outcome Results: Quit Rates Pre- Versus Post-Intervention (N=1370)

Overall self-reported quit rates	Intervention Sites N=884			Control Sites N=486	
Pre-intervention	6.8%			6.2%	
Post-intervention	17.6%			7.4%	
P-Value	<.001			.741	
Cotinine-verified quit rate*					
Pre-intervention	3.7%			2.5%	
Post-intervention	7.1%			3.2%	
P-value	<.05			.670	
Self-reported quit rate by site	Muskegon Mercy N=132	Ann Arbor N=349	Grand Rapids N=403	Muskegon Hackley N=215	Livonia N=271
Pre-intervention	5.4%	7.2%	6.8%	6.5%	5.9%
Post-intervention	13.2%	14.2%	23.4%	8.3%	6.6%
P-value	0.137	0.038	<0.001	0.617	0.814

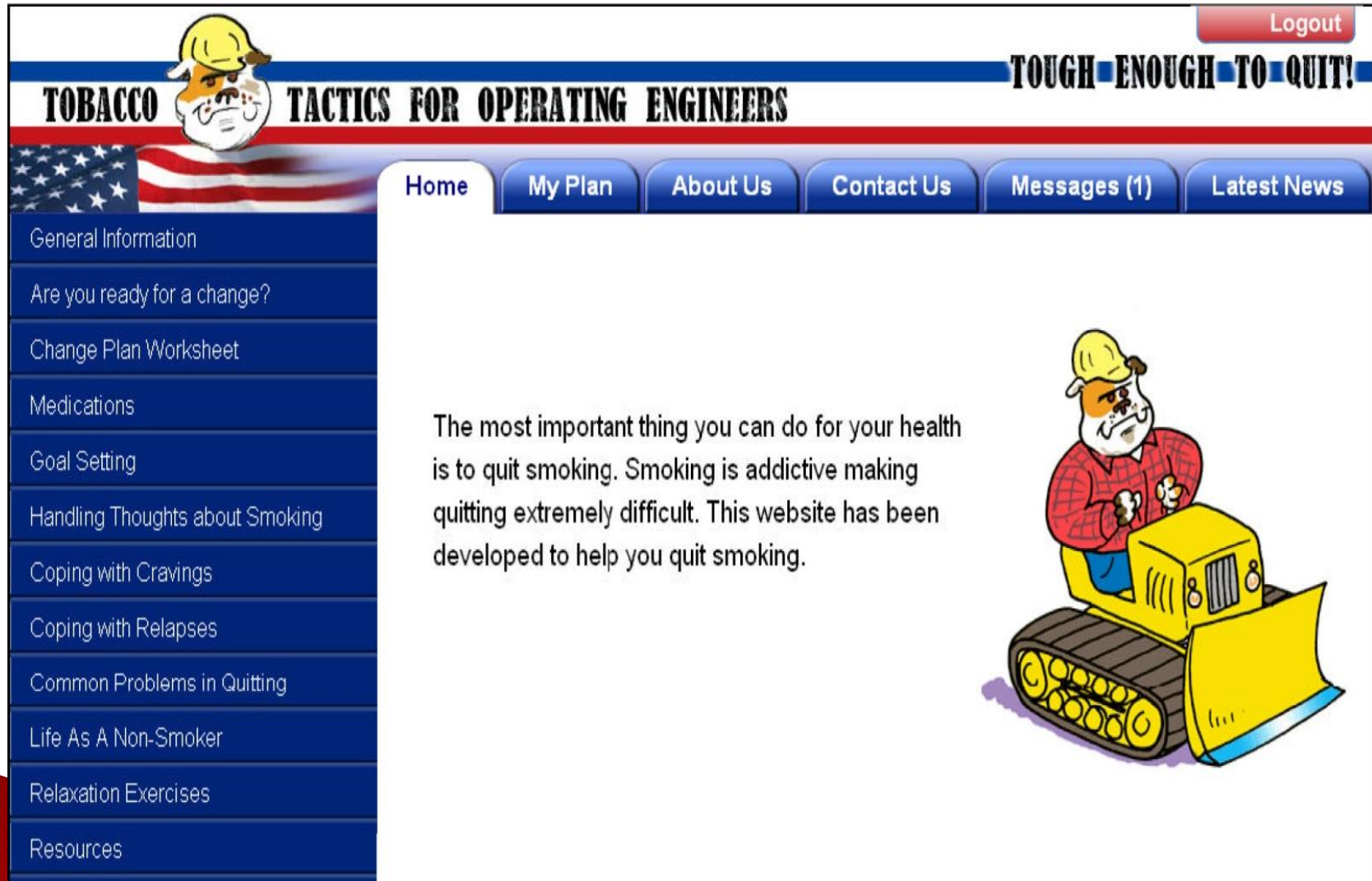
Outcome Results: Propensity-Adjusted GEE Models of Six-Month Smoking Cessation by Intervention Status of Hospital, Post-intervention Time Period and Interaction of Intervention Status of Hospital By-Post-Intervention Time Period (n=1336)

	Self-reported 6-month cessation		Cotinine-verified 6-month cessation	
	Beta (SE)	P-value	Beta (SE)	P-value
Intercept	-2.82 (0.34)	<0.0001	-3.63 (0.69)	<0.0001
Intervention sites (vs. Control sites)	-0.10 (0.45)	0.82	0.32 (0.73)	0.66
Post-intervention time period (vs. pre- intervention)	0.16 (0.34)	0.65	0.24 (0.91)	0.79
Intervention sites X Post- intervention time period	0.90 (0.43)	0.04	0.46 (1.00)	0.65

Sustainability

- ▶ At the end of the study, nurses in the control hospitals were also trained.
- ▶ Nurses in the hospitals continue to implement the intervention.

R21: Randomized Control Trial of Tobacco Tactics Website vs. 1-800-QUIT-NOW telephone quit line (VA RRP and BC/BS of Michigan Foundation)



The screenshot shows the website's header with a bulldog mascot wearing a yellow hard hat. The main title is "TOBACCO TACTICS FOR OPERATING ENGINEERS" with the slogan "TOUGH ENOUGH TO QUIT!". A navigation bar includes "Home", "My Plan", "About Us", "Contact Us", "Messages (1)", and "Latest News". A sidebar on the left lists various resources. The main content area features a paragraph about the importance of quitting smoking and a cartoon illustration of the bulldog mascot operating a yellow tracked bulldozer.

[Logout](#)


TOBACCO TACTICS FOR OPERATING ENGINEERS

TOUGH ENOUGH TO QUIT!

[Home](#) [My Plan](#) [About Us](#) [Contact Us](#) [Messages \(1\)](#) [Latest News](#)

- General Information
- Are you ready for a change?
- Change Plan Worksheet
- Medications
- Goal Setting
- Handling Thoughts about Smoking
- Coping with Cravings
- Coping with Relapses
- Common Problems in Quitting
- Life As A Non-Smoker
- Relaxation Exercises
- Resources

The most important thing you can do for your health is to quit smoking. Smoking is addictive making quitting extremely difficult. This website has been developed to help you quit smoking.



Websites

- ▶ <http://va-tobaccotactics.nursing.umich.edu/>
 - test, testpass
- ▶ <http://bcbsm-operatingengineers.nursing.umich.edu/>
 - Talvarez, testpass

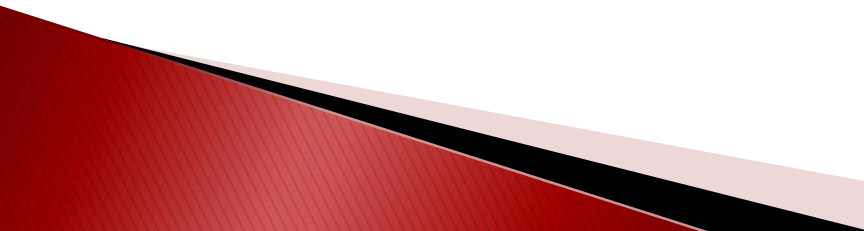
Results from Tobacco Tactics Website for Operating Engineers with Nurse Telephone Follow-Up

	<u>Tobacco Tactics</u> N=59	<u>1-800-QUIT-NOW</u> N=68	P value
Thirty-day quit rate	27%	8%	.004
Six-month quit rate	12%	12%	NS
Among smokers at 6 months, Cigarettes smoked/day (Change from Baseline)	-6.6	1.0	.02

Smoking and Cancer Patients

- Focus Groups and Interviews with Cancer Patients (Never, Former, and Current Smokers), Caregivers, and Staff (N=47) at Six Comprehensive Cancer Centers (CCCs)
- (Dana Farber, Hopkins, Duke, Emory, Northwestern, OSU)

Comments on Tobacco Tactics

- Need human touch
 - Empower them: You can take control and we will help you.
 - Workbook a good idea.
 - “I know my nurse” – they can be a big help.
 - Relationship with nurse is golden
 - Would be great to have healthcare team assist me to quit
- 

Comments on Referral to NCI Resources

- Would be a stranger.
- My husband would never have called a quit line
- Too much on plate already to call quit line
- Nurse would have to “sell” it.
- Make the 1st call with the nurse

So that is a bird's eye view of my past work. Questions?

