Annual Report 2003

# Strengthening Our Focus

The Center for Tobacco Research and Intervention
University of Wisconsin Medical School

uw-ciri

Center for Tobacco Research and Intervention University of Wisconsin Medical School

# The Mission

The mission of UW-CTRI is to expand our understanding of tobacco dependence and its treatment and to use this knowledge to design and implement interventions that will significantly reduce tobacco use in Wisconsin, in the nation and beyond.

# The Center

The University of Wisconsin Center for Tobacco Research and Intervention (UW-CTRI) was established in 1992 by the University of Wisconsin-Madison as the lead campus agency addressing tobacco use in our society. It is a nationally recognized authority on tobacco dependence and treatment.

# **Center Organization**

The Center for Tobacco Research and Intervention is organized within the University of Wisconsin Medical School. The founder and Director of UW-CTRI is Michael C. Fiore, M.D., M.P.H., Professor of Medicine, and the Associate Director is Timothy B. Baker, Ph.D., Professor in the Department of Psychology.

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# From the Director . . .

# **Strengthening Our Focus**



Michael Fiore

his year's annual report, "Strengthening Our Focus," describes a year that has seen a greater emphasis on planning and a greater concentration on achieving our mission. Last year we engaged in a significant strategic planning exercise. This year we have used the results of that exercise to focus on the areas of tobacco research and intervention in which we have the greatest expertise and to which we can make the greatest contribution.

This means that we have continued our research directed toward understanding tobacco dependence. All of the data from our Trandisciplinary Tobacco Use Research Center program, the five-year \$10 million National Institutes of Health-sponsored research grant, has been collected and we are now analyzing it. Through this effort, we are gaining a better understanding of tobacco withdrawal and relapse that will inform future research and treatment.

We have also increased our collaborations with pharmaceutical companies to test new medications. Three active studies are underway, including two experimental medications—each with a different approach to helping smokers quit and treating tobacco dependence.

We have used our knowledge and expertise in the policy arena. As chair of the Subcommittee on Cessation of the Interagency Committee on Smoking and Health, at the behest of Health and Human Services Secretary Tommy Thompson, we worked with experts in tobacco cessation to create a National Action Plan for Tobacco Cessation. This plan provides a roadmap for providing services and funding to prevent three million deaths from smoking by helping more Americans successfully quit.

We have focused our Outreach Program on providing more and better training and materials for healthcare providers. We have expanded cooperation between the extremely successful Wisconsin Tobacco Quit Line and our outreach specialists through the Fax to Quit Program and the Free Patch Program for low-income populations.

This provides just a sample of the variety of activities completed in 2003, some of which are detailed in this report. Our goal during this period has been to focus on doing the very best we can to promote smoking cessation. In that way, we have advanced our mission—to understand, treat and reduce tobacco dependence in the state and the nation through research, intervention and policy.

# **Focus on National Programs**

## **Understanding and Treating Tobacco Dependence**

The University of Wisconsin Center for Tobacco Research and Intervention (UW-CTRI) has a history of conducting significant research in the field of tobacco dependence. UW-CTRI research concentrates on two areas—understanding tobacco dependence and developing new treatments, including medications, counseling and new combinations of treatments. The long-term goal is to use the expanded knowledge of tobacco dependence in a effort to identify improved methods for helping smokers quit for good.

### Transdisciplinary Research: Understanding and Preventing Relapse

Currently, much of the research conducted at UW-CTRI is part of our national Transdisciplinary Tobacco Use Research Center (TTURC) grant program. One of seven centers nationwide selected for this National Institutes of Health-funded program, the UW-TTURC has as its theme—Understanding and Preventing Relapse. Three major studies and five pilot projects are part of this program. The major studies each include components aimed at understanding and assessing innovative treatment modalities.

# Major UW-TTURC Research Studies

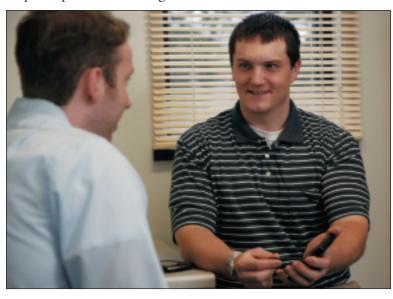
#### Measurement of Tobacco Dependence

This study focuses on assessing tobacco dependence, which causes smokers to persist in tobacco use despite harmful consequences. As a first step in this research effort, UW-CTRI researchers developed a questionnaire designed

to measure tobacco dependence—
the Wisconsin Inventory of Smoking
Dependence Motives (WISDM). In
addition to the initial development of the
WISDM, this research features a clinical
trial that will permit the validation of the
questionnaire. Thus far, this research
has shown that the WISDM scales are
capable of predicting core criteria
of dependence: withdrawal severity,
smoking heaviness and relapse.

**Results.** Preliminary results presented at the Society for Research on Nicotine and Tobacco (SRNT) Annual Meeting





by Megan Piper, MA, suggested that there were significant gender differences in treatment effects and that bupropion did not eliminate these differences. The 12-month outcome data showed that the combination of bupiopion and nicotine gum was of significant benefit to women, but not men. Another finding from this research was that when relapse occurs, it tends to take place very early in the post-quit period (i.e. within the first week of the quit attempt). Medications appear to exert their effects very early in the quitting process.

# Real-time Response: Assessments of Quitting Processes and Treatment Effects

This study, conducted in Madison, used hand-held computers so that participants could record their experiences during their quit attempt. Participants were randomly selected to receive bupropion SR or a placebo, and either counseling or no counseling. Collecting information on withdrawal and relapse as it takes place will help researchers learn how treatments work, whether bupropion SR reduces withdrawal symptoms, whether participants follow counseling recommendations and whether these recommendations help participants quit smoking.

**Results**. An individual's symptoms on the quit day and prior to the quit day appear to be relevant to the smoker's ability to stay quit. Increased craving on the quit day predicted three-month smoking status. Variability among smokers increased after the quit day, suggesting that quitting smoking may uncover individual differences that are masked by smoking.

#### Computer-based Prevention of Relapse to Smoking Study

In this study, UW-TTURC and the UW Center for Health Systems Research and Analysis (CHSRA) developed an internet-based computer program, "Quitting Smoking for Life," to be used as a smoking relapse prevention

treatment. In the first phase of the study, the computer program was tested in a clinical trial that compared a standard smoking cessation treatment (bupropion and brief counseling) to a combination of these two standard treatments plus the computer program.

Results. Preliminary results presented in a poster by Mark Zehner, CCRC, at SRNT found that smokers who used the computer program most often were more likely to report a high level of "ease in obtaining information on quitting smoking and in getting help with withdrawal symptoms and negative emotions." We also learned that having access to the computer program did not



increase "ease of getting support from others." An additional finding was that access to the computer program did not produce increased abstinence for all participants. People who used the program heavily achieved greater success than those who used it less or not at all.

#### **UW-TTURC Collaborations**

#### University of Utah Genetics Research Grant

Tim Baker, UW-CTRI Associate Director, is working with Utah geneticists on research expected to reveal genetic markers for tobacco dependence. UW-TTURC staff are providing their expertise in phenotypes, or the characteristics of smokers resulting from both heredity and environment, while University of Utah experts will provide genetic analysis.

This collaboration was funded in 2003 by a five-year, \$10 million grant from the National Heart, Lung and Blood Institute. The study will compare genotypes of smokers with those of non-smokers. Blood samples from non-smokers were obtained either from within the smoker's family or from the community in conjunction

with UW-TTURC research on dependence. The genes being explored are those that are theoretically linked to nicotine dependence.



#### University of Wisconsin Communications Grant

In 2003, David Gustafson, UW-TTURC principal investigator on the Computer-Based Prevention of Relapse research study, was awarded a \$10 million Center of Excellence in Cancer Communications Research, a grant from the National Cancer Institute. The five-year grant will allow researchers to enhance a computer system, known as the Comprehensive Health Enhancement Support System (CHESS), that currently provides support to patients with a number of diseases, including breast cancer and AIDS, as well as smokers trying to quit. Some of the elements developed for the UW-TTURC relapse prevention program are being adapted for use in the cancer communications research.

#### **2003 MILESTONES**

Research

Rimonabant trial begins, ultimately has 129 participants randomized for treatment.

Final treatment for 284 participants in the TTURC computer-based program, "Quitting Smoking for Life."

Second clinical trial of varenicline starts in Milwaukee. More than 80 participants enrolled.

DNA samples given by Milwaukee non-smokers as part of a TTURC genetics study collaboration with the University of Utah.

Trial of nicotine vaccine begins. 21 participants enrolled in study.

Varenicline study begins in Madison with 83 participants by the final enrollment.

Second Phase of the TTURC computer-assisted quitting program begins.

TTURC Dependence study one-year follow-up ends. 608 total in study.

TTURC Real-Time Response study ends. 462 total in study.

## **Medication Clinical Trials**

This year was characterized by an increased interest nationally in new medications to treat tobacco dependence. UW-CTRI conducted clinical trials for three new medications.



In March, the Center began a trial of rimonabant, a new drug, developed by Sanofi-Synthelabo, which is believed to improve long-

term smoking cessation and reduce or eliminate the weight gain traditionally associated with quitting.

A study being conducted in Madison and Milwaukee of varenicline, a new stop smoking medication from Pfizer, acts to reduce the effects of nicotine in two ways—reducing the immediate effects of nicotine and the length of the nicotine high.

In addition, the Center began a trial to determine the safety of a vaccine against nicotine that is being developed by Nabi. Previously tested on rats, the vaccine is in the early stages of human testing. The vaccine is designed to stimulate the production of antibodies that attach to the nicotine molecules and prevent their absorption by the brain.

# **Health Systems Research**

#### Addressing Tobacco In Managed Care (ATMC)

The ATMC program, funded by The Robert Wood Johnson Foundation (RWJF), is intended to promote the integration of effective smoking cessation treatments into basic healthcare provided by managed care organizations (MCO). To achieve this objective, the program provides grants to evaluate the effectiveness of organizational strategies to implement the recommendations of the U.S. Public Health Service Clinical Practice Guideline: *Treating Tobacco Use and Dependence*. UW-CTRI manages this program as the national program office.



Addressing Tobacco in Managed Care

NICOTINE
TOBACCO
RESEARCH

OFFICIAL JOURNAL OF THE
SOCIETY FOR RESEARCH ON NICOTIME AND TOBACCO

Réditers: Gary R. Swan and Danid J. K. Balfour

Addressing Tobacco
in Managed Care

The projects funded under this initiative examine the impact

of organizational strategies (including clinical, financial and administrative practices) on such outcomes as rates of smoker identification, utilization of cessation benefits or programs, rates of clinician intervention and costs of intervention efforts. This program of research spans the full spectrum of MCO models so that results may benefit a wide range of providers and health plans.

#### 2003 MILESTONES ATMC

Grantees presented findings at the Society for Research on Nicotine and Tobacco Annual Meeting.

Grantees made presentations at the American Association of Dental Schools/International Association of Dental Research Annual Conference.

Research results were presented by grantees at the Society for Behavioral Medicine Annual Meeting.

"Opportunities and Challenges in Designing and Implementing Provider Feedback Systems," program was presented at the 2003 ATMC Annual Conference.

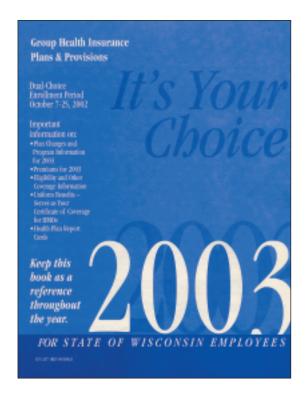
Research results were presented at the Society for General Internal Medicine Annual Meeting.

"Systems-Level Innovations to Promote Tobacco Treatment in Health Care Settings," was presented at the 2003 National Conference on Tobacco or Health.

## **Employer Initiative**

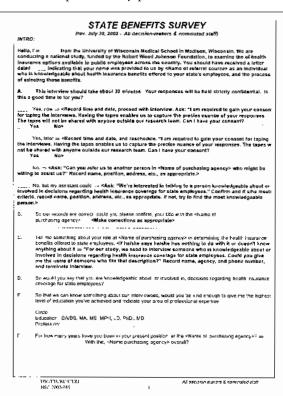
#### Cost of Treatment Study—Wisconsin

The RWJF funds two related studies at UW-CTRI as part of the UW-TTURC Policy Research program. Both studies examine different dimensions of insurance coverage for tobacco cessation treatment for state employees. The first study, a Cost of Treatment study, examines the awareness, use, and cost of insurance coverage for tobacco cessation treatment among Wisconsin state employees and retirees. It is a three-year observational study in which 16 of the 17 health insurance carriers that serve state employees agreed to participate. This new insurance coverage for tobacco cessation treatment became available on January 1, 2001. This study collects awareness, use and cost data for the first three years of that benefit's availability. Data on the Wisconsin state employees' self-reported use of the new smoking cessation benefit has been collected. Questions were included on the annual Consumer Assessment of Health Plan Survey of state employees.



### Coverage for State Employees—National Study

The second study is a national study that focuses on insurance coverage for state employees. That is, in each state a public entity purchases health insurance for the state's employees and retirees. This study has two aims:



1) To identify the prevalence of insurance coverage for smoking cessation treatment among state employees, nationwide, and 2) To identify those factors that influence state employers' decisions to purchase insurance coverage for smoking cessation treatment for their state employees. Data collection was completed for the State Benefits Survey, a national survey of state employers. Researchers then assessed the prevalence of insurance coverage and the role of information in the decision to purchase insurance coverage.

A paper based on this study has been accepted for publication: Burns ME, Bosworth TW, Fiore MC. Insurance coverage for smoking cessation treatment for state employees. *American Journal of Public Health*, in press.

# A National Action Plan for Tobacco Cessation: Preventing 3 Millions Deaths, Helping 5 Million Smokers Quit

On February 11, 2003, Dr. Michael Fiore presented a bold, new plan to promote smoking cessation, reduce smoking prevalence and prevent millions from starting to smoke to the Interagency Committee on Smoking

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Michael Fiore announces the release of the "National Action Plan for Tobacco Cessation" at the National Press Club in Washington, D.C. Plan recommendations were published in the February 2004 edition of The American Journal of Public Health.

and Health (ICSH) in Washington, D.C.

In the summer of 2002, Health and Human Services Secretary Tommy Thompson had asked Dr. Fiore to chair the ICSH Subcommittee on Cessation and charged the 16-member subcommittee with the responsibility of developing a set of bold, sciencebased action steps that the federal government could undertake to dramatically reduce tobacco use rates in America.

The subcommittee met on five occasions in late

2002 and early 2003, including three regional meetings in Washington D.C., Denver and Chicago where more than 200 individuals provided testimony either in person or in writing. The subcommittee's report is a comprehensive plan that recommends both government programs and public/private partnerships.

The response of Surgeon General Carmona, the full committee and the public was overwhelmingly positive. After discussion, the full committee unanimously endorsed sending the report to Secretary Thompson. The report was presented to Secretary Thompson in July, 2003.

On February 3, 2004, the recommendations of the report were published in the American Journal of Public Health and unveiled at a press conference at the National Press Club in Washington D.C. The same day, Sec. Thompson announced his plan for a national quitline network, one of the plan's recommendations.



#### **The National Plan**

#### The primary recommendations of the Action Plan are:

- Establish a federally funded national tobacco quitline network that will provide universal access to evidence-based counseling and medications for tobacco cessation through a national portal to available state or regionally-managed quitlines.
- Launch an ongoing, extensive paid media campaign to help Americans quit using tobacco.
- Include evidence-based counseling and medications for tobacco cessation in benefits provided to all federal beneficiaries and in all federally funded healthcare programs, including Medicare and Medicaid (100 million Americans).
- Invest in a new, broad and balanced research agenda with two primary goals—improve the successful cessation rate to above 50 percent and eliminate the disparities in tobacco use.
- education for healthcare providers. Ensure that all clinicians in the United States have the knowledge, skills and support systems necessary to help their patients quit tobacco use.



David Satcher, former U.S. Surgeon General; Cheryl Healton, president of the American Legacy Foundation, Michael Fiore, and Julius Richmond, former U.S. Surgeon General, at the National Press Club announcement.

Establish a Smokers' Health Fund by increasing the Federal Excise Tax on cigarettes by \$2.00 per pack with a similar increase in the excise tax on other tobacco products. At least 50 percent of the new revenue generated by this tax increase (at least \$14 billion of the estimated \$28 billion generated) should be earmarked to pay for the components of this action plan.

The plan also included four public/private partnership recommendations. Copies of the plan are available on the CTRI website at www.ctri.wisc.edu.

# **Focus on Wisconsin**

# The Wisconsin Tobacco Quit Line

Current research tells us that telephone counseling can increase the quit smoking success rate fourfold. This has proven true in Wisconsin where the Wisconsin Tobacco Quit Line has demonstrated a quit rate of 22 percent with more than 5000 individuals quitting as the result of receiving Quit Line services. In its first two years of operation, the Wisconsin Tobacco Quit Line has helped more than 29,000 callers and recorded a satisfaction rating of 92 percent.



#### What the Quit Line Does

The Wisconsin Tobacco Quit Line,

a free cessation service, provides individualized counseling and support to any Wisconsin resident who is ready to quit tobacco use. It offers a complete menu of cessation services—including a one-, twoand four-phone-call program that initiates calls to smokers during a quit attempt. Quit Line counselors, the most experienced in the nation, conduct a 20-40 minute initial assessment with each caller ready to make a quit attempt. Callers receive a quit kit with information about quitting methods, developing a quit plan, available medications and tips for quitting. Quit Line counselors create a personalized program for each caller that includes follow up phone calls throughout the quitting process.

#### **2003 MILESTONES**

Wisconsin Tobacco Quit Line

FAX to Quit pilot proves successful.

Program designed to initiate
first calls to smokers who are
ready to quit.

FAX to Quit program expanded statewide to all providers.

Quit Line becomes standard of care. Virtually all insurers and healthcare systems integrate and promote Quit Line usage.

FAX to Quit includes additional sites—employers, universities, homeless shelters. Ends year at 150 sites.

Quit Line Report shows 22 percent quit rate, 92 percent satisfaction.

"Value of Cessation Interventions as Part of a Comprehensive Tobacco Control Program" published. Effort led by UW-CTRI Outreach.

> Senior Patch Program Report released. 43% quit rate for program.

Funding for Outreach Program secured for next 18 months.



# **Special Quit Line Programs**FAX to Quit

This new program, initiated by UW-CTRI and the Wisconsin Tobacco Quit Line, links healthcare providers to Quit Line services. It operates at more than 150 sites across Wisconsin and allows the Wisconsin Quit Line to initiate a call to patients who have begun the quitting process with the help of their physician. Sites using "FAX to Quit" include stand-alone clinics, managed care organizations, *First Breath* Program sites (a stop smoking program for pregnant women) and Women, Infants and Children (WIC) clinics. Recently, the program expanded to include dental clinics, a homeless shelter and a clinic serving the Hispanic community.

#### Senior Patch Program

Wisconsin senior smokers, aged 65 or older, quit in record numbers as part of a Wisconsin Tobacco Quit Line program that provided free nicotine patches and phone counseling last year. Close to 45 percent of the senior participants successfully quit, based on a survey conducted nine months after enrollment. In contrast, research shows that quitting "cold turkey," or without any help, is successful for only about 5 percent of people.

The 45 percent abstinence rate among the seniors, one of the highest ever reported, contradicts the belief that older smokers are less interested or able to quit. Among those who were unable to quit successfully, more than 80 percent still wanted to stop and 44 percent were planning to quit within 30 days.

# **Outreach to Healthcare Providers**

UW-CTRI is a national leader in conducting and implementing cutting-edge research on treating tobacco use. The Center's focus is twofold—to better understand tobacco dependence and to increase the use of effective treatments to help smokers quit for good.

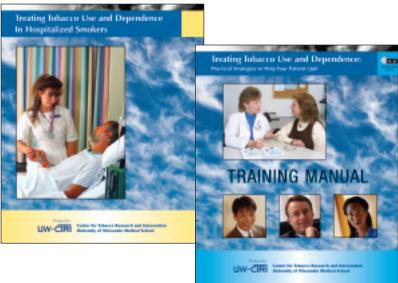
In Wisconsin, these up-to-the-minute research findings are disseminated statewide through the UW-CTRI Outreach Program. This program is charged with bringing effective tobacco use treatment to every corner of the state and instituting policies to help people quit. By providing training to healthcare providers, clinics and healthcare delivery systems, the UW-CTRI Outreach staff enhances the ability of healthcare providers to treat tobacco users successfully. By providing technical assistance to systems and insurers statewide, Outreach staff helps these organizations implement evidence-based tobacco dependence treatment.

Located in the state's five regional health department offices-Eau Claire, Rhinelander, Green Bay, Milwaukee,

and Madison–CTRI Outreach specialists help healthcare providers implement tobacco cessation best practices based on the U.S. Public Health Service Clinical Practice Guideline: *Treating Tobacco Use and Dependence*, so that smokers can have the most up-to-date treatment available.

This year, UW-CTRI Outreach staff has worked to increase clinic and systems integration of tobacco cessation treatment and have achieved much success, including changing or improving practice in some of the state's largest healthcare systems.





They have also developed new tools for healthcare providers—
a packet designed for smoking cessation in a hospital setting and a video for training providers in smoking cessation counseling.

#### **2003 MILESTONES**

Wisconsin Statewide
Outreach

Training and technical assistance to *First Breath* is strengthened through formal partnership.

Action Paper: *How Smokers Are Quitting* published.

More than 10,000 healthcare providers trained in two years since the Outreach Program began.

Outreach to clinics for underserved Wisconsin residents begins. By year's end, 26 clinics provide patches and counseling through the Quit Line.

UW-CTRI creates tobacco dependence training for dentists, approved for CME credit.

200 attend statewide conference on *Women and Tobacco Use:* Innovations in Treatment.

## **Special Programs**

#### Free Patch Program for low income smokers

In 2003, the Outreach Program began to provide tobacco dependence treatment through partnerships with more than 29 clinics that treat low-income populations. Outreach Specialists train clinic staff, link the clinics to the Quit Line through the FAX to Quit program and provide free nicotine patches to uninsured or underinsured smokers. Since midsummer, patches have been distributed to 29 sites, providing treatment to more than 725 patients, who otherwise were unable to receive these evidence-based interventions.

#### First Breath for pregnant women

UW-CTRI has worked closely this past year with *First Breath*, a program of the Wisconsin Women's Health Foundation, which intervenes with pregnant women to quit smoking. CTRI Outreach specialists: assist in training *First Breath* providers, deliver technical assistance to *First Breath's* 84 sites and offer post-partum cessation support through the Quit Line.

#### Women and Tobacco Use Statewide Conference

Close to 200 Wisconsin health care providers attended *Women and Tobacco Use: Innovations in Treatment*, a conference sponsored by UW-CTRI in September 2003. The conference focused on stemming the tide of disease and death among women caused by smoking. Attendees received practical strategies for treating smokers, especially women, including the latest information on current smoking cessation medications, gender-specific studies and cessation counseling techniques.



#### Disparities Work Group

UW-CTRI Outreach staff served as part of

a Department of Public Health Disparities Task Force to address tobacco use prevalence rates, tobacco-related diseases, quit rates and access to cessation services among special populations. Tobacco use has greater impact among minorities and populations with lower income and educational levels. A report identifying these disparities and UW-CTRI activities that address them was released in September.



# **Regional Highlights**Southeastern Region—Milwaukee County

- UW-CTRI Outreach has partnered with Independent Care, a Milwaukee County Medicaid HMO, to ensure that all smokers in the 5620-member organization have access to treatment. Mary Balestreri Cywinski, Southeastern Regional Outreach Specialist, provided training for ICARE staff and worked to institute the FAX to Quit program which allows ICARE staff to connect members directly to the Quit Line's skilled tobacco specialists.
- Cywinski also provided training and information to clinical staff from each of the major health systems in Milwaukee, including the Aurora, Covenant and Columbia-St. Mary's health systems.

#### Southeastern Region—Counties other than Milwaukee

- Tyler Roberts, Southeastern Regional Outreach Specialist, has been working with the cardiac and respiratory rehab staff of United Hospital in Kenosha to bring bedside cessation counseling to all patients who smoke.
- Roberts has also been working with Aurora Health Care in training staff to address tobacco use with every patient at every visit.
- The Washington County Tobacco Free Coalition is working with at-risk agencies in adopting a new protocol for referring clients to smoking cessation resources or the Wisconsin Tobacco Quit Line. Roberts has been providing technical assistance.

# **2003 MILESTONES**Wisconsin Statewide Outreach

State task force releases Disparities Report focusing on addressing tobacco dependence in underserved populations.

CTRI publishes Action Paper: Insurance Usage and Quitting Smoking.

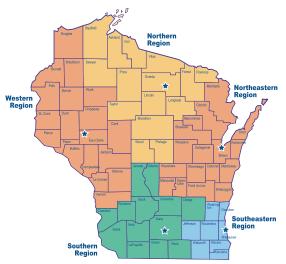
Outreach video and training program on counseling smokers to quit are finished and available to healthcare providers.

UW-CTRI produces implementation packet for treating tobacco dependence in a hospital setting.

UW-CTRI Outreach presents three posters, two workshops and a panel at the National Conference on Tobacco Or Health in Boston.

#### Southern Region

- Mile Bluff Medical Center established a system-wide tobacco cessation policy. Southern Regional Outreach Specialist Gayle Laszewski provided training, technical assistance and ongoing support.
- Laszewski has been working with dental clinics and the Wisconsin Dental Association to encourage and implement tobacco dependence intervention with dental patients.



#### Western Region

- Holy Family Hospital in New Richmond developed an inpatient cessation program for smokers. Kristine
   Hayden, Western Regional Outreach Specialist, provided training and continues to provide ongoing support.
- The Burnett County Public Health Department in Siren is implementing the recommendations of the Clinical Practice Guideline: *Treating Tobacco Use and Dependence*. Hayden is providing training and technical assistance.

#### Northern Region

All chronic disease care managers at Wausau Benefits (administrator of self-insured health benefits) began providing in-depth tobacco cessation services and referrals after being trained by Laurie Groskopf, Northern Regional Outreach Specialist.

• Nurses and care managers at North Central Health Care are providing in-depth tobacco cessation assistance to mental health clients. Groskopf provided training and support.

Family Health Centers (17 federally funded Primary Health Care Clinics administered through the Marshfield Clinic system) approved expanded pharmacotherapy benefits for patients as a result of receiving technical assistance from Groskopf.

#### Northeastern Region

- Aurora Health Care's Northern Region rolled out a system-wide plan to treat tobacco dependence at Aurora HealthCare sites. Roger Dier, Northeastern Regional Outreach Specialist, trained 106 clinicians to initiate this new program.
- Prevea Health Services implemented treatment of tobacco dependence at 14 Prevea Clinics in Northeast Wisconsin and is moving forward with its plan to systematically treat its patients for tobacco dependence. Dier provided support and assistance to Prevea.



## **The Wisconsin Tobacco Survey:**

### **Smoking in Wisconsin**

In late 2002, UW-CTRI began publishing a series of action papers, based on interviews with 6000 Wisconsin residents summarized in the Wisconsin Tobacco Survey, conducted in 2001.

These papers include important information about smoking in Wisconsin and contain

recommendations for policies to meet the needs uncovered in the survey. The first two papers, *Why People Smoke* and *Smoking and Pregnancy*, were published in 2002 and *How Smokers Are* 

Quitting and Insurance Usage and Quitting Smoking were produced in 2003.

Staff at the University of Wisconsin Survey Center have interviewed 8000 Wisconsin adults from June 2003 through February 2004 for the new Wisconsin Tobacco Survey. CTRI is now analyzing the data.



# **The UW Smoking Cessation and Prevention Clinic**

Since 1989, the UW Smoking Cessation and Prevention Clinic has provided outpatient care for individuals who want to successfully quit smoking. The clinic, housed in the UW-CTRI offices, is run by a staff of clinical psychologists, physicians and others who are trained experts in the field of smoking cessation. Working as a team under the direction of Douglas Jorenby, PhD, clinic staff members help smokers understand the physical and psychological aspects of quitting smoking and help them use a variety of strategies to successfully quit. These strategies include individual and group counseling, medications such as nicotine replacement therapy or bupropion and individual feedback on the health effects of smoking. In addition, smokers who have quit

are able to attend a twice-weekly support group.

The clinic also serves as a training ground for psychology and medical school students. This past year, clinic staff trained two clinical psychology doctoral candidates and two fourth-year medical students in effective smoking cessation practices. In addition, clinic staff trained and provided material support for students enrolled in the UW Physician Assistants Program to deliver comprehensive smoking cessation services. These students assisted uninsured/underserved Wisconsin



residents with smoking cessation as part of the GuardCare program which supplied medical services to Darlington and Boscobel residents this past summer.

# **Focus on the Future**

#### **Future Directions in Research**

### **Tobacco Dependence: Treatment and Outcomes**

UW-CTRI has created an ambitious set of research projects which comprise its application for the second round of TTURC funding. If successful, this grant funding will begin in September 2004. The application includes four major research projects, pilot grants and a career development program. The topics for the major research projects are a comparison of medications used to treat tobacco dependence, the long-term outcomes of quitting and not quitting, tobacco treatment in a primary care setting, and healthcare costs related to smoking and quitting.

### **Project 1 Medications**

This project will produce the best evidence to date on relative efficacies and mechanisms of action of cessation medications and will provide a guide for future medication use. This project will produce head-to-head comparisons of five medication conditions: nicotine patch, nicotine lozenge, bupropion, nicotine patch + nicotine lozenge, and bupropion + lozenge and a placebo control.

### **Project 2 Natural History of Smoking and Quitting: Long-term Outcomes**

The proposed research will follow selected participants of Project 1 (about 360 successful quitters and 540 continuing smokers) for three years after the quit attempt. Participants who received intensive in-person assessments at baseline pre-quit will have selected measures repeated at one, two, and three years after the quit attempt. The project will integrate information on the physical and psychosocial outcomes of a quit attempt that should help reduce late relapse, motivate more smokers to quit, motivate clinicians to treat smokers more effectively, and provide a basis for preventive interventions to avoid any negative effects of quitting (e.g., gaining weight).

### **Project 3 Medications: Effectiveness in Primary Care Systems**

This research will address the effectiveness of cessation medications offered in real-world primary care settings, assess patients' willingness to participate in cessation treatment, and evaluate a treatment recruitment and delivery strategy. Primary care patients presenting for a regular outpatient visit will be recruited by medical assistants to participate in a free smoking cessation program and will be randomly assigned to the same five active medications evaluated in Project 1. Smoking status will be followed for 1 year, and health care utilization will be tracked for three years as part of Project 4. This project will reveal the relative effectiveness of five different pharmacotherapies in real-world primary care settings, the utility of an algorithm for assigning medications, and the cost-effectiveness and success of a novel treatment recruitment and delivery strategy.

# **Project 4: Healthcare Costs and Utilization of Smoking and Quitting**

This study will contribute new data on the impacts of cessation on health care utilization and costs of smokers quitting within a large network of primary care clinics. The specific aims of this study are to:

1) Obtain longitudinal data on health care use from the cohort of 1320 smokers participating in Project 3



and from a sample of 600 continuing smokers 2) compare health care use and costs among quitters and continuing smokers 3) compare types of health care visits and diagnoses among quitters and continuing smokers in the effectiveness study; and 4) model the health care costs and utilization of quitters against their predicted costs had they not quit.

### **Future Directions in Intervention**

For the past three years, the UW-CTRI Outreach Program has brought training and technical assistance to healthcare providers across the state. This work will continue in 2004 and beyond. As part of that process, a multitude of public-private partnerships have been established. In the coming year, the Outreach Program will seek to strengthen those partnerships in order to institutionalize tobacco dependence treatment statewide.

#### Institute universal tobacco treatment policies

An important goal for the future is to institute universal tobacco treatment policies statewide so that any smoker regardless of insurance status, income, geographic location, and racial or ethnic background can access effective, evidence-based treatment for tobacco dependence. To accomplish this goal, UW-CTRI will work with national experts and other states to identify effective strategies for implementing population-based cessation policies. Work in this area has already begun at a conference initiated by the Centers for Disease Control, bringing states together to learn from each other.

# Increase access to tobacco treatment for low-income individuals and eliminate disparities in tobacco treatment

Individuals with lower incomes and various minority groups are more likely to be affected by the disease and death caused by tobacco use. UW-CTRI Outreach will evaluate its current efforts to provide medications to low-income individuals through community clinics and make recommendations for the future, based on the evaluation. CTRI will also participate with the Wisconsin Tobacco Control Disparities Workgroup and the



Division of Public Health Comprehensive Tobacco Prevention and Control Program to eliminate tobacco-related disparities, especially those relating to tobacco dependence treatment.

# Work with employers, insurers and insurance purchasers to increase coverage and treatment

CTRI has already started working with employers and insurers, but 2004 will see an increased emphasis in this area. Specifically, we will work with employers to create smokefree workplaces and connect employees with

cessation services. We will also release results of the survey of Wisconsin insurers, currently being completed, and continue to work with purchasers and insurers to make cessation benefit coverage universal.

#### Work with hospitals to increase in-patient cessation programs.

In 2003 a packet for hospitals was developed. In 2004, CTRI Outreach will distribute the packet and encourage all hospitals in our state to implement smoking cessation programs.

### **Future Scientists**

UW-CTRI encourages future tobacco scientists in a number of ways including funding research projects and sponsoring a mentoring program for students in the field.

# TTURC Training Research Projects Participation in Major Research Projects

Graduate students from the University of Wisconsin Psychology Department, working under the direction

of Tim Baker, PhD, have been heavily involved in TTURC research. Results from some of this research have already been submitted for publication.

#### fMRI and Drug Use Motivation—Matthew Majeskie

This study is focusing on the neuro-anatomical basis of smoking motivation by using function magnetic resonance imaging (fMRI) to capture activity in neural substrates believed to motivate drug use. Researchers hope to better understand smoking motivation and addictive processes, which may some day lead to the development of treatments



specifically targeted to parts of the brain involved in motivation, reward anticipation and addiction.

#### Assessing Tobacco Dependence—Megan Piper

Assessing diverse motives for smoking is the focus of the Wisconsin Inventory of Smoking Dependence Motives (WISDM-68), a questionnaire that provides a better understanding of tobacco dependence. This study also examined the efficacy of various treatments.

#### Risk of Relapse: Pre and Post Quitting Reactions—Danielle McCarthy

This research seeks to identify both episodic and emergent processes that contribute to success or failure in a quit attempt. Researchers gathered data about withdrawal symptoms, negative affect, craving and hunger levels by using electronic diaries for three weeks preceding and following the quit attempt.

#### **Training Tobacco Scientists Mini-Grants**

New TTURC-funded Training Tobacco Scientists mini-grants were awarded in 2003 to Danielle McCarthy, Joanne Hogle, and Sara Pfister Johnston, UW psychology graduate students. All three studies look at various aspects of tobacco dependence.

#### Environmental Cues—Danielle McCarthy

McCarthy's study, "Color-Naming Performance in Nicotine Withdrawal and Under Stress" will try to understand how an individual's attention can be drawn to drug-related cues and away from other cues in the environment, especially during withdrawal and/or induced negative feelings.

#### Sex Differences—Joanne Hogle

Hogle's study, "Sex Differences in the Effect of Smoking Withdrawal on Psychophysiological Indices of Affective Motivation," aims to increase understanding of the effects of nicotine withdrawal on positive and negative feelings, and sex differences in smoking behavior and withdrawal symptoms.

#### Smokers with Disabilities—Sara Pfister Johnston

Sara Pfister Johnston will focus on potential interventions to help smokers with psychiatric, cognitive, or physical disabilities using the U.S. Public Health Service Clinical Practice Guideline. She will assess current knowledge of the Guideline among rehabilitation therapists and their attitudes toward smoking cessation as a first step toward Guideline implementation.

### Practice Quitting—Danielle McCarthy and Rebecca Gloria

Building on the knowledge that quitting tobacco takes practice, this study will test the tolerability of having smokers engage in "practice quitting" sessions and unpleasant smoking procedures before an actual quit attempt.



### Other Programs Encouraging Tobacco Research and Researchers

In 2003, UW-CTRI researchers were involved in a number of programs that acquainted a variety of students with tobacco research and encouraged them to work in the field. Two UW Medical School Students, Paul Slavik and Douglas Newton, learned about smoking cessation interventions in hospitals and clinics and a variety of UW-CTRI research projects.

College students from inside and outside Wisconsin were able to work on research projects with UW-CTRI scientists last summer. Hope Fisher from Oberlin College and Shikinah Washington from Jackson State University in Mississippi learned and researched in Madison and Jovanna Miller and Denise Harley worked with Dr. Tom Jackson in his Milwaukee laboratory.

High school students were also introduced to tobacco research through the UW Medical School's Research Apprenticeship Program. Maria Din and Alula Eshete, two Madison high school students, helped answer some important questions on tobacco dependence and increased efficiency for UW-CTRI researchers this past summer.

### **Appendix A: Structure and Staff**

#### Structure

In 2003, UW-CTRI had 70 employees in multiple sites: 40 faculty and staff, five graduate students and 25 undergraduates. In addition to the staff in Madison, the Center now has six outreach staff located in five regions of the state and a clinical office in downtown Milwaukee that has expanded CTRI's research capabilities and diversity.

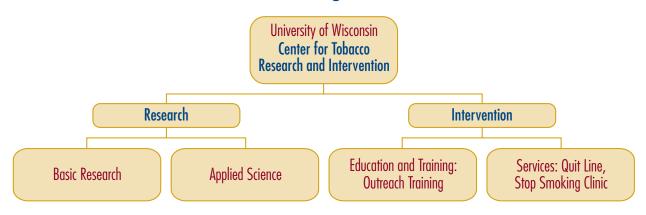
UW-CTRI is organized into two primary functional enterprises: research and intervention. Slightly more than one-half of the Center's work is in research, which includes both basic science and applied science. The intervention side of UW-CTRI involves two primary focus areas—training and service delivery. Statewide training and education comes through the education and outreach group which concentrates primarily on implementing the Clinical Practice Guideline: *Treating Tobacco Use and Dependence*.

The service delivery component is provided by the Wisconsin Tobacco Quit Line and the Smoking Cessation and Prevention Clinic. Both programs have specific missions to interact directly with smokers to help them quit. The clinic operates primarily in Madison while the Quit Line provides a statewide service that has reached more than 29,000 smokers.

While placed separately on an organizational chart, the research groups and the intervention groups have many linkages. In fact, one of the strengths of the organization is the interrelationship between research and intervention.

Supporting these basic units are the UW-CTRI administrative units, including communications, computer support, fund development and finances, human resources, administrative support services and leadership.

# **UW-CTRI Organization**



#### **UW-CTRI Staff 2003**



### **UW-CTRI Staff**

#### Research

Tim Baker, UW-CTRI Associate Director and Director of Research

#### Faculty and Staff

Jennifer Brown, Leigh Brown, Katrina Bundy, Marguerite Burns, Stephanie Collins, Adam Fiebelkorn, Natalie Ganas-Schultz, Terese Guiliani, Douglas Jorenby, Paula Keller, Daniel Lawrence, Rhianan Lewis-Smith, Jason Moresco, Donna Muehlenbruch, Tammy Sims, Stevens Smith, Wendy Theobald, Heather Vaughn, Patti Weston, Jackie Wilson, Mark Zehner.

#### Graduate Students

Rebecca Gloria, Sandra Japuntich, Matthew Majeskie, Danielle McCarthy, Megan Piper.

#### Undergraduate and Other Students

Tevyn Anderson, Elizabeth Burke,
Gwen Dykema, Kristopher Haynes, Maha Hilal,
Terrae Hudek, Amanda Krawczyk,
Julia Leo, George McPhail,
Melissa Meischer, Daniel Nalepinski,
Christine Naughton, Jessica Nolan,
Keysha Onheiber, Jesse Pacheco,
Prashant Ram, Renee Schauer,
Melissa Schoner, Jordan Sheran,
Amanda Skeff, Gwen Stohs-Krause,
Jacqueline Tsz-Hin Law, Amy Valenza,
Sara Wolfgram, Stefanie Wood.

#### Intervention

Lezli Redmond, Assistant Director for Education and Outreach

Douglas Jorenby, Director of Clinical Services

#### Faculty and Staff

Mary Cywinski, Roger Dier, Laurie Groskopf, Pat Harper, Kristine Hayden, Sandy Keller, Gayle Laszewski, Nancy Miller, Marjorie Paloma, Sara Pfister Johnston, Tyler Roberts, Ann Schensky, Tammy Sims, Wendy Theobald.

#### Undergraduate Student

Michael O'Connor.

#### **Administration**

David Fraser, Assistant Director for Research Administration

Lisa Rogers, Assistant Director for Finance

#### Faculty and Staff

Chris Hollenback, Linda Kurowski, Marie Larson, Gloria Meyer, Audra Russell, Andy Tappa, Jim Terasa.

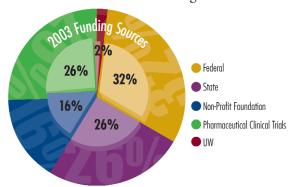
#### **Undergraduate Student**

Gwen Stohs-Krause.



### **Appendix B 2003 Financial Information**

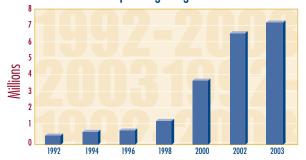
UW-CTRI's operating budget in 2003 was \$7.1 million. Funding for UW-CTRI research and activities comes from a variety of sources—federal government grants, state tobacco control funds, nonprofit organizations, pharmaceutical company research and the University of Wisconsin. The Center is committed to maintaining a diversified funding portfolio. UW-CTRI does not accept tobacco-industry funding since this would be inconsistent with UW-CTRI's mission. CTRI funding in 2002 came from the following sources:



#### The National Institutes of Health (NIH)

In 1999, UW-CTRI was awarded a \$10 million five-year grant as one of the seven Transdisciplinary Tobacco Use Research Centers (TTURC) in the nation. In 2003, UW-CTRI continued to receive a \$175,000 per year TTURC research supplement for under-represented minorities.





#### State of Wisconsin

In 1999, UW-CTRI was awarded \$1 million per year for two years in the 1999-2001 state budget to support a statewide education and outreach program. This funding was continued in the 2001-2003 state budget along with \$1 million per year to support the Wisconsin Tobacco Quit Line which UW-CTRI initiated and manages. Due to

a reduction in overall tobacco control funding by the state, the 2003-2005 funding level for CTRI Outreach and the Quit Line was reduced to \$1.6 million a year.

#### The Robert Wood Johnson Foundation

In 1997, UW-CTRI was designated as the National Program Office for a new Robert Wood Johnson Foundation (RWJF) initiative and received a five-year \$6.7 million grant. The initiative, Addressing Tobacco in Managed Care, is designed to prompt managed care organizations to implement smoking cessation programs. The year 2003 was the sixth year of the RWJF initiative.

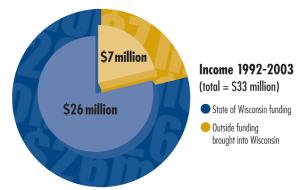
In 2000, RWJF awarded UW-CTRI a five-year, \$100,000-per-year communications supplement and a five-year \$150,000-per-year policy research supplement to the NIH-funded TTURC award. The supplements continued in 2003.

#### Pharmaceutical Research

UW-CTRI conducts a number of clinical trials of new medications for smoking cessation. Funding for pharmaceutical clinical trials was approximately \$1.9 million in 2003.

#### The University of Wisconsin

The University of Wisconsin continues to support UW-CTRI through a variety of funding mechanisms.



#### Funding Ratio: Wisconsin to External Sources

As is evident from the graph, UW-CTRI has been very successful in bringing funding from outside Wisconsin into the state—from the federal government, foundations and the pharmaceutical industry. Close to 80 percent of CTRI funding has come from outside the state, funneling more than \$26 million into the state's economy over the past 12 years.

### **Appendix C 2002-2003 Publications**

- Stein, J.H., Bushara, M., Bushara, K., Mcbride, P.E., Jorenby, D.E., Fiore, M.C. (2002)
  Smoking cessation, but not smoking reduction, reduces plasma homocysteine levels.

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  affective and physical models
  of dependence. *Journal of Consulting and Clinical Psychology*, 70, no 1,
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- Anderson, J.E.; Jorenby, D.E., Scott, W.J., Fiore, M.C. (2002). Treating tobacco use and dependence: An evidence-based clinical practice guideline for tobacco cessation. *CHEST*, 121, 932-941.
- Durcan, M.J., White, J., Jorenby, J.E., Fiore, M.C., Rennard, S.I., Leischow, S.J., Nides, M.A., Ascher, J.A., Johnston, J.A. (2002). Impact of prior nicotine replacement therapy on smoking cessation efficacy. *American Journal Health Behavior*, 26, 213-220.

- Piasecki, T.M., Fiore, M.C., McCarthy, D.E., Baker, T.B. (2002) Have we lost our way? The need for dynamic formulations of relapse proneness. *Addiction*, 97, 1093-1108.
- Fiore, M.C., Hatsukami, D.K., Baker, T.B. (2002). Effective tobacco dependence treatment. *JAMA*, 288, No. 14, 1768-1771.
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- Baker, T.B., Curtin, J.J. (2002) How will we know a lapse when we see one? Experimental and Clinical Psychopharmacology, 10, No. 4, 350-352.

- Curry, S.J., Fiore, M.C., Orleans, C.T., Keller, P. (2002).

  Addressing tobacco in managed care: Documenting the challenges and potential for system-level change.

  Nicotine and Tobacco Research, 4, 1:5-7.
- Vitale, J.E., Smith, S.S., Brinkley, C.A., Newman, J.P. (2002)

  The reliability and validity of the psychopathy checklist—revised in a sample of female offenders. *Criminal and Justice Behavior*, 29, No. 2 202-231.
- Piasecki, T.M., Fiore, M.C., McCarthy, D.E., Baker, T.B., (2002) Have we lost our way? The need for dynamic formulations of relapse proneness. *Addiction.* 97, 1093-1108.
- Smith, S.S., Jorenby, D.E.,
  Leischow, S.J., Nides, M.A.,
  Rennard, S.I., Johnson, J.A.,
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  Baker, T.B. (2003) Targeting
  smokers at increased risk for
  relapse: Treating women and
  those with a history of
  depression. *Nicotine and Tobacco Research*, 5, 99-109.

### Appendix C 2002-2003 Publications (cont.)

- Fiore, M.C., Schroeder, L.L. (2003) Effective interventions for patients who use tobacco: Key findings from the United States Public Health Service—Clinical Practice Guideline: Treating Use and Dependence. Clinical Psychiatry Monograph, 18 (1), 64-73.
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  Jorenby, D.E., Ryan, C.F.,
  Ferguson, C.L. (2003) Efficacy
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  of cue-provoked cigarette
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- Piper, M.E., Fiore, M.C., Smith, S.S., Jorenby, D.E., Wilson, J.R., Zehner, M.E., Baker, T.B. (2003) Use of the vital sign stamp as a system to promote smoking cessation. *Mayo Clinic Proceedings*, 78, 716-722.
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- Piasecki, T.M., Jorenby, D.E., Smith, S.S., Fiore, M.C., Baker, T.B. (2003) Smoking withdrawal dynamics III: Correlates of withdrawal heterogeneity. *Experimental and Clinical Psychopharmacology*, 11, No. 4, 276-285.
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  Preventing 3 million
  premature deaths, helping
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  American Journal of Public
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- Baker, T.B., Piper, M.E., McCarthy, D.E., Majeskie, M.R., Fiore, M.C. (2004) Addiction motivation reformulated: An affective processing model of negative reinforcement. *Psychology Review*, 111, No. 1, 33-51.
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#### **UW-CTRI** has a wealth of materials available on its website.

# These include:

- Tools for physicians and other healthcare providers
- Information about the Wisconsin Tobacco Quit Line and how to access its services
- Research on tobacco dependence
- Links to important tobacco control websites
- Information about UW-CTRI faculty and staff

Go to www.ctri.wisc.edu



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