

Working Together for a Healthier Future



By helping smokers quit



*Through collaboration with
healthcare providers*



*Through tobacco control
research*

UW-CTRI

University of Wisconsin Medical School

Center for Tobacco Research and Intervention



Pictured on the front cover: (left to right)

Reggie Taylor

Fond du Lac

Quit smoking January 2003

Through the Wisconsin Tobacco Quit Line

June Lewandoski, M.D.

Family Practice

Mile Bluff Clinic, Mauston

Megan Piper, M.A.

Doctoral student in clinical psychology at UW-Madison

Graduate student researcher at UW-CTRI

2002 Training Tobacco Scientists (TTS) Mini-Grant recipient



Working Together for a Healthier Future

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

From the Director . . .



Dr. Michael Fiore
Director, UW-CTRI

This year's annual report, "Working Together for a Healthier Future," focuses on the people we work with and for—healthcare providers, healthcare systems, researchers, students and, of course, smokers—all with the purpose of reducing tobacco dependence and making our communities healthier and stronger. While most of this report concentrates on our collaborators outside our Center, I would like to spend a few minutes on the unique collaborations that go on within the Center.

The UW Center for Tobacco Research and Intervention (UW-CTRI) is structured so that research, practice and policy interact and inform each other. This brings an exciting synergy to the various components of our organization. We are engaged in national cutting-edge research that identifies new treatment strategies that can be implemented through our statewide outreach programs. This goal of translating research into practice is realized through our ability to test new approaches through our programs to help Wisconsin smokers quit.

In addition to translating research into practice, we are committed to translating research into policy. The last year provided a number of opportunities for UW-CTRI to inform policy-makers with the best scientific evidence. From the Wisconsin Tobacco Quit Line to the national efforts to disseminate the Public Health Service

Clinical Practice Guideline, UW-CTRI was at the forefront of science-based tobacco policy initiatives. These initiatives also informed insurers and employers of the powerful economic incentives resulting from successful tobacco cessation.

This past year, we also strengthened our ability to conduct research with more diverse populations. Through working with the University of Wisconsin Medical School Milwaukee campus, the UW-CTRI Milwaukee site has enhanced the diversity of participants both in our research studies and among those to whom we provide direct services. With our committed staff in Milwaukee, we can ensure that future research findings have greater applicability to a variety of smokers and their families.

Finally, this year's report is more forward-looking than previous annual reports, because we recently undertook a comprehensive strategic planning exercise. The process and the resultant plan have enabled us to approach the future with greater insight and increased excitement. We are including some of our planning objectives in this report so you can see our plans for the future.

Reducing the enormous burden of illness and death resulting from tobacco use in Wisconsin and beyond remains a monumental but achievable task. Everyone at UW-CTRI is proud that we can contribute to this essential effort.

Introduction

Working Together for a Healthier Future

The University of Wisconsin Center for Tobacco Research and Intervention (UW-CTRI) is nationally recognized for its dedication to reducing tobacco use. The Center's primary focus is to better understand tobacco dependence and to increase the use of effective treatments so that smokers can quit for good.

To reach this goal, UW-CTRI has developed a comprehensive program including research in tobacco dependence and its treatment, training and technical assistance to healthcare providers and systems, and direct services to smokers. To accomplish this ambitious program, UW-CTRI has assembled a staff of scientists, clinicians, educators, outreach experts and support personnel to advance the science of tobacco dependence, to change medical practice and to influence tobacco control policy.

In its efforts to translate research into practice, UW-CTRI primarily uses a medical model, as described in the U.S. Public Health Service Clinical Practice Guideline: *Treating Tobacco Use and Dependence*, published in 2000. In this model, tobacco dependence is regarded as a chronic disease requiring intervention and treatment, like hypertension or diabetes. Healthcare providers are charged with the responsibility of intervening with all patients who smoke and providing them with state-of-the-art tobacco use treatment.

Collaboration and assistance are vital to efforts to reduce tobacco dependence. Clinicians must be trained in treating tobacco dependence. Medical systems must be changed to encourage treatment. Research on the nature of tobacco dependence and more effective treatments must be conducted and disseminated. Various groups who may not have collaborated in the past must now work together towards a common goal.

This report describes the collaborations and activities that UW-CTRI undertook in 2002 to promote the understanding, treatment and reduction of tobacco dependence. The report emphasizes the people involved in these efforts because people are both the focus and the method—people working together for a healthier future, free of the burden of tobacco dependence.

Assisting Healthcare Providers

Two UW-CTRI programs focus on assisting healthcare providers in obtaining the training and materials they need to effectively treat tobacco dependence—the UW-CTRI Wisconsin Education and Outreach Program and the Dissemination Group. The two programs collaborate with each other as well as with healthcare organizations, associations and individual providers.

Education and Outreach



“I truly believe that the majority of health problems I see in my practice are related to smoking. That’s why I have been working within my clinic to develop a program to institutionalize the 5 A’s as recommended in the Clinical Practice Guideline. The technical assistance and materials I get from CTRI have been very helpful in this effort.”

June Lewandoski, M.D.
Family Practice
Mile Bluff Clinic, Mauston

The Wisconsin Model

The Education and Outreach Program, in the field for just two years, has developed the Wisconsin Model for promoting tobacco dependence treatment. Six regional outreach specialists are trained to call on individual healthcare providers, clinics, hospitals, and managed care organizations to introduce them to smoking cessation treatment possibilities and brief intervention techniques. The specialists provide training, technical assistance, and materials based on the U.S. Public Health Service Clinical Practice Guideline: *Treating Tobacco Use and Dependence*. They also help clinicians and others utilize the Wisconsin Tobacco Quit Line, an individualized smoking cessation counseling telephone service that UW-CTRI also manages. In other words, the regional outreach specialists are a complete resource for anyone wishing to treat tobacco dependence.

Training and Technical Assistance

Specialists can call on the expertise of UW-CTRI clinicians and researchers to stay continuously informed about current tobacco use research occurring at the Center and beyond. This resource enables the outreach specialists to provide smoking cessation information and technical assistance to clinicians, local Tobacco Control Coalitions and others in their region.

Specialists work with community-based organizations to identify and address the specific tobacco use needs of diverse populations. Examples of these organizations include the

Assisting Healthcare Providers - continued

Great Lakes Inter-Tribal Health Clinics, United Migrant Opportunity Service (UMOS), the Black Health Coalition and the Wisconsin Coalition of Mutual Assistance.

The Outreach Program continues to expand into new healthcare arenas, working with dental providers, mental health clinics, the Primary Healthcare Network, and the Free Clinics of Wisconsin. Every healthcare provider who has contact with smokers can conduct an intervention. One of UW-CTRI's goals is to give providers the information and tools to be successful.

Insights: Smoking in Wisconsin

A significant part of changing practice around smoking cessation is providing information that can affect attitudes and policy. In 2002, UW-CTRI began publishing a series of action papers, based on interviews with 6000 Wisconsin residents summarized in the Wisconsin Tobacco Survey. These papers include important information about smoking in Wisconsin and contain recommendations for policies to meet the needs uncovered in the survey. The first paper, "Why People Smoke," supported the tobacco dependence construct and revealed that cravings, fear of failure and inadequate resources contribute to continued smoking.

2002 OUTREACH HIGHLIGHTS

- Conducted nearly 700 training sessions with thousands of healthcare providers, including those at Gundersen Lutheran Health System, Marshfield Clinics, Prevea Clinics, Advanced Health Care, Ministry Medical Group, Fort Atkinson Memorial Hospital, Security Health Plan, and Dean Care.
- Held a statewide training, "Treating Tobacco Dependence in the Real World: Practical Strategies." Over 100 healthcare providers, clinic managers, cessation program administrators and others attended.
- Provided training and technical assistance to over 8,000 individuals in Wisconsin, including hospitals and clinics, health departments, communities, schools, worksites and local coalitions.
- Provided training and technical assistance to providers for underserved populations including the Primary Healthcare Network, the Free Clinics of Wisconsin (uninsured and underinsured), First Breath (pregnant smokers), Tribal Health Clinics, and WIC Clinics (underserved women and children).
- Worked with the Wisconsin Division of Public Health and others to develop a comprehensive plan to address disparities related to tobacco use.

Assisting Healthcare Providers - continued

“NEAS has developed a pilot program to address smoking cessation. We would not have been able to launch this program without the guidance and training provided by Tyler Roberts from the Center for Tobacco Research and Intervention. His agency provided evidence-based tobacco cessation practices and strategies that will be a valuable part of our program.”

Jodie Loomans, EAP Counselor II
National Employee Assistance Service, Inc.
EAP & Work/Life Company
NEAS developed a telephone-based cessation program that it provides to its clients for their employees.

Outreach Staff

Lezli Redmond, Assistant Director for Intervention Programs

Ann Schensky

Sandy Keller

Amy Brewer

Laurie Draheim

Regional Outreach Staff

Southern: *Gayle Laszewski*

Northern: *Laurie Groskopf*

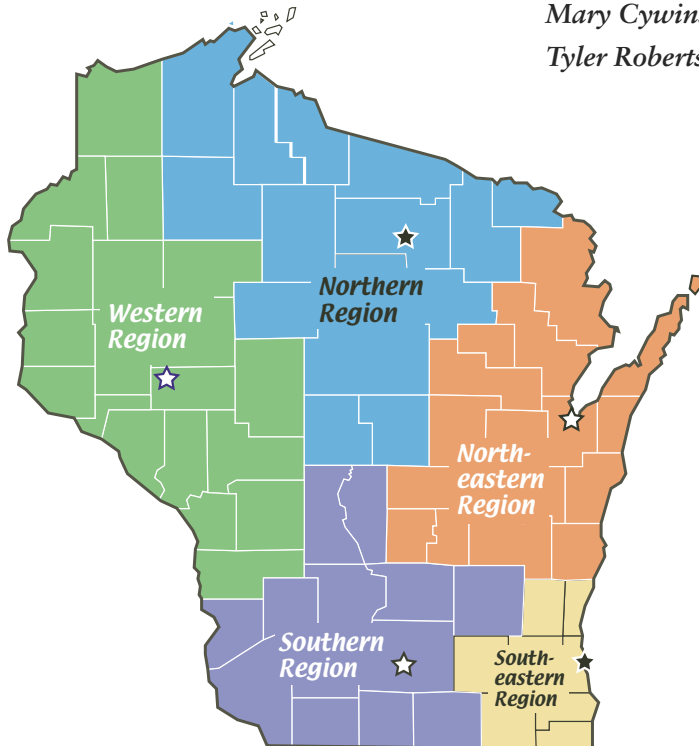
Northeastern: *Roger Dier*

Western: *Kristine Hayden*

Southeastern:

Mary Cywinski (Milwaukee County)

Tyler Roberts (Other SE counties)



Assisting Healthcare Providers - continued

The Dissemination Group

To effectively treat tobacco use and dependence, clinicians need practical techniques and products that work in a variety of healthcare settings. The UW-CTRI dissemination staff designs and creates these materials, basing the content on the findings and recommendations found in the Clinical Practice Guideline.

Collaboration with the Outreach Program

A remarkable synergy results from the collaboration of the Dissemination Group and the Education and Outreach Program. Many of the materials created by Dissemination have resulted from input by the outreach staff. Once the materials are created, the outreach staff tests them in the real world. With results in hand, the Dissemination staff refines the products and produces them not only for Wisconsin but often for national audiences.

Collaboration with National Programs

A number of Dissemination materials have been developed in collaboration with national programs. Working with the Agency for Healthcare Research and Quality, part of the U.S. Public Health Service, the Dissemination Group has produced materials that make the Guideline recommendations more available to healthcare providers and the general public.

2002 DISSEMINATION HIGHLIGHTS

- Created a free on-line CME program for healthcare professionals, working with the UW Medical School Office of Continuing Education.
- Developed the clinician packet, a self-contained resource kit to assist clinicians in intervening more effectively with their patients.
- Developed one-hour, clinician CME training on treating tobacco dependence.
- Created a CD-ROM based clinician CME training program for intervening with older smokers, in collaboration with the Center for Medicare and Medicaid Stop Smoking Program.
- Revised "You Can Quit Smoking," a consumer brochure in English and Spanish, targeted to low literacy populations, in collaboration with the Agency for Health Care Research and Quality.



Dissemination Staff

Patricia Harper, Program Leader

Lisa Schroeder

Ulpiana Tamayo

Wendy Theobald

Collaborating with Healthcare Systems

For medical practice to include tobacco dependence treatment, change must not only occur at the clinician level, but must also involve healthcare systems. Three UW-CTRI programs address systems and the way tobacco dependence treatment can be enhanced by changing these systems—the State Employer Initiative (which involves tobacco coverage by state insurers), Addressing Tobacco in Managed Care (ATMC) and the Education and Outreach Program (which collaborates with HMOs, clinics and healthcare organizations on smoking cessation programs).

Employer Initiative

The Robert Wood Johnson Foundation (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.

The second study is a national study that focuses on the state employers. 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.

Employer Initiative Staff

Marguerite Burns

Timothy Bosworth

2002 EMPLOYER INITIATIVE HIGHLIGHTS

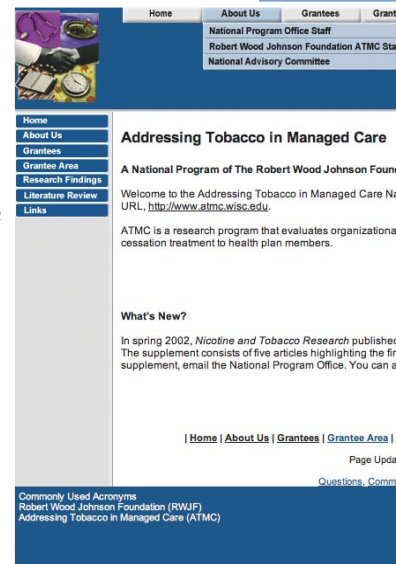
- 12 of the 16 Wisconsin health insurance carriers have provided claims data for the Cost of Treatment study. Preliminary analysis has begun.
- 45 of 50 states have agreed to participate in the national study. 45 have completed a survey of the availability of insurance coverage for smoking cessation and 42 have completed interviews.

Collaborating with Healthcare Systems - continued

Addressing Tobacco in Managed Care

The ATMC program, funded by RWJF, is intended to promote the integration of effective smoking cessation treatments into the basic healthcare provided by managed care organizations (MCO). To achieve this objective, the program awards 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.

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.



2002 ATMC HIGHLIGHTS

- ATMC awarded a second round of funding for five evaluation and four planning grants, totaling over \$2 million dollars.
- Published a supplement to *Nicotine and Tobacco Research*, highlighting the findings from five planning grants funded in the first round of research.
- Held a grantee meeting in April 2002, for newly funded grantees to present overviews of their research and to foster collaborative relationships between the grantees and national program staff.
- Redesigned the ATMC website to include summaries of current and past grant projects, research findings and a database of recent literature on systems research and tobacco.

ATMC Staff

Michael Fiore, Director

Susan Curry, Director

(University of Illinois-Chicago)

Paula Keller, Deputy Director

Timothy Baker, Scientific Advisor

Katrina Bundy

Collaborating with Healthcare Systems - continued

The UW-CTRI Education and Outreach Program

By taking a multi-level approach, UW-CTRI's Education and Outreach Program has worked to implement cessation programs in a systemic way—through all facets of healthcare and clinical systems. This means that systems and processes—



“Our Care Management philosophy embraces the implementation of proven best practice wherever care is delivered—thus, we’ve chosen to partner with UW-CTRI, an organization whose actions are scientifically proven to work. . . . We are fortunate to have nationally recognized tobacco dependence leaders in Wisconsin.”

Mary Kay Lingeman, RN, MBA
Quality Coordinator
Aurora Health Care

from those used in individual clinics to larger systems—must be developed or enhanced to accommodate the treatment of tobacco dependence.

In addition to training clinicians for individual interventions, the Outreach Program staff works with each healthcare organization to ensure that tobacco dependence treatment functions as other treatments—with appropriate personnel, record-keeping and follow-up. Outreach staff also works with major HMOs and large healthcare organizations to set policies that encourage

tobacco dependence treatment, including referral programs to the Wisconsin Tobacco Quit Line.

2002 OUTREACH SYSTEMS HIGHLIGHTS

- Worked with Aurora Health Care in implementing a tobacco dependence treatment strategy based on the Clinical Practice Guideline. Aurora Health Care serves more than one million people each year in Wisconsin through its 13 hospitals, 78 clinics and 125 pharmacies.
- Helped develop and pilot a smoking cessation program, modeled on the Guideline, for 100 ThedaCare Health System employees (Green Bay) who smoke. The program, launched in January 2002, boasts a six-month quit rate of 32 percent.
- Assisted ProHealth Care (Milwaukee) in launching a system-wide tobacco cessation initiative.
- Collaborated with the Wisconsin Dental Association to secure reimbursement for counseling and to train hygienists.
- Launched a special effort with the Marshfield Clinic System to develop plans to identify and address staff training needs and to implement, pilot, and evaluate smoking cessation programs.
- Established a multi-disciplinary cessation team at the Mile Bluff Medical Center (Mauston). The team has been working on integrating system changes to support cessation interventions.

Helping Smokers Quit

UW-CTRI provides direct smoking cessation services to Wisconsin smokers in several ways—through the Wisconsin Tobacco Quit Line, the Center’s Smoking Cessation and Prevention Clinic and research studies UW-CTRI conducts. Last year, several thousand Wisconsin smokers quit smoking using one of these three services.

The Wisconsin Tobacco Quit Line

The Wisconsin Tobacco Quit Line, launched on May 1, 2001, is designed to help anyone anywhere in Wisconsin quit smoking for good. This program, funded by the Wisconsin Tobacco Control Board, offers free, individualized smoking cessation counseling to Wisconsin residents. The Quit Line has received over 30,000 calls since its inception and has helped over 4000 smokers quit. Smokers are three times more likely to quit using the Quit Line than quitting unaided.

On May 8, 2002, the Quit Line initiated the Wisconsin Senior Patch Program which provided nicotine patches to smokers 65 and over who used the Quit Line counseling services. Over 1000 Wisconsin seniors took advantage of this program from May to September 2002.

2002 WISCONSIN TOBACCO QUIT LINE HIGHLIGHTS

- Almost 12,000 calls to the Quit Line in 2002 (over 30,000 since inception).
- Over 84% of Quit Line callers reported satisfaction with the service.
- Nearly 6,000 smokers received help from the Quit Line in 2002. 90% of smokers who called the Quit Line were ready to quit or had recently quit.
- Just under 3,500 callers were referred to local cessation programs in 2002.
- Over 1,075 seniors received free nicotine patches and counseling after calling the Quit Line between May 8 and August 16.
- Over 4,000 smokers quit smoking since the Quit Line began service.

“I smoked for about twenty-five years. I tried to quit cold turkey but it never worked. Then my wife brought home some information about the Quit Line. I called and they helped me quit for good.”

James Lortz
Richland Center
Quit Smoking
December 2002



Helping Smokers Quit - continued

QUIT SMOKING USING THE QUIT LINE



“The specialists at the Quit Line made me feel like a million bucks. Every one of the specialists who called me should be given a raise.”

Donald Berger
Medford
Quit Smoking July 2002



“The Quit Line made me feel that I wasn’t unique. That I wasn’t the only person who had tried to quit and failed. They made me feel like they knew what I was going through.”

Michelle Naff
Jefferson
Quit Smoking April 2002



“I really liked how the specialists kept in touch with me. They kept calling and checking up on me. That was really helpful.”

Reggie Taylor
Fond du Lac
Quit Smoking January 2003

UW-CTRI Clinical Trials

Last year, several hundred individuals were able to quit smoking through clinical trials conducted by UW-CTRI as part of its research program. Since so much of the Center’s research involves treatment, many subjects use study participation as their opportunity to quit.



“Being in the tavern business as well as a bowler creates a very hostile place to quit smoking. Dr. Fiore told me that it would be very difficult and that success would be very hard. I haven’t smoked for over a year and feel that the cessation program at CTRI was the only contributing factor to my success.”

Dan Schwoegler
Madison
Study Participant
Quit Smoking February 2002

QUIT SMOKING IN A RESEARCH STUDY

Helping Smokers Quit - continued

The UW Smoking Cessation and Prevention Clinic

Since 1989, the UW-CTRI Smoking Cessation and Prevention Clinic has provided intensive outpatient care for individuals who want to successfully quit smoking. The clinic, housed in the UW-CTRI offices, is run by a staff of physicians, clinical psychologists and others who are trained experts in the field of smoking cessation.

Working as a team, clinic staff members help smokers understand the physical and psychological aspects of quitting tobacco use and help them use a variety of strategies to successfully quit. These strategies include individual feedback on the health effects of smoking, individual counseling and medications such as nicotine replacement therapy and bupropion. In addition, smokers can attend a twice-weekly support group.

According to satisfaction data gathered as part of follow-up six months after quitting, 64 percent of clinic participants self-reported abstinence. They also indicated high satisfaction with the program, giving the clinic an average rating of 3.9 on a five-point scale. In these surveys, many former participants wrote of their gratitude for the support and services provided by the clinic.

2002 CLINIC HIGHLIGHTS

- Helped over 75 smokers set quit dates.
- Provided smoking cessation counseling and medication to 100 medically underserved Wisconsin residents in conjunction with the UW Physician Assistant Program and the Wisconsin National Guard.

Clinic Staff

Douglas Jorenby, Director of Clinical Services

Sara Pfister

Michael Fiore

QUIT SMOKING THROUGH THE CLINIC



“It feels so incredible to be smoke-free. I feel like I’ve been reborn. It feels great for you to be in control, not that cigarette.”

Connie Petersen

Madison

Quit Smoking January 2002

Understanding and Treating Tobacco Dependence

The University of Wisconsin Center for Tobacco Research and Intervention has a history of conducting significant research in the field of tobacco dependence. Much of UW-CTRI research has tended to concentrate on potential practical application—new medications, new treatments, new combinations of treatments. Even research focused on understanding tobacco dependence involves the development of a new measure of nicotine dependence, and this research is designed to suggest improved methods for helping smokers quit long-term.

Transdisciplinary Research

uw-tturc

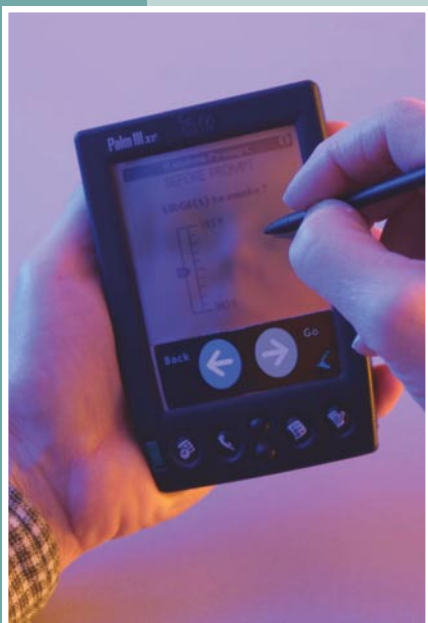
Currently, much of the research being conducted at UW-CTRI is part of the national Transdisciplinary Tobacco Use Research Center (TTURC) program. One of seven centers nationwide selected for this NIH-funded program, the UW-

TTURC has taken as its focus—Understanding and Preventing Relapse. Three major studies and five pilots are part of this program.

Major TTURC 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.



In the clinical trial, 608 participants were randomly assigned to receive bupropion SR and nicotine gum, bupropion SR and placebo gum, or a double-placebo. In addition, all participants received counseling. Blood samples were also gathered from participants for DNA determination so that the genetic correlates of dependence can be ascertained. Thus far, this research has shown that the WISDM scales are capable of predicting core criteria of dependence: withdrawal severity, smoking heaviness and relapse.

Understanding & Treating Tobacco Dependence - continued

ASSESSING 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 immediate information on withdrawal and relapse 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.

In addition, the study investigates the potential role genes may play in vulnerability to nicotine addiction by conducting family-based association analyses. Four hundred and eighty smokers were enrolled in this study.

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 (Zyban and brief counseling) with a combination of treatment plus the computer program. Participants who received access to the computer program were encouraged to use the program on a daily basis for three months. First phase results showed that smokers are willing to use a computer-based program extensively and for long periods of time. However, the study did not simulate real-world usage.

The second phase of the study will occur in 2003. During this phase, researchers will attempt to determine how effective a computer-based cessation program will be under conditions that resemble real world use.

TTURC Pilot Studies

QUALITATIVE RESEARCH ON QUITTING SMOKING DURING PREGNANCY

This study focuses on pregnant smokers, a topic of concern among healthcare providers. Using qualitative research, common in anthropology, sociology and nursing, the study examines the life circumstances that motivate pregnant women to quit smoking, to stay quit during pregnancy and to prevent post-partum relapse.

Understanding & Treating Tobacco Dependence - continued

AN ANIMAL MODEL OF CRAVING: GENE EXPRESSION PROFILING IN THE ADOLESCENT RODENT BRAIN

To begin to understand why adolescents respond differently to nicotine, this study uses DNA micro-array analysis to identify genes that are expressed uniquely in adolescent compared to adult rodent prefrontal cortexes. Also, researchers are interested in determining whether nicotine administration in the adolescent rodent influences nicotine sensitivity or sensitivity to other drugs of

abuse when these animals reach adulthood. Insights into the molecular components that differ between adolescent and adult brain, and an understanding of how these differences relate to nicotine addiction and relapse, may lead to more effective interventions.



TREATMENT EFFECTS AND MOTIVATIONAL PROCESSES

This study looks at the relationship between activity in certain brain regions and smoking motivation by using functional magnetic resonance imaging (fMRI). The results of the

study will show the extent to which brain structures related to reward anticipation are influenced by the manipulation of smoking motivation. In addition to contributing to basic scientific understanding of motivation and addictive processes, these findings may be relevant to a host of smoking cessation issues.

NICOTINE AND EXERCISE-RELATED EXPENDITURE IN WOMEN

This UW-TTURC pilot study investigates whether aerobic exercise and use of the nicotine patch discourages post-quit weight gain. Participants, who are female smokers with a normal Body Mass Index (BMI), exercise and rest in a specialized chamber used to measure metabolic activity. Upon quitting, participants are randomly assigned the nicotine patch or a placebo. They then repeat the exercise and rest sequences, allowing researchers to trace any changes in metabolic activity.

AFFECTIVE CONSEQUENCES OF SMOKING AND WITHDRAWAL

This study examines affective characteristics of dependent vs. occasional smokers and affective consequences of acute nicotine withdrawal. During the experimental session, various components of participants' stress response to a noxious stimulus (electric shock) are assessed prior to and following cigarette

Understanding & Treating Tobacco Dependence - continued

administration in the laboratory. Stress response is indexed with both self-report and psycho-physiological indexes of affective response (e.g. fear-potentiated startle), and with neuroendocrine system (salivary cortisol) activity. Smokers are measured on negative emotionality, positive emotionality, stress response recovery and changes in positive and negative affect.

The results of this research suggest that one consequence of tobacco withdrawal is that smokers, especially women, take longer to recover from the emotional aftereffects of a stressor.

Additional UW-CTRI Research

UW-CTRI researchers conduct a variety of research on other tobacco dependence and treatment issues. These include:

Treatment Research

SMOKING AS A VITAL SIGN

Dr. Fiore, UW-CTRI director, was the prime proponent of treating smoking status as a vital sign. Continuing research on the efficacy of this procedure is being conducted. A current study examines the ability of the vital sign stamp to increase rates of smoker identification, physician advice to quit smoking, physician assistance in quitting and abstinence rates.

INTEGRATING SMOKING CESSATION TREATMENT INTO PRIMARY CARE

Researchers are examining whether free, readily accessible smoking cessation treatment offered in primary care settings is accepted and used by the majority of unselected smokers of diverse racial and ethnic origins. In addition, they are looking at the barriers that might prevent such usage.

MEDICATIONS AND SMOKING CESSATION

A number of UW-CTRI studies concern the efficacy of medications and combinations of medications. A recent study has found that bupropion triples the quit rate of women and formerly depressed smokers. Another study looked at length of treatment while another examined the effects of combining bupropion and various nicotine replacement therapies.



Dependence Research

UNDERSTANDING DEPENDENCE

A number of studies on the nature of dependence are underway or being published. These include findings about affective and physiological modes of dependence and present a new theory of dependence. Research on college smokers and the nature of their tobacco use may also shed some light on the development of tobacco use and the origins of dependence.

Research Staff

Timothy Baker, UW-CTRI

Associate Director

Daniel Lawrence

Jason Moresco

Heather Vaughn

Jackie Wilson

Patricia Weston

Mary Benes-Malone

Angela Eschle

Jennifer Brown

Rebekah Kopec

Stevens Smith

Mark Zehner

Douglas Jorenby

Donna Muehlenbruch

Megan Piper

Danielle McCarthy

Matthew Majeskie

Terese Guiliani

2002 RESEARCH HIGHLIGHTS

- Completion of the treatment phases of all three major UW-TTURC investigations.
- Development and publication of a new theoretical model of relapse.
- Completion of a UW-TTURC pilot study that reveals how nicotine withdrawal interferes with the regulation of affect.
- Presentations by four UW-CTRI researchers at the 2002 National Conference on Tobacco or Health in San Francisco and six presentations at the Nicotine and Tobacco Conference in Savannah, Georgia.
- Publication of a number of significant research articles in 2002 (See Appendix B).

Fostering New Researchers

UW-CTRI recognizes the importance of attracting diverse and committed students to tobacco research as well as continuing the education of those already in the field. At UW-CTRI several programs are in place to engage new researchers in the tobacco control arena.

The Training Tobacco Scientists Program

In 2002, the Training Tobacco Scientists (TTS) program, part of the Transdisciplinary Tobacco Use Research Center initiative, addressed both the need to attract new researchers and to continue the education of those already involved in tobacco research. The TTS program recruits and mentors future researchers at several levels—high school, undergraduate, graduate and postdoctoral. At each level, students are encouraged to learn about the broader arena of tobacco control while also selecting and researching a subject that both follows their interests and falls within the framework of tobacco control research.

The Brown Bag Series provides an opportunity for trainees and other researchers to present works in progress for comment, feedback and discussion. The Seminar Series involves inviting national experts in tobacco control to Madison to present their research to the TTS trainees, participating mentors and the entire UW campus. Speakers are selected based on their interest in tobacco control and their research experience in a field that holds promise for addressing transdisciplinary tobacco control research questions. Speakers in 2002 included Dr. Ellen Gritz from the M.D. Anderson Cancer Center in Houston and Dr. Joanna Cohen of the Ontario Tobacco Research Unit of the University of Toronto.

Learning at the Clinic

The UW-CTRI Smoking Cessation and Prevention Clinic serves as a training ground for the next generation of health professionals. Clinical psychology trainees from the Department of Psychology, UW resident physicians, and other health professionals learn effective tobacco cessation



“The mini-grant has been an amazing opportunity to learn about research methodology and the processes required of a research project. The knowledge and experience I’ve gained will doubtlessly help me in years to come.”

Megan Schultz
UW undergraduate
TTS Mini-Grant Project:
*Target Marketing of Tobacco Products
in the U.S. Latino Population*

Fostering New Researchers - continued



UW MEDICAL SCHOOL RESEARCH APPRENTICESHIP

“Working with Dr. Fiore taught me a lot about tobacco research and helped me see if I am interested in the field.”

Alex Kirkendoll

Madison West High School Senior
Summer Research Project:
*Withdrawal Symptoms: Real Time
Assessment Before and After Quitting*

“Doing research at CTRI exposed me to the scientific, professional world.”

Sam Johnson

Memorial High School Junior
Summer Research Project:
*Bupropion and Counseling as Aids
in Smoking Cessation: Using
Empirical Data to Determine the
Efficacy of Treatment*

techniques through interaction with clinic patients. In addition, for the past five years UW-CTRI has worked with students from the UW Physician Assistant Program to train them in assisting underserved persons with smoking cessation.

UW-CTRI Student Research Programs

UW-CTRI works with other UW training programs to offer summer research opportunities for high school students and undergraduates with interests in tobacco cessation. One of these programs, the UW-Madison Medical School Research Apprenticeship Program (RAP), allows secondary students to work with UW-CTRI researchers to gain exposure to and experience in tobacco control research. The students participate in research projects for six weeks, concluding with a final presentation of their efforts. The other program, the UW Psychology Research Experience Program (PREP), offers an eight-week summer program for underrepresented minority or first-generation college students. UW-CTRI also offers postdoctoral fellowships to tobacco researchers in conjunction with the UW Comprehensive Cancer Center.

Training Staff

Tammy Sims, Director of TTS Program
Deb Christianson

2002 TRAINING HIGHLIGHTS

- Awarded three mini-grants from a fund of \$30,000 to support mentored tobacco research by UW undergraduate and graduate students.
- Recruited five different trainees ranging from high school students through graduate students to conduct summer research projects at UW-CTRI.
- Sponsored or co-sponsored four campus-wide seminars related to tobacco use research or treating tobacco use and dependence.
- Organized center-wide brown bag seminars for discussing works in progress and sharing proposals.
- Collaborated with outreach staff to provide a Statewide Training Workshop for healthcare providers called “Treating Tobacco Dependence in the Real World: Practical Strategies.”

Supporting the Mission

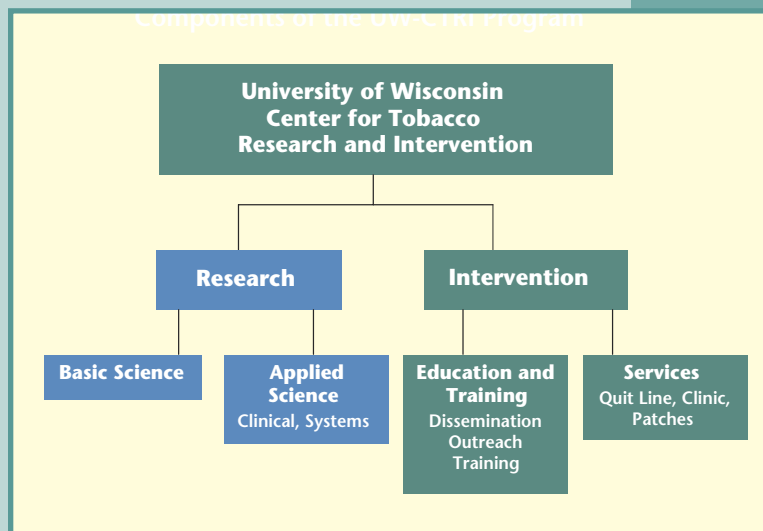
UW-CTRI is now an organization with over 70 employees. Administrative structures, strategic planning and a greater emphasis on internal communications have become a necessity. In 2002, the Center analyzed its organizational components and developed a new structure to reflect the growth and change that has been occurring.

Center Organization: Research and Intervention

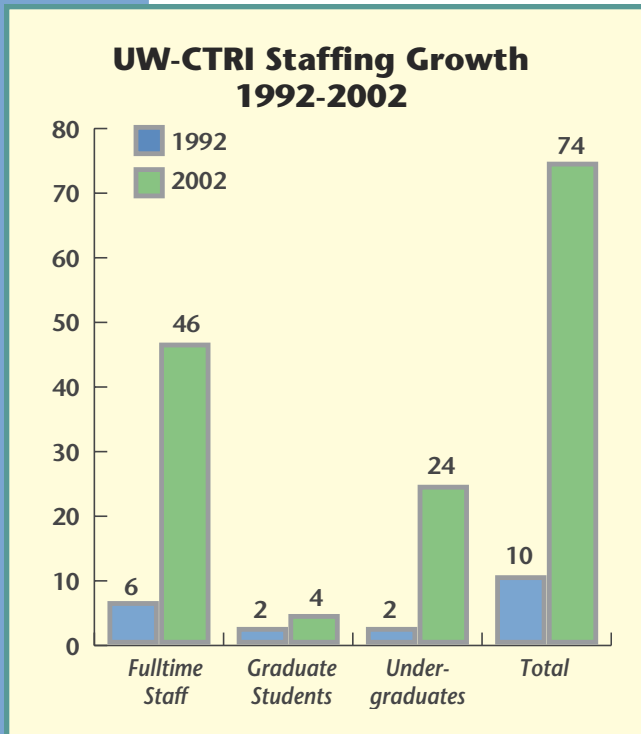
UW-CTRI is organized into two primary functional enterprises: research and intervention. Slightly more than one-half of the Center's work is in research, which includes both basic science and applied science. There are two distinct but related work groups--one focusing on basic science and clinical applications of that science and the other focusing on health services systems. An example of the health services systems research is the state employers' initiative which examines the impact of smoking cessation coverage on quit attempts.

The intervention side of UW-CTRI involves two primary focus areas--training and education and service delivery. Training and education nationally occurs primarily through the dissemination group; statewide training and education comes through the education and outreach group. Both groups concentrate primarily on implementing the Clinical Practice Guideline: *Treating Tobacco Use and Dependence*.

During and following the strategic planning process, these groups (dissemination and education and outreach) have come to work more closely. They are now working more closely with the UW-CTRI training program, which provides professional training seminars and educational opportunities for practitioners and future scientists.



Supporting the Mission - continued



The last two programs, the Wisconsin Tobacco Quit Line and the stop smoking clinic, are both direct services. 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 20,000 smokers.

While placed separately on an organization 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, fund development and finances, human resources, administrative support services and leadership.

Administrative Staff

*Lisa Rogers, Assistant Director
for Finance*

*David Fraser, Assistant Director for
Research Administration*

*Gloria Meyer, Communications Director
Jessica Citti*

Linda Kurowski

Marie Larson

Audra Russell

James Terasa

Looking Toward the Future: Our Strategic Plans

Over the past three years, the UW Center for Tobacco Research and Intervention has experienced tremendous growth—in funding, in staff, in responsibility and in reputation.

When this happens, it is prudent to initiate a strategic planning process. For UW-CTRI, this process began in the fall of 2002 with the goal of renewing and defining the Center’s mission and vision for the future.

The core mission of UW-CTRI is to expand our understanding of tobacco dependence and its treatment and to apply those scientific findings through intervention strategies that reduce tobacco use in Wisconsin, nationally and internationally.

Each UW-CTRI program has developed goals, strategies and action plans based on the mission. Below is a brief synopsis of the individual program plans.

Research

The research side of UW-CTRI is facing tremendous opportunities. Now established as the lead center for research on smoking cessation, especially in the applied/treatment field, UW-CTRI has the staff and capability to perform studies far beyond what it has done before. UW-CTRI also has a wealth of data stemming from recent and current studies. Thus, the research program has these strategies and goals:

RESEARCH STRATEGIES AND GOALS

Clinical and Basic Science Research

- Focus the new research direction on the nature of dependence and tobacco cessation and develop a better understanding of the “natural history” of tobacco dependence generally and within different groups of people
- Expand the number of senior level researchers, as staff and/or collaborators

Health Services Research

- Establish a national role in this area, building on the Center’s strengths in tobacco dependence research and research application in the field
- Attract senior level health services expertise to the Center
- Collaborate with other Centers working in this area, especially focusing on costs of treatment and return on investment, treatment coverage, managed care and related health services concerns

Looking Forward: Strategic Plans - continued

Intervention

UW-CTRI also has significant opportunities in its intervention programs. UW-CTRI's development of the Public Health Service Clinical Practice Guideline has been a fundamental strength of all these intervention efforts and provides an opportunity for the dissemination program to develop products and services for outreach in Wisconsin and nationally.

The statewide outreach program has established a significant track record of accomplishments in a very short time, especially in training clinicians throughout the state to implement the smoking cessation guideline. The Quit Line also has established itself quickly as a major resource for the state, serving over 14,000 tobacco users annually. The UW-CTRI training program has produced promising new scientists in the field of tobacco research. This effort needs to be more closely connected with some of the other related education and training efforts at UW-CTRI, particularly outreach and dissemination.

INTERVENTION STRATEGIES AND GOALS

Outreach and Education

- Build capacity to support cessation through training, expanding state and local networks and development of tools
- Expand outcome evaluation
- Develop worksite and insurer-based initiatives similar to the successful clinic-based work that has already been done

Wisconsin Tobacco Quit Line (and related direct services)

- Continue to improve promotional efforts designed both to ensure Quit Line usage among all populations and better inform the public about tobacco dependence and its treatment
- Expand the ability to provide add-on direct services such as nicotine replacement therapies to groups in need (people without insurance, teens, etc.)

Dissemination

- Continue to develop evidence-based products for state and national use, targeted toward a wide variety of audiences
- Expand the role of dissemination in linking research and practice within the Center and beyond

Clinical Services

- Maintain a clinic both as a service and a training resource

Training

- Tie the training effort more closely to outreach and dissemination

For a more complete summary or a copy of the complete plan, contact the UW-CTRI Center Office at 608-262-8673.

Appendix A

2002 Financial Information

UW-CTRI's operating budget in 2002 was \$6.8 million. Funding for UW-CTRI research and activities comes from a variety of sources—federal government grants, state tobacco control funds, nonprofit organizations and pharmaceutical company research funding. UW-CTRI does not accept tobacco-industry funding since this would be counterproductive to UW-CTRI's mission. CTRI funding in 2002 came from the following sources:

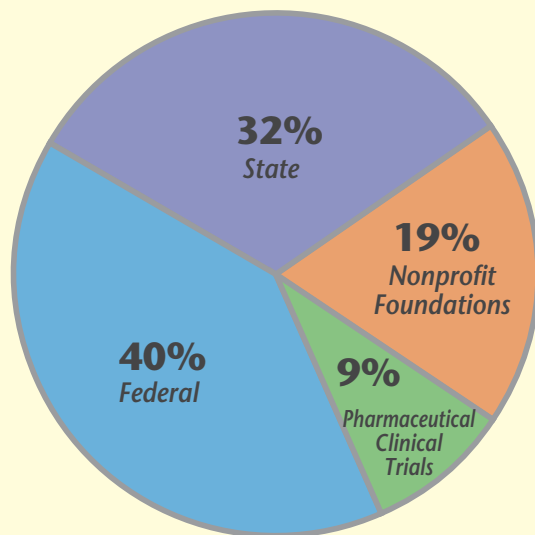
The National Institutes of Health (NIH)

In 1999, UW-CTRI was awarded a \$10 million five-year grant as one of the seven national Transdisciplinary Tobacco Use Research Centers (TTURC). This grant funds a variety of research activities related to prevention of relapse to smoking. In 2001, UW-CTRI was awarded a \$175,000 per year TTURC research supplement for under-represented minorities.

State of Wisconsin

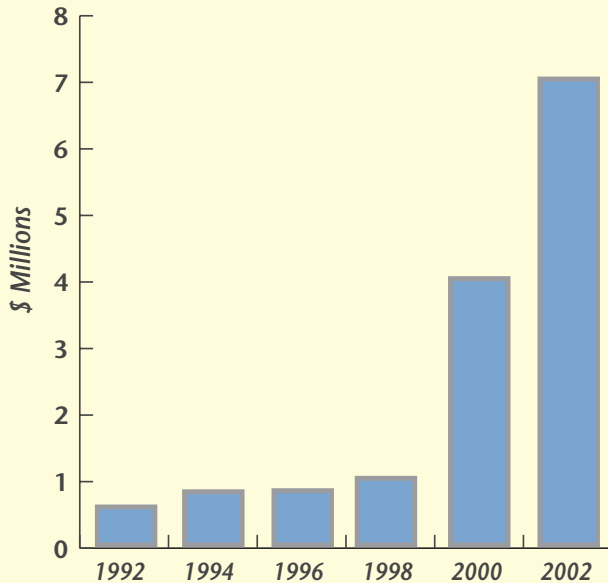
In 1999, UW-CTRI was awarded \$1 million per year for two years in the 1999-2001 state budget to support a statewide education and outreach program aimed at reducing smoking among children and adults in Wisconsin. This funding was continued in the 2001-2003 state budget. In addition, the Wisconsin Tobacco Control Board allocated another \$1 million per year to support the Wisconsin Tobacco Quit Line, which UW-CTRI initiated, manages and promotes.

2002 Funding Sources



Appendix A - 2002 Financial Information - continued

**UW-CTRI Operating Budgets
1992-2002**

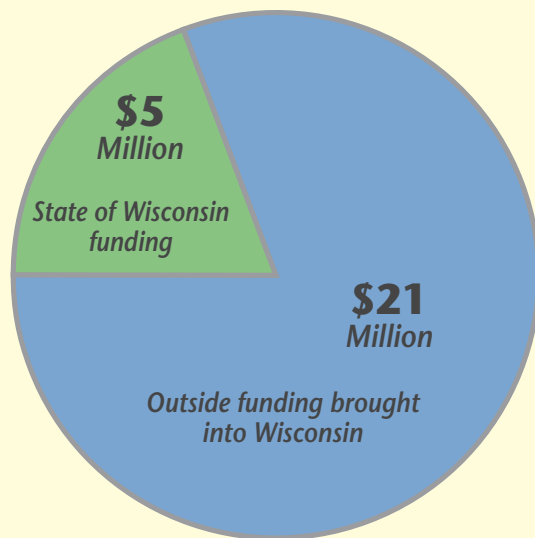


The Robert Wood Johnson Foundation

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.

In 2000, RWJF awarded UW-CTRI a \$100,000 per year supplement to the NIH-funded TTURC award. The purpose of this supplement is to promote internal and external communication of research findings resulting from TTURC research. Also in 2000, RWJF awarded UW-CTRI \$150,000 a year TTURC supplement for policy research.

**Income 1992-2002
Total = \$26 Million**



Pharmaceutical Funding

UW-CTRI conducts a number of clinical trials of new medications for smoking cessation. Funding for pharmaceutical clinical trials was approximately \$600,000 in 2002.

Appendix B

Publications 2001-2002

- Pinney, J.M., Ahluwalia, J.S., Arkin, E.B., Curry, S., Fiore, M.C. et al. (2001). Realignment of the nation's tobacco agenda: The need to treat tobacco dependence. *Preventive Medicine*, 32, 95-100.
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- Anderson, J.E., Fiore, M.C. (2001). Focus on tobacco. Clinician perseverance: Helping patients overcome tobacco dependence. *Wisconsin Medical Journal*. 100, 14-15.
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- Fiore, M.C., Saunders C.S., Westman E.C. (2001). Using pharmacotherapy for smoking cessation. *Patient Care*, 18-27.
- Smith, S.S., Jorenby, D.E., Fiore, M.C., Anderson, J.E., Mielke, M.M., Beach, K.E., Piasecki, T.M., Baker. T.B. (2001). Strike while the iron is hot: Can stepped-care treatments resurrect relapsing smokers? *Journal of Consulting and Clinical Psychology*, 69, 429-439.
- Farrell, P.M., Fiore, M.C. (2001). Solving complex health problems with interdisciplinary approaches. *Wisconsin Medical Journal*. 100, 75-76.
- Curry, S.J., Fiore, M.C., Burns, M.E. (2001). Community-level tobacco interventions: Perspective of managed care. *American Journal of Preventive Medicine*, 20, 6-7.
- Jamerson, B.D., Nides, M., Jorenby, D.E., Donahue, D., Garrett, P., Johnston, J.A., Fiore, M.C. (2001). Late-term smoking cessation despite initial failure: An evaluation of bupropion sustained release, nicotine patch, combination therapy and placebo. *Clinical Therapeutics*, 23, 744-52.
- Piasecki, T.M., Baker, T.B. (2001). Any further progress in smoking cessation treatment? *Nicotine and Tobacco Research*, 3, 311-23.
- Piper, M.E., Fox, B.J., Fiore, M.C. (2001). Strategies for smoking cessation. *Pulmonary and Clinical Care Update Online*, 15. <http://www.chestnet.org/education/online/pccu/vo115/lesson13.php>.

continued

Appendix B - Publications 2001-2002 - continued

- Piasecki, T.M., Fiore, M.C., McCarthy, D.E., & Baker, T.B. (2002). Have we lost our way? The need for dynamic reformulations of relapse proneness. *Addiction*, 97, 1093-1108.
- Fiore, M.C., Hatsukami, D., Baker, T.B. (2002). Effective tobacco dependence treatment. *JAMA*, 288, 1768-1771.
- 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. *Clinical Cardiology*, 25, 23-26.
- 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.
- Sims, T.H., Fiore, M.C. (2002). Pharmacotherapy for treating tobacco dependence: What is the ideal duration of therapy? *CNS Drugs*, 16, 653-662.
- Jorenby, D.E. (2002). Clinical efficacy of bupropion in the management of smoking cessation. *Drugs*, 62, 25-35.
- Katz, D.A., Muehlenbruch, D.R., Brown, R.B., Fiore, M.C., Baker, T.B., AHRQ Smoking Cessation Guideline Study Group (2002). Effectiveness of a clinic-based strategy for implementing the AHRQ smoking cessation guideline in primary care. *American Journal of Preventive Medicine*, 35, 293-302.
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- Baker, T.B. and Curtin, J.J. (2002). How will we know a lapse when we see one? *Experimental and Clinical Psychopharmacology*, 10, 350-352.
- Duncan, M.J., White J., Jorenby, D.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 of Health Behavior*, 26, 213-220.

The Mission

The mission of The University of Wisconsin Center for Tobacco Research and Intervention (UW-CTRI) is to expand our understanding of tobacco dependence and its treatment and to apply those scientific findings through intervention strategies that reduce tobacco use in Wisconsin, nationally and internationally.

The Center

UW-CTRI was established in 1992 by the University of Wisconsin-Madison as the lead campus agency addressing tobacco use and control 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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UW-CTRI

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