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WITH TOBACCO USE RESEARCH CENTERS

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The Networker

TTURC Partners Policy Research: Expanding the Science

By Nicole Greenway

Last September, 2002, TTURC researchers funded by the Robert Wood Johnson Foundation to conduct policy related research convened in Chicago to learn more about the tobacco landscape and to present information about their own policy projects. During the meeting, two well-known tobacco policy researchers and a tobacco policy advocate presented information about various aspects of the tobacco policy realm. David Altman, Ph.D., Director of the RWJF National Program Office, Substance Abuse Policy Research Program, presented the history of tobacco policy research, and the current tobacco policy climate. Peter Jacobson, J.D., M.P.H., of the University of Michigan, discussed logistical issues involved in designing and conducting policy-related research. Danny McGoldrick from the Campaign for Tobacco-Free Kids provided the group with examples of media campaigns that Tobacco-Free Kids have used in an attempt to impact state, local and national policies.

The overwhelming sentiment was that the tobacco policy movement has come a long way in a very short time. In the past several years, we have seen a Master Settlement Agreement between the States and the Tobacco Companies; individuals suing the tobacco industry for damages and winning; cities and states implementing bar and restaurant smoking bans; states raising cigarette taxes, thus helping to make cigarettes less accessible to adolescents; and the Food and Drug Administration fighting to regulate the production of cigarettes. All of these things seemed unimaginable a decade ago.

Tobacco policy science has also made great strides. It was once considered a periphery science, but it is now a fundable topic with millions of dollars supporting tobacco policy researchers each year. To highlight some of the interesting tobacco policy science being funded, this issue of the Networker is dedicated to the TTURC Partners tobacco policy projects funded by RWJF. The tobacco policy topics cover a wide spectrum, including State Employer tobacco cessation coverage, the ethical and policy-relevant questions related to genetically tailored cessation treatment, the economic affects of smoking cessation on worker productivity and health care costs, and the barriers to effective tobacco policy change.

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State Employer Initiative: The Decision to Cover Tobacco Dependence Treatment

By Gloria Meyer



Marguerite Burns, MA

While most health insurance plans provide coverage for the diseases resulting from tobacco use, the majority do not provide treatment for the cause of those diseases—tobacco dependence. A study being conducted by UW-TTURC investigators, Michael C. Fiore, MD, MPH; Marguerite Burns, MA; Marjorie

Rosenberg, PhD; and Timothy Bosworth, Ph.D., aims to identify the factors that determine smoking cessation insurance coverage for the 5.2 million state employees and retirees nationwide. The study has two tracks. One involves surveying state employers about their smoking cessation coverage while the other examines current usage and the costs of providing Wisconsin state employees with a smoking cessation benefit.

Researchers at the University of Wisconsin TTURC have now almost completed a national survey of state employers. This survey was designed to identify the prevalence of the provision of smoking cessation insurance coverage, to understand health care purchasing processes, and to discover what influences the likelihood of purchasing a smoking cessation insurance benefit. The survey employs semi-structured interviews and paper and pencil surveys of existing benefits. Eighty percent of states have agreed to participate in the survey and data collection will be completed in January 2003.

“This study gives us a snapshot of what’s available right

now. In addition, it will help us learn how the decision to cover smoking cessation treatment is made and how more public health care purchasers might be convinced to cover smoking cessation as part of their benefits package,” said Marguerite Burns, graduate research assistant, UW Department of Population Health Sciences.

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The policy research team is also conducting a three-year cost analysis of a new smoking cessation insurance benefit for State of Wisconsin employees. This research assesses member awareness and the use and cost of the new benefit during the first three years of its availability. At this point, two years of self-reported data from state employees are in. The analysis of 2001 claims is well underway. Sixteen of the 17 health insurance carriers that provide health care to Wisconsin state employees have agreed to participate in this study and provide annual pharmaceutical claims data as specified by the study team.

“We have been very pleased at the cooperation both from the State of Wisconsin and the state employers across the country,” said Burns. “The information we collect and its analysis should prove to be very helpful in understanding state coverage policy decisions.”

First year benefit use data for Wisconsin state employees and the per member per month cost of the benefit will be reported at the January TTURC conference.

Identifying Barriers to Effective Policy Change

By Louri Groves

“This collaboration will focus on the ‘translation’ of research findings into novel intervention efforts with the aim of determining their overall feasibility and the barriers to their implementation.” - Dan Stokols

interventions targeting adolescents. The major aim of this pro-

The UCI TTURC Policy Proposal project focuses on identifying barriers to, and opportunities for innovative tobacco control programs and prevention/treatment inter-



Larry Jamner, Ph.D.

posal is to assemble a collaborative working group, the Policy Board, consisting of regional policy makers, community leaders, educators, government/health officials, and UCI-TTURC members. “There is significant value in enlisting regional community members and leaders to help identify hurdles and delineate effective ways to

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Measuring the Economic Value of Smoking Cessation for Various End Users

By Jody Sindelar and Tracy Falba



Jody Sindelar, Ph.D.



Tracy Falba, Ph.D.

The Robert Wood Johnson Foundation funded policy research at the Yale TTURC has several aims. Most aims relate to measuring the benefits, especially productivity benefits, of smoking cessation. Many policies and treatments have the aim of getting people to quit. Our research seeks to better measure the value of a smoker quitting. Better measures of the value of quitting will provide an empirical foundation for the evaluation of interventions designed to encourage cessation. Our approach uses economic frameworks and empirical methods. Primarily we use large nationally representative data sets, but we are also using data collected through the Yale TTURC. Since there are several decision-makers who could influence smoker quit rates, we examine the value of a quit to society, smokers, firms, and other decision-makers.

Productivity losses from smoking and gains to quitting are potentially important areas of value that have received relatively little attention in the past. Thus, calculating productivity gains and losses is a key focus of our group. We are estimating the impact of smoking cessation on measures of productivity including days absent from work, retirement, and wages earned. The evidence that we provide may help to better structure policies and provide incentives to promote cessation. We may even be able to influence the smoker's decision to quit by providing relevant information. Previously, in both policy and research, the focus has been placed on medical costs of smoking. Quantification of medical care costs served as a focal point for the Master Settlement Agreement between states and tobacco companies. In a parallel way, we seek to put the focus on workplace productivity and smoking.

Methods of valuing a quit are also being applied in a cost-benefit analysis that we are conducting of a Yale TTURC clinical trial. The trial is to determine the efficacy of nal-

trexone when combined with the nicotine patch as compared to the patch alone (Stephanie O'Malley, P.I.). A primary focus of the trial is to determine the efficacy of the treatment in helping smokers to quit without gaining weight. The value of the potential attenuation of weight gain has not been assessed before. We use a novel approach to capture the value to smokers of not only the cessation efficacy, but also the attenuated weight gain. In addition to standard methods, we use a willingness-to-pay survey to assess the value to smokers of both trial outcomes.

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We have expanded our willingness-to-pay surveys to joint work with the Brown TTURC. The Brown site will implement such surveys to assess the value of their intervention of the patch with tailored counseling. This particular project seeks to determine how willingness-to-pay varies with increased treatment effectiveness.

The work of the policy team extends that of the TTURC by adding new methods, approaches, data sources and topics. We add the methods of economic and policy analysis. We also add new data sources and use large nationally representative data sets in novel ways to answer difficult questions. We extend the topics to include productivity gains due to smoking cessation and evaluation of treatments. These two topics intertwine with each other as knowledge of the magnitude of productivity gains from cessation helps to value the gains to treatment for cessation. We also extend analysis to the population of long-term smokers.

Results from our research will benefit various groups of society and will be relevant to several policy audiences. Those potential audiences include employers, government policy makers, pharmaceutical companies, and workers who smoke and their families.

Tailoring Smoking Cessation Treatment by Genotype: Implications for Ethics and Clinical Practice

By Alexandra Shields, Caryn Lerman, Megan Kasimatis



Alexandra Shields, Ph.D.

Research on the genetic basis of tobacco dependence currently underway holds great promise for improving the efficacy outcomes of smoking cessation treatment. However, this potential is likely to be undermined if the possible ethical and policy issues related to the clinical concerns about the integration of these new technologies into clinical practice are not adequately addressed. This is precisely the focus of the PENN/Georgetown TTURC health policy project.

Sponsored by RWJF, this project extends the research underway by Pennsylvania TTURC PI Caryn Lerman, Ph.D. Through two randomized clinical trials, Dr. Lerman and colleagues are examining how individual differences in genetic factors may influence the outcomes of different pharmacologic treatments for smoking cessation.

The health policy project is based on a foundation of transdisciplinary collaboration. The research team believes that collaborative transdisciplinary research produces products with an increased depth and scope due to methodological and theoretical contributions gleaned from multiple disciplines. The complex nature of genetic information and the issues involved with translating it into clinical practice and communicating it to the broader public require the insights and expertise of various disciplines, including those with scientific, ethical, medical and legal expertise.

Included in this health policy effort, led by P.I. Alexandra Shields, Ph.D., are two methods of identifying and addressing concerns raised by the possible future use of genetically tailored treatments for smoking cessation. The first includes focus groups and a national survey of primary care physicians to assess physicians' attitudes about genetic testing in the context of smoking treatment. The second strategy focuses on a number of ethical questions that have significant public policy implications. The future tailoring of smoking treatment by genotype would involve testing for a panel of genetic polymorphisms and then matching patients to optimal treatment based on their individual genetic profile. The same genotypes identified to tailor treatment have also been associat-

ed with an increased risk of becoming addicted to nicotine. Further, many of the candidate genes under study are pleiotropic in nature – the same genes associated with smoking behavior have also

been associated with addiction to cocaine, alcohol and number of psychiatric conditions. Finally, initial studies have documented a higher prevalence of risk-conferring alleles among minority populations. These particulars heighten the potential that unintended adverse consequences, including possible discrimination against smokers or identifiable sub-populations, may result from genetic testing conducted as part of new smoking treatment strategies. Providers appear to be ill equipped to provide adequate informed consent to patients considering genetic testing. Currently, state and federal privacy law is inadequate to protect patients from unauthorized use of genetic test results, thereby emphasizing the importance of anticipating potential negative consequences of undergoing genetic testing in this context.

The Georgetown Transdisciplinary Ethics Research Consortium on Smoking and Genetics is studying these ethical and policy-relevant questions. The Consortium includes national experts in diverse fields, including genetics, public policy, law, history of medicine, anthropology, tobacco research, medicine, psychology and bioethics. A series of analyses and white papers are being produced by the Consortium, which will be widely disseminated to stimulate discussion and strategic thinking among researchers and policy makers regarding issues related to clinical integration of new research on smoking and genetics.

Better understanding the role of genetics in smoking behavior and response to treatment may be an important lever needed to improve smoking treatment. Helping policy makers make the connection between better treatment outcomes for smoking and adequate protections for patients may be one of the great contributions of the PENN/Georgetown health policy project.

Included in this health policy effort are two methods of identifying and addressing concerns raised by the possible future use of genetically tailored treatments for smoking cessation in clinical practice. The first includes focus groups and a national survey of primary care physicians to assess physicians' preparedness and attitudes about genetic testing in the context of smoking treatment. The second strategy focuses on a number of ethical questions that have significant public policy implications.

Economic Impact of Tobacco Use Across the Lifespan

By Suzanne Moriarty, Jane Wheeler, Charles Neighbors

The research at TTURC: New England Family Study (NEFS), investigates the intergenerational factors and lifetime psychiatric conditions that affect nicotine dependence. The research also compares a twelve-month, proactive telephone intervention, which uses individually-tailored materials vs. brief telephone counseling. The tailored materials address co-existing conditions, such as substance abuse, depression/stress, and weight concerns. The goal of the policy project linked to TTURC: NEFS, “Economic Impact of Tobacco Use Across the Lifespan” (C. Neighbors, PI), is to translate the research findings of the larger TTURC to important stakeholders in the tobacco policy arena, providing policy makers with pertinent data to inform decision making.

The NEFS policy team has a unique opportunity to present a more sophisticated analysis of the healthcare costs associated with tobacco smoking than any study published to date. Better data will help public health and private sector policymakers, smokers and the general public make more informed decisions about tobacco control policies and funding for treatment of smokers.

Creating public health policies that curtail the detrimental effects of tobacco remains controversial. Some argue that smoking is a personal choice. Others counter that tobacco imposes large costs on society. While there is some agreement about health hazards to individuals, there is limited understanding of the full societal cost of tobacco smoking.

Some researchers conclude the medical costs are in excess of \$50 billion per year for the United States. Critics challenge that cost analyses have misattributed to tobacco the costs of other problems often associated with smoking such as depression and alcohol abuse. As a result, some federal and state governments, employers, insurers, and patients are reluctant to pay for “best practice” treatments for smoking cessation.

Funded by RWJF, the TTURC: NEFS policy project addresses four questions: 1) What are the unique medical care and lost productivity costs associated with smoking, independent of other contributing factors such as alcohol abuse, depression and sedentary behavior?; 2) How do sub-groups of smokers, based on their levels of nicotine dependence or psychiatric illness, differ in medical care

and lost productivity costs?; 3) What are the medical care and lost productivity costs - later in life - of offspring of mothers who smoked during pregnancy?; 4) What are the potential cost savings, associated with a telephone smoking cessation intervention that tailors content and intensity to smoker needs?



Charles Neighbors, Ph.D.

TTURC: NEFS is gathering extensive data on individuals who have been part of a longitudinal study focused on pregnancy outcomes (National Collaborative Perinatal Perinatal Project). Interviews are completed with three generations of NEFS participants, including: Generation One: expectant mothers enrolled in the original study; Generation Two (G - 2): children enrolled in the original study from birth through age 7, now aged 36 - 43; Generation Three: adolescent children of G - 2 parents. The policy research project has added questionnaires that ask about the individuals’ health, use of the medical care system and reduced productivity at work. In addition to these interviews, the policy project is gathering utilization data from health insurers and hospitals.

This economic project could not be accomplished without the collaboration of many individuals representing different scientific disciplines. The NEFS transdisciplinary policy research team has been enlightened by the input of co-investigators Melissa Clark (Survey Researcher), Don Shepard (Health Economist), George Papandonatos (Statistician), Pedro Gozalo, (Econometrician) and Robert Stout (Health Services Researcher). The team has been guided by the experience of Steve Buka, Ray Niaura and David Abrams. Interviewers in the field have provided concrete feedback that improved the quality and relevance of our interviews.

The NEFS policy team has a unique opportunity to present a more sophisticated analysis of the healthcare costs associated with tobacco smoking than any study published to date. Better data will help public health and private sector policymakers, smokers and the general public make more informed decisions about tobacco control policies and funding for treatment of smokers.

Short List of TTURC Posters/Presentations to be Presented at SRNT 2003

Audrain-McGovern, J., et al. Applying a behavioral economic framework to understanding adolescent smoking.

Audrain-McGovern, J., et al. The impact of poor self-control and good self-control on adolescent smoking.

Baker, T., et al. Tobacco treatment evaluation: Achieving trans-disciplinary integration.

Belluzzi, J.D., et al. Acetadehyde enhances nicotine self-administration in adolescent rats.

Franklin, T. et al. Structural disparities between smokers and never smokers in select brain regions.

Hardie, T., et al. Genetics shared and nonshared environmental influences on selected smoking behaviors in twins from the Midus Survey.

Hatsukami, D.K., et al. Tobacco Exposure Reduction.

Kane, J.K., et al. Characterization of homer and group I metabotropic glutamate receptor regulation by nicotine.

Krishnan-Sarin, S., et al. Acute tobacco abstinence effects in adolescents: Influence of sex.

Lerman, C., et al. Differential response to nicotine replacement therapies in obese and non-obese smokers.

Leslie, F.M., et al. Single trial conditioned reinforcement and locomotor sensitization in adolescent rats.

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Loughlin, S.E., et al. Nicotine induced C-FO mRNA activation in adolescent brain.

Mase, T.F., et al. Priming of tobacco expectancies in free recall and recognition tasks.

Mbogori, J., et al. Brain metabolic effects of nicotine patch in high and low hostility subjects.

McKee, S.A., et al. Sex differences in tobacco withdrawal: Interactions with alcohol and depression diagnoses.

Murphy, S.E. Correlations among biomarkers of tobacco exposure and the use of these markers in a cigarette reduction trial.

O'Leary, K.T., & Leslie, F.M. Developmental regulation of nicotinic acetylcholine receptor-mediated norepinephrine release.

Patterson, F., et al. Individual differences in nicotine intake per cigarette.

Pomerlau, C.S., et al. Depressed mood as a women's withdrawal symptom.

Staley, J.K. et al. Correlation between severity of nicotine dependence and benzodiazepine receptor binding in alcoholics.

Strasser, A., & Kozlowski, L. The effect of puff volume on carbon monoxide exposure in 1mg tar and light cigarettes.

Identifying Barriers Continued..

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Dan Stokols, Ph.D.

surmount them,” said Larry Jamner, PhD., UCI Associate Professor and UCI TTURC Project Leader. “The interactions between key opinion leaders and UCI TTURC investigators will provide us with valuable insights into our Center’s work— critical perspectives that we might have not considered and otherwise over look.” The Policy Board will meet on a regular basis to collectively synthesize the research findings emerging from

the UCI-TTURC. They will also identify the institutional/cultural facilitators and barriers to implementing highly innovative transdisciplinary approaches aimed at tobacco use prevention and reduction among adolescents. More importantly, the group will characterize the factors that

influence policy maker decisions regarding tobacco control efforts in the schools and community and track changes among policy makers in receptivity and attitudes towards tobacco-control interventions likely to emerge from the UCI-TURC. Finally, the Policy Board will be asked to make recommendations on modifications of new directions for TTURC-sponsored research.

According to Dan Stokols, Ph.D, “This collaboration will focus on the ‘translation’ of research findings into novel intervention efforts with the aim of determining their overall feasibility and the barriers to their implementation.”

Under the leadership of Jamner, along with the Project's Co-Principal investigator, Stokols and Co-Investigator Frances Leslie, Ph.D., the study is scheduled to begin February 2003.