

Executive Summary

For far too long, tobacco use has been viewed as a men's issue, but the use of tobacco among women around the world is now common. As a result, women have experienced a dramatic upsurge in cancers, cardiovascular and lung disease, and other life-threatening conditions caused by tobacco use. Currently, it is estimated that approximately 1 in 5 U.S. women smoke and 170,000 U.S. women die each year from smoking.

The 2001 report of the Surgeon General, *Women and Smoking*, identified several strategies to reduce smoking among women. In addition, in 2001, the National Cancer Institute (NCI) highlighted research on tobacco and tobacco-related cancers in its annual budget document. The Department of Health and Human Services' (DHHS) *Healthy People 2010* continues to make smoking cessation and prevention a priority.

The Women, Tobacco, and Cancer Working Group was formed to respond to the priorities identified in these and other plans and reports. The group focused on identifying ways to stimulate scientific research and suggesting approaches to translate knowledge into interventions to prevent tobacco-related cancers in women in the United States and other countries. The Working Group, a public/private partnership led by NCI, met in Houston, Texas, in February 2003. This Report summarizes the recommendations of the breakout groups at the February 2003 Women, Tobacco, and Cancer Working Group meeting (see the *Summary of Recommendations*, pages 3-4).

Implementing the strategies described in the report will advance our progress toward the following goals:

Discovery

Increase our understanding of sex and gender differences* across the broad range of research on women, tobacco, and cancer.

A better understanding of the biological, psychological, and behavioral mechanisms and processes associated with women's and men's responses to nicotine exposure is critical to develop

better prevention and cessation interventions for addiction and to prevent and treat tobacco-related cancers. Research on genetic factors and hormonal variations throughout the life cycle should be emphasized in elucidating women's susceptibility to tobacco-related diseases and addiction, as well as responses to pharmaceutical and behavioral interventions. We need to understand how the interaction of gender, culture, race and ethnicity, and socioeconomic status affects women's and girls' use of tobacco products, perceptions of risk, and responses to relevant health messages. To conduct research that can be translated into effective applications, we must validate and standardize sex- and gender-appropriate definitions and measures of addiction, exposure, injury, and recovery.

Development

Develop new and more effective interventions to prevent and treat tobacco use and environmental tobacco smoke (ETS) exposure among women and girls, especially in populations at greatest risk.

We must translate basic and applied research into effective, evidenced-based prevention and treatment programs by using knowledge from animal studies, pilot projects, and small-scale clinical and community-based trials. By using or modifying existing mechanisms, we can rapidly evaluate promising interventions, programs, and policies—such as the World Health Organization Framework Convention on Tobacco Control—on tobacco use by women and girls, both nationally and globally. We need to evaluate and monitor the impact of tobacco control policies on tobacco use by women and girls, both nationally and globally. State-of-the-art, audience-tailored communication strategies should be used to develop and disseminate evidence-based messages that target women and girls.

* "Sex and gender differences" are defined as follows in the 2001 Institute of Medicine (IOM) report *Exploring the Biological Contributions to Human Health—Does Sex Matter?*: "The committee defines sex as the classification of living things, generally as male or female according to their reproductive organs and functions assigned by the chromosomal complement, and gender as a person's self-representation as male or female, or how that person is responded to by social institutions on the basis of the individual's gender presentation. Gender is shaped by environment and experience." (16)

Delivery

Ensure the widespread delivery of effective interventions to prevent and treat tobacco use and ETS exposure among women and girls.

The reach and impact of evidence-based tobacco control programs, policies, and counter-advertising campaigns must be expanded by increasing the appeal, access, affordability, and use of effective interventions, particularly among women and girls in populations at greatest risk. We need to identify and use targeted strategies to involve individuals, communities, policy makers, and organizations, especially women's organizations and those that have not previously been involved in tobacco control.

Partnerships

Harness and expand partnerships, networks, and innovative research platforms to design and launch broad-based strategies to eliminate the harms of tobacco use and ETS exposure.

Successfully implementing the discovery, development, and delivery recommendations will require capitalizing on existing collaborations and developing new partnerships. To maximize the development and dissemination of effective interventions, partners must be involved from the beginning, and knowledge gained from practice should be used to inform future research. We need to encourage researchers to investigate common pathways of tobacco-related disease mechanisms by fostering networks of clinical and translational researchers. Community-based participatory research needs to be conducted through partnerships between research institutions and community-based organizations, especially those that serve populations at greatest risk. Because of the magnitude and persistence of the tobacco use problem in American Indian/Alaska Native populations, it is particularly important to develop partnerships between research institutions and tribal colleges, tribal health departments, and/or American Indian health care and community settings. Similarly,

partnerships with organizations that serve women with low levels of education and women of low socioeconomic status are also a key priority.

Evaluation and Surveillance

Improve national and global evaluation and surveillance of the harms of tobacco use and ETS exposure and of women's and girls' knowledge, attitudes, and behaviors related to tobacco use and harms.

It is essential to monitor and evaluate progress toward reducing tobacco use and the impact of tobacco-related cancers on women. This will require further development of standardized measures and surveillance systems to ensure that data are comparable within and across nations. Information obtained will help strategically target funding to ensure that gains are maintained while expanding support for tobacco control among the general public, including policy makers. Identification and dissemination of best practices will inform researchers and practitioners about which prevention and cessation interventions are the most effective and help determine how to tailor core interventions to specific populations.

The Working Group believes that reducing and ultimately eliminating the harmful effects of tobacco use on women requires integrating advances in our understanding of basic biologic, behavioral, and social factors to develop new prevention and treatment interventions and ensure the delivery of new evidence-based interventions to all women who need them. As interventions are delivered, their impact on individual and public health must be evaluated and monitored to inform future research and development. Successful implementation of all of the recommendations of the Women, Tobacco, and Cancer Working Group will require many collaborations and partnerships between Federal and non-Federal organizations. Such efforts have the potential to rapidly decrease tobacco use and ETS exposure and, ultimately, morbidity and mortality.

Summary of Recommendations

DISCOVERY	DEVELOPMENT	DELIVERY
<p>OVERALL GOAL: Increase our understanding of sex and gender differences* across the broad range of research on women, tobacco, and cancer.</p>	<p>OVERALL GOAL: Develop new and more effective interventions to prevent and treat tobacco use and ETS exposure among women and girls, especially in populations at greatest risk.</p>	<p>OVERALL GOAL: Ensure the widespread delivery of effective interventions to prevent and treat tobacco use and ETS exposure among women and girls.</p>
<p>A better understanding of sex and gender differences is critical to eliminating tobacco use and tobacco-related cancer morbidity and mortality in women and men.</p> <p>Multidisciplinary research is needed on:</p> <ul style="list-style-type: none"> ■ Sex differences in the mechanisms and processes associated with: <ul style="list-style-type: none"> ◆ All phases of tobacco addiction—from experimentation to regular use and addiction to cessation—including the natural history of the progression between phases and the effects of environmental tobacco smoke (ETS) exposure. This includes genetic, molecular, cellular, neurobiological, biobehavioral, and hormonal factors that play a critical role in tobacco addiction and in the etiology of cancers and other diseases caused by tobacco. ◆ The etiology of cancers caused by tobacco, especially those related to gene-hormone-environment interactions involved in carcinogenic and other disease pathways. ◆ Methods of prevention and treatment of tobacco addiction. ■ Gender-specific factors in tobacco use and the components of effective prevention and treatment interventions for women and girls, especially in populations at greatest risk, to: <ul style="list-style-type: none"> ◆ Identify behavioral, psychosocial, sociocultural, and environmental influences on tobacco use, exposure to ETS and disease risk, and prevention and treatment interventions. ◆ Assess women’s and girls’ knowledge of the harms of tobacco use and ETS exposure and the benefits of quitting. <p>Multidisciplinary research is needed to:</p> <ul style="list-style-type: none"> ■ Validate and standardize sex- and gender-appropriate definitions and measures of addiction, ETS exposure, tissue injury, and recovery. 	<p>Translating basic and applied research into effective, evidence-based prevention and treatment programs and broad public health tobacco control policies will require:</p> <ul style="list-style-type: none"> ■ Using evidence from animal studies, pilot projects, and small-scale clinical and community-based studies to develop, refine, and evaluate promising sex- and gender-appropriate interventions for prevention, cessation, and treatment. ■ Using or modifying existing infrastructures to rapidly evaluate the efficacy of promising treatments and the effectiveness and cost-effectiveness of proven small-scale interventions, programs, and policies. ■ Developing and disseminating evidence-based cessation, prevention, and advocacy messages targeted to women using state-of-the-art, audience-tailored communication strategies. ■ Conducting research to explore and strengthen the positive health impacts of public and private tobacco control policies on women and girls, especially in populations at greatest risk, and improving the adoption of evidence-based policies and strategies by policy and decision makers. ■ Monitoring the harmful effects of tobacco marketing targeted to diverse populations of women and girls domestically and globally. 	<p>Expanding the reach and impact of evidence-based tobacco control programs and policies will require:</p> <ul style="list-style-type: none"> ■ Increasing the appeal, access, affordability, and use of effective interventions, particularly among women and girls in populations at greatest risk. ■ Identifying and using targeted messages and strategies to involve and activate individuals and organizations in effective, sustained advocacy for evidence-based tobacco control programs and policies. ■ Making data from surveillance and policy research, as well as social, economic, and cultural studies, available to the health care community, policy makers, and the general public in a timely and effective fashion. ■ Supporting research and demonstration projects to better understand how to convert women’s broad-based support for tobacco control policies and programs into more active involvement in their communities.

* See footnote on page 1.

Summary of Recommendations (continued)

PARTNERSHIPS	EVALUATION AND SURVEILLANCE
<p>OVERALL GOAL: Harness and expand partnerships, networks, and innovative research platforms to design and launch broad-based strategies to eliminate the harms of tobacco use and ETS exposure among women and girls.</p>	<p>OVERALL GOAL: Improve national and global evaluation and surveillance of the harms of tobacco use and ETS exposure, and of women’s and girls’ knowledge, attitudes, and behaviors related to tobacco use and harms.</p>
<p>Successfully implementing the discovery, development, and delivery recommendations will require capitalizing on existing collaborations and developing new partnerships. To maximize the development and dissemination of effective interventions, partners must be involved from the beginning, and knowledge gained from practice should be used to inform future research.</p> <p>Partnerships are especially needed between:</p> <ul style="list-style-type: none"> ■ Established networks of clinical and translational researchers that can provide the resources and infrastructure needed to foster cross-disciplinary interactions and rapidly evaluate treatments and interventions. ■ Research institutions and community-based organizations that serve populations at greatest risk to conduct community-based participatory research. These partners must be committed to joint decision making in designing research, sharing ownership of the products of research, and disseminating and implementing research results. ■ Research institutions and tribal colleges, tribal health departments, and/or American Indian health care and community settings to develop effective, culturally appropriate individual, family, and community-level tobacco prevention and cessation initiatives. ■ Public and private funding agencies to fully and efficiently support the implementation of successful interventions. 	<p>It is essential to monitor and evaluate progress toward reducing tobacco use, ETS exposure, and the impact of tobacco-related cancers on women and to make midcourse adjustments as needed. This will require further development of standardized measures and surveillance systems to ensure that data are comparable within and across countries.</p> <p>Local, national, and global evaluation and surveillance will be critical for:</p> <ul style="list-style-type: none"> ■ Monitoring and measuring national and global trends and patterns in tobacco use and exposure to ETS using standardized measures. ■ Ensuring that research and programmatic funding are strategically targeted and, where appropriate, tailored to specific populations. ■ Assessing whether progress has been made and whether it is due to specific interventions and policies. ■ Identifying effective interventions through success stories and rigorous case studies to inform researchers, encourage broader dissemination, and increase public support.