# UCSF DEPARTMENT OF MEDICIN

# UCSF Department of Medicine

FRONTIERS OF MEDICINE

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UCSF's Center for Tobacco Control Research and Education is a world leader in fighting tobacco addiction, and includes 46 faculty members. From left, Neal Benowitz, MD, Steven Schroeder, MD, Stanton Glantz, PhD, the center's director, and Pamela Ling, MD, MPH, co-director.



# Creating a Smoke-Free World

### **Center for Tobacco Control Research and Education**



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ach year, a terrible epidemic kills more than 400,000 Americans: the epidemic is tobacco addiction, and it continues to be the nation's leading preventable cause of death. UCSF's Center for Tobacco Control Research and Education is a world leader in fighting this scourge.

Directed by Stanton Glantz, PhD, the American Legacy Foundation Distinguished Professor of Tobacco Control, the interdisciplinary center's 46 faculty members study everything from the biology of addiction to the tobacco industry's political strategies. The center has also trained 30 fellows, including physicians, anthropologists, historians, economists, lawyers, and scholars from many other fields. "We try to teach people how to do first-class, unassailable science that addresses important questions impacting public health and policy," says Glantz.

Glantz, a tobacco control leader for more than three decades, is perhaps most famous for receiving a box containing secret documents from the Brown & Williamson tobacco company in 1994. The whistleblower's return address was listed as "Mr. Butts," the cigarette-shaped Doonesbury cartoon character.

Glantz and his colleagues sorted through 4,000 pages showing that tobacco executives lied to the public while knowing cigarettes were addictive and harmful. "The documents are like the human genome of evil," says Glantz. "They show smart industry executives saying things to each other like, 'We're in the business of selling nicotine, an addictive drug,' in 1963."

# tobacco control research and education



"Tobacco-induced disease is a disease of policy and politics. We try to work on areas where ideas will have impact."

- Stanton Glantz, PhD

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Brown & Williamson demanded that UCSF return the papers, sent private investigators to the UCSF library, and filed a lawsuit. Glantz was summoned to a meeting with UCSF's lawyers. "I remember thinking, 'Time to walk to the plank. They're going to say, we hope you've got a good lawyer," remembers Glantz. "Instead, they said, 'This is what the University of California is for, and we'll defend you." UCSF prevailed in the California Supreme Court, a remarkable victory considering that the tobacco industry's bullying had convinced 60 Minutes to cancel an exposé.

Glantz and his colleagues published five groundbreaking papers based on the documents in the *Journal of the American Medical Association*, later expanding the material into a book, *The Cigarette Papers*. They also published the source documents online.

As a result of litigation based in part on this evidence and Glantz's analysis of it, the four largest U.S. cigarette manufacturers and 46 states signed the 1998 Tobacco Master Settlement Agreement, the biggest civil litigation settlement in U.S. history. Among other

provisions, it restricted advertising and required tobacco companies to pay more than \$200 billion to compensate states for the cost of treating tobacco-related diseases.

The settlement also made 62 million pages of internal tobacco industry documents publicly available.

UCSF created the Legacy Tobacco Documents Library, publishing those documents online and providing primary source material for more than 600 scholarly papers. "Making this information accessible to everybody has transformed the debate, making it possible to start regulating the industry and allowing people to see how malignant they are," says Glantz.

He currently leads efforts to reduce the amount of smoking portrayed in movies, and exposes tobacco industry efforts to undermine smoke-free ordinances covering restaurants, bars and hotels.

Smoking rates among California's adults have fallen from 23 percent to 13 percent since 1988, thanks largely to tobacco education efforts. With sufficient political will, Glantz believes tobacco could be eliminated as a public health problem in California within five years. "Tobacco-induced disease is a disease of policy and politics," says Glantz. "We try to work on areas where ideas will have impact."

### **Helping Smokers Quit**

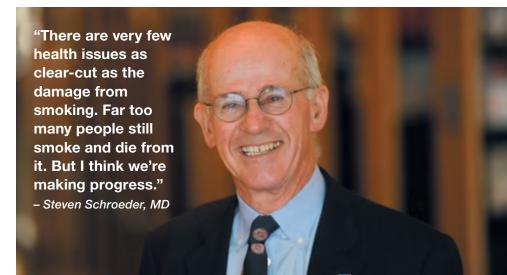
As an internist, epidemiologist and founding chief of the Division of General Internal Medicine at Parnassus, Distinguished Professor of Health and Health Care Steven Schroeder, MD, saw tobacco's devastating effects on individuals and populations.

After becoming president of the Robert Wood Johnson Foundation in 1990, Schroeder convinced its board to become the first philanthropy to address smoking. During his 12-year tenure, the foundation made \$500 million in grants for research, prevention and treatment of tobacco use.

Schroeder wanted to narrow the gap between what health professionals should do to help people stop smoking, and what they actually do. He returned to UCSF, creating the Smoking Cessation Leadership Center with support from the Robert Wood Johnson Foundation and the American Legacy Foundation, whose board he chaired.

Initially, Schroeder met resistance from national clinician groups. "They said, 'Our people are too busy. We don't have time for this!" recalls Schroeder. So he coined the phrase, "Take 30 seconds and save a life," and developed the "Ask, Advise, Refer" campaign. Participating clinicians ask patients if they smoke; advise them to quit, doubling their chances of trying; and refer them to the national quitline, 1-800-QUIT-NOW, to develop a customized cessation plan.

The center also cultivates champions from various health professions. For example, it worked with Mayo Clinic anesthesiologist David Warner, MD, to convene a meeting of anesthesiology leaders. The center presented data on quitline success rates, and anesthesiologists then piloted "Ask, Advise, Refer" with pre-operative patients at 14 hospitals. The practice has become official



Excerpt from one of the millions of tobacco industry papers online at legacy.library.ucsf.edu

policy of the American Society of Anesthesiology. The center has similarly partnered with more than 50 organizations.

The center also took on controversial issues. "People with chronic mental illness die 25 years earlier than the rest of the population; much of that is from smoking," says Schroeder. "Forty-four percent of all cigarettes are consumed by people with mental illness. And yet it had been a hands-off issue." Some mental health advocates opposed depriving people of their only pleasure. But studies show that about 70 percent of smokers with mental illness want to quit, similar to the general population. In 2006, the center convened a pivotal summit of mental health agencies, clinical organizations and advocacy groups. They also met with the Substance Abuse and Mental Health Services Administration, convincing the federal agency to prioritize smoking cessation in their grant programs.

## Join the Smoke-Free Commune

As a UCSF medical student in 1994, Pamela Ling, MD, MPH, led a very public life as a cast member of the MTV reality show, "The Real World." Her roommates included a 22-year-old HIV-positive man, one of the first young people with AIDS to appear on television.

Sixteen years later, viewers still recognize Ling, and say the show transformed their idea of who could get HIV. "I've remained interested in how media and social experiences that happen outside the doctor's office affect health-related choices," says Ling, who now directs the Center for Tobacco Control Research and Education's fellowship program.

Ling studies smoking among young adults in bars and nightclubs, a very high-risk group. For example, 56 percent of young nightclub attendees in San Diego smoke, compared to 18 percent of young adults statewide. "Young adults are a top priority for the tobacco industry, which recognizes that most smokers in this age group either quit or progress to addiction," says Ling. "Rather than just cede this territory to tobacco companies, we should be competing with them."

By analyzing tobacco documents, Ling found that the industry tailors marketing campaigns to specific subgroups of smokers. By reverseengineering this approach, Ling

"Young adults are a top priority for the tobacco industry.... Rather than just cede this territory to tobacco companies, we should be competing with them." - Pamela Ling, MD, MPH



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Percent of Californians who smoke – down from 23% in 1988 44

Percent of all cigarettes consumed are by people with mental illness

56

Percent of young
San Diego nightclub
attendees who
smoke – compared
to 18% statewide

50,000

Number of Americans killed each year by second-hand smoke

### **TOBACCO CENTER LINKS:**

- tobacco.ucsf.edu legacy.library.ucsf.edu smokefreemovies.ucsf.edu
- tobaccoscam.ucsf.edu jointhecommune.com famri.org/core/
- smokingcessationleadership.ucsf.edu

# tobacco control research and education

hopes to decrease smoking among high-risk populations. Ling partnered with Rescue Social Change Group, which uses marketing strategies to effect social change among youth. They identified young adult subgroups in San Diego's bar scene, including hipsters, urban youth and college partiers, as a high-priority population in tobacco control.

Ling is piloting an intervention for hipsters, who disregard traditional health messages. "Saying 'Smoking is bad for you' isn't relevant to them," says Ling. "But they do care about self-expression and social justice." Ling and Rescue designed a "social brand" called Commune, which sponsors popular smoke-free events featuring local artists and alternative bands. Artist-commissioned T-shirts, often with anti-Big Tobacco messages,



are sold at events and on Commune's website. They also started a weekly smoking cessation group for social leaders like DJs and bartenders, chronicling members' progress in a blog.

So far, smoking rates have dropped by 10 percent – promising but not yet statistically significant – and Ling will continue to measure this over time. She will also test three other smokefree "brands" targeted to other subgroups, comparing them with control groups in the coming years.

"The tobacco industry teaches young people, 'When I go out, I smoke,'" says Ling. "We're trying to break these associations so you have an experience where you're flirting or seeing a band you love, and you're not smoking."

### Investigating a 'New' Drug

For more than 30 years, Neal Benowitz, MD, chief of the Division of Clinical Pharmacology, has studied the pharmacology of nicotine – the addictive chemical in cigarettes –translating discoveries into clinical and policy interventions.

Working with Peyton Jacob, PhD, a research chemist at San Francisco General Hospital and his longtime collaborator, the two have developed methods to measure very low levels of nicotine in patients. "Working together, we're able to do science that no one else can do," says Benowitz.

Their early research demonstrated that people who reduce the number of cigarettes they smoke do not lower their exposure to nicotine or other toxins, because they take larger, more frequent puffs in a phenomenon called compensation. "People just smoked each cigarette twice as hard," says Benowitz.

He also studies how sex, race, age and genetics affect how people metabolize nicotine, and leads the Flight Attendant Medical Research Institute's Bland Lane Center of Excellence on Second Hand Smoke. The center investigates how secondhand smoke – which kills 50,000 Americans annually – impacts pulmonary and cardiovascular disease, economics and public policy. They also study "thirdhand smoke," long-lasting tobacco compounds like those deposited into hotel room carpets.

Benowitz also helps shape national tobacco policy. Last year, Congress passed the Family Smoking Prevention and Tobacco Control Act, allowing the Food and Drug Administration (FDA) to regulate the content of tobacco

products. Benowitz serves on the FDA's Tobacco Products Scientific Advisory Committee, which is currently developing recommendations on whether menthol should be banned from cigarettes, and will research the public health impact of smokeless tobacco use. "Eventually we'll be asked whether certain toxicants in tobacco smoke, or even nicotine, should be regulated down," says Benowitz.

For the past decade, Benowitz has investigated the question of possibly regulating nicotine, giving smokers experimental cigarettes which contain progressively less nicotine. "We found basically no change in cigarette consumption, even though nicotine intake levels dropped by more than two-thirds," says Benowitz. "If done gradually, smokers can be weaned from nicotine so they don't need to compensate by puffing harder or smoking more cigarettes."

Though few smokers would choose reduced nicotine cigarettes, Benowitz believes that mandating them would make cigarettes less addictive and make it easier to quit. "By modifying the product itself, you would intervene with millions of people at once," he says. "Plus, the United States will be the model for international regulation, so we could impact the 10 million lives that are lost each year worldwide from tobacco."

"I think the combination of regulation, health promotion, smoking cessation, maintaining Stan Glantz's invaluable work around clean indoor air, and specialized interventions like Steve Schroeder's efforts with smoking and mental illness, will have a profound impact in reducing tobacco-caused death and disability," says Benowitz.

