Journal of Korean Academy of Nursing (2004) Vol. 34, No. 8

A Comparison of Smoking Control Strategies in Korea and the United States

Chung Yul Lee, RN, PhD[1], Ok Kyung Ham, RN, PhD[2], Yoon Mi Hong, RN, PhD[3]

The purpose of this study was to compare smoking control strategies between Korea and the United States. Korea and other developing countries may learn from the experience of the United States in dealing with the growing epidemic of cigarettes. In particular, smoking control objectives, structures, laws and regulations, funds, programs and activities, research, and surveillance systems were compared. The comparison was conducted at the federal, states/provincial, and county levels of the two countries. The data were collected through various governmental websites, contact with people directly, and a literature review. Based on the comparison, seven recommendations for smoking control strategies were made primarily for Korea.

Key Words: Smoking Control, Korea, United States, International Comparison

INTRODUCTION

Tobacco use has been identified as the most important risk factor regarding disease and death. The consequences of tobacco use have become an issue of global concern. The World Health Organization estimates that 3 million people die every year of tobacco-related diseases. Without effective international tobacco control programs, the death toll will increase to as many as 10 million people by 2030, and 7 million of these deaths will occur in developing countries (Jha & Chaloupka, 2000). In Korea, the number of deaths attributable to lung cancer just surpassed that of stomach cancer, which was the number one cause of cancer death until 2000 (National Statistics Office, 2001). The primary factor is the high tobacco use among Koreans, particularly among men. The rate of tobacco use among Korean men is one of the highest in the world. Sixty-five percent of males aged 20 and above are smokers. There has been no decrease in this trend since 1995 (Korean Institute of Health & Social Research, 2000). A 1990-1991 California survey estimated that 35.8% of Korean-American men smoked, which was lower than that for men in Korea. The smoking rates for Korean-Americans, however, were the highest among Asian-Americans, which were 24% for Filipino-Americans, 20.1% for Japanese-Americans, and 19.1% for Chinese-Americans (California Department of Health Services, 2002).

Tobacco use is the single most preventable cause of death and disease in the United States. About 430,000 deaths are attributed to cigarette smoke each year. Tobacco use costs the nation approximately $50–$73 billion, or about 7–10% of the total health care costs in the United States. About 10 million people in the United States have died of smoking-related causes - including lung and other types of cancer, emphysema, and other respiratory disease, and heart disease - since the first Surgeon General's report on Smoking and Health in 1964 (CDC, 2004a).

The landmark 1964 Surgeon General's report on Smoking and Health provided official evidence that ciga-

1. Professor, Nursing Policy Research Institute, College of Nursing, Yonsei University
2. Full Time Lecturer. Department of Nursing, Kyungpook National University
3. Assistant Professor. Department of Nursing, Kwandong University
Corresponding author: Chung Yul Lee, RN, PhD, College of Nursing, Yonsei University, 134, Shinchon-dong, Seodaemun-gu, Seoul 120-752, Korea.
Tel: 82-2-361-8148 Fax: 82-2-392-5440 E-mail: cylee@yumc.yonsei.ac.kr
Funded by the 2002 Fulbright New Century Scholars Program
Received February 4, 2004 ; Accepted July 22, 2004

rette smoke causes cancer and other serious diseases. Since 1964, America has been engaged in an aggressive effort to decrease tobacco use; this includes requiring health warnings on all tobacco products; preventing tobacco ads on television and radio; legislating the creation of non-smoking sections on airlines and public places; limiting a minor's access to tobacco; increasing the excise tax on cigarettes; providing tobacco prevention and cessation programs to the public; and supporting tobacco counter-advertising. As a result, the smoking rate in the United States has decreased from 42.4% in 1965 to 23.5% in 1999 (CDC, 2004a).

Although Korean men have one of the highest smoking rates in the world, efforts to decrease smoking were introduced only recently. The Korean Ministry of Health and Welfare passed the Health Promotion Act in 1995, started to collect funds for health promotion from cigarette sales tax in 1997, and announced smoking control strategies at the government level in 2001 (Ministry of Health & Welfare (MOHW), 2002).

In the United States, cigarette smoking among adults declined almost 50% since 1965, and there has been a significant downward trend among youth since the mid-1990s (CDC, 2004b). In Korea, however, annual tobacco sales increased continuously since the 1970s and the total number of cigarettes has increased from 44,409 million cigarettes in 1970 to 104, 944 million cigarettes in 2000 (MOHW, 2002). Therefore, there is a need to compare and contrast the smoking control strategies of Korea and the United States, in order to adopt effective smoking control strategies for use in Korea. Successful programs in the United States that reduce cigarette use will provide valuable lessons to help Korea and other developing countries effectively address the growing tobacco use epidemic.

This study was intended to compare smoking control strategies between Korea and the United States. In particular, the following components of smoking control strategies were compared; smoking control objectives, structures, laws and regulations, funding, programs and activities, research, and surveillance systems.

METHODS

Study Subjects

This study was intended to compare smoking control strategies between Korea and the United States. The comparison between these two countries was conducted at the federal, state, and county levels. At the federal level, the Ministry of Health and Welfare (MOHW) in Korea and the Department of Health and Human Services (US DHHS) in the United States were compared. At the state level, two provinces (Gyeonggi Province and Jeonbuk Province) in Korea and two states (California State and Washington State) in the United States were selected. The Gyeonggi and Jeonbuk provinces are active in providing health services in Korea. Related to tobacco programs, Gyeonggi Province has focused on decreasing tobacco use among adolescents such as operating smoking cessation schools for teenagers and the intensified supervision of tobacco sales to adolescents (The Province of Gyeonggi-Do, 2002). Jeonbuk Province concentrated on health center smoking cessation programs such as campaigns and the operation of smoking control demonstration schools (The Province of Jeollabuk-Do, 2004).

California and Washington States have been providing effective tobacco control services in the United States. The California Department of Health Services created a Tobacco Control Section and has been conducting statewide media campaigns with an emphasis on promoting laws and policies to protect people from exposure to secondhand smoke (California Department of Health Services, 2002). Likewise, Washington State Department of Health began a Tobacco Prevention and Control Program in 2000 and has taken a comprehensive approach such as support for community and school programs, public awareness media campaigns, and the prevention of the sale of tobacco to minors (Washington State Department of Health, 2004).

At the county level, two counties (Gwangju City in Kyunggi Province and Jinan gun in Jeonbuk Province) in Korea and two counties (Alameda County in California State and King County in Washington State) in the United States were selected. These counties have been leading health care programs in their respective provinces and states. According to the evaluation reports regarding the demonstration health promotion services, both Gwangju City and Jinan-gun provided various tobacco control programs to their community residents for all age groups, from preschoolers to the elderly. These were regarded as excellent smoking control programs (Lee, Kim, Lee, & Lee, 2001). In Alameda County, the tobacco control program has been an integral part of the Public Health Department. To reduce secondhand smoke and

access to tobacco products by youth, the program has provided education as well as promoted public health policies (Alameda County Public Health Department, 2004). Similarly, King County was awarded grants from Washington State to reduce the use of tobacco by youth and to lower the exposure of secondhand smoke (Public Health Seattle & King County, 2003).

Data Collection

The major data collection methodology used for this study was an Internet search. Most of the government information related to tobacco control for the United States originated from the Internet sites of the US DHHS, Center for Disease Control and Prevention (CDC), National Institute for Health (NIH), and the National Cancer Institute (NCI). In Korea, information was taken from the Internet sites of the MOHW, the health departments of provinces and counties, and anti-smoking associations. With the universal use of the Internet, most government organizations post their important research results and programs on their websites. Therefore, data collection was mainly conducted through an Internet search and insufficient information was complemented through direct contact with the health department/agency.

Some of the study content, especially laws and regulation, and information about funding, were collected via direct contact with people who are working in the governmental organizations, including the CDC, California State, Washington State, Alameda County in California State, and King County in Washington State in U.S. In Korea, the following participated in the study, MOHW, Gyeonggi and Jeonbuk Provinces, and Gwangju City and Jinan-gun in Korea. Health care personnel, who were in charge of smoking control programs in each organization, were interviewed over the telephone. The contact numbers of these health personnel were identified through an Internet search. A literature review was conducted to compare the information regarding tobacco control programs in Korea and the United States. This study was limited to a comparison of government organizations only. Therefore, programs provided by non-government organizations were excluded from this study.

RESULTS

The study results were described by the seven components of smoking control strategies: Smoking control objectives, structures, laws, funds, programs and activities, research, and surveillance. Each component was compared in relation to the two countries. If possible, they were analyzed at the federal, state, and county levels. In describing the results, data related to Korea were discussed first, followed by the U. S. information.

Smoking Control Objectives

Korea has been working on 'People Health 2010' which is the first national health objectives. It was revised by a couple of research teams and reported by the Ministry of Health and Welfare (2002). The national health objectives consist of two major components: Increasing the life span from 75.9 years in 2002 to 81.9 years in 2010 and a healthy life span from 66.0 years in 2002 to 75.1 years in 2010; and decreasing the rate of death from chronic diseases such as cancer and diabetes, and the prevalence rates of high blood pressure and cerebro-vascular disease.

The objectives include four management plans: A chronic disease management plan (cancer, high blood pressure, diabetes, dementia); a healthy life style plan (smoking control, exercise, nutrition); a mental, oral, maternal and child health service plan; and emergency services. The Korean national health objectives also include smoking control plans, and specify smoking related objectives such as reducing the smoking rate among male adolescents from 67.8% in 2002 to 30% in 2010 (MOHW, 2002).

The United States health objectives are entitled 'Healthy People 2010'. Healthy People 2010 outlines a comprehensive, nationwide health promotion and disease prevention agenda. It was designed to serve as a roadmap for improving the health of all people in the United States during the first decade of the 21 st century. 'Healthy People 2010' was designed to achieve two overarching goals: An increase in quality and years of healthy lives; and eliminate health disparities. These two goals are supported by 467 specific objectives in 28 focus areas.

Tobacco use is one of the 28 focus areas of 'Healthy People 2010.' The goal of 'Healthy People 2010' regarding tobacco use is to reduce illness, disability, the numbers of death related to tobacco use, and exposure to secondhand smoke. The focus area of tobacco use has 21 specific objectives, which are divided into four components: Tobacco use in population groups (4 objectives); cessation and treatment (4 objectives); exposure to sec-

ondhand smoke (5 objectives); and social and environmental changes (8 objectives). The objectives are geared towards four different types of tobacco: Cigarette smoking, spit tobacco, cigars, and other products (Office of Disease Prevention & Health Promotion, 2002).

Smoking Control Structure

The smoking control structure could be a government or a private organization. For this study, only the government institutions were included for the comparison between the two countries from the county to federal level.

In Korea, the Ministry of Health and Welfare has 5 divisions. Among those, the Division of Health Promotion has 6 departments: Health policy, Public health, Disease management, Cancer management, Mental health, and Oral health. Smoking control is managed by the Department of Health Policy, however, no specific smoking control structures are illustrated in the organization chart (MOHW, 2002).

In Kyunggi and Jeonbuk Provinces, the Bureau of Health and Welfare has a Department of Health and Hygiene. One of the activities of this department is health promotion services. Once again, however, smoking control areas are not evident in the provincial structures (Gyeonggi-Do, 2004; Jeollabuk-Do, 2004).

At the county level health center, there are four teams: Health administration, health services, preventive medicine, and screening. Health promotion services including smoking control are provided by the health services team. Most of the health promotion services provided by the health centers are managed by a couple of health care workers. It is not easy for them to fully implement smoking control strategies that meet the needs of the county (Gwangju City, 2004; Jinan-gun, 2004).

In the US DHHS, there are 8 areas. Among those, the Center for Disease Control and Prevention (CDC) has 12 centers. The National Center for Chronic Disease Prevention and Health Promotion is one of them, which has 8 divisions including the Office of Smoking and Health (OSH), which is the major organization for tobacco control at the federal level (CDC, 2002). In the DHHS, not only the CDC, but also the National Institute of Health (NIH) and the Substance Abuse and Mental Health Services Administration (SAMHSA) have joined together in tobacco control efforts.

At the state level, California and Washington States have a tobacco control section within the Health Department. At the county level, Alameda County in California and King County in Washington have tobacco control programs or sections in the organizational chart of their health department (Alameda County Public Health Department, 2004; Public Health Seattle & King County, 2003).

Smoking Control Laws

The 'Health Promotion Act,' which was mandated in 1995, was a landmark for smoking control in Korea. Activities of health promotion and smoking control were specified in the contents of this Act. These included requiring health warnings on cigarette packages, the banning or limiting of cigarette advertisements, restricting cigarette vending machines, and restricting smoking areas. Also, the Act mentioned health promotion services for the health centers. The counties and provinces follow the 'Health Promotion Act' for smoking control (MOHW, 2002).

The United States has tobacco control laws at the state and federal levels. The federal laws can be categorized into six areas: Prohibiting tobacco advertising; requiring health warning on tobacco packaging; prohibiting sales of tobacco to minors; prohibiting smoking on flights; banning tobacco products from children's place; and restricting smoking areas.

The state follows federal laws for tobacco control. Some states, however, apply federal laws more strictly than other states. California and Washington States are the ones with rigorous tobacco legislation and laws (National Drug Strategy Network, 1999; Washington State Department of Revenue, 2002). Also, there are specific state laws regarding tobacco control including two major categories: Excise tax on cigarette and smokeless tobacco, and smoke-free indoor air restrictions (CDC, 2004b; National Tobacco Information Online System, 2001; Washington State Department of Health, 2004a).

Smoking Control Funds

In 1997, the Korea government actually started to collect health promotion funds from cigarette tax (2 won ($ 0.0015) / 1 pack) according to the Health Promotion Act and it has totaled 9 billion won ($7 million) per year. From 2002, the health promotion tax increased to 150 won ($0.125)/1 pack, therefore, the Health Promotion Fund increased 7,500% since 2002. Within the budget, however, only 3% (4.5 won/pack and totaled 20 billion won) goes to the National Health

Promotion Programs. Approximately, 5 % of the Health Promotion Funds earmarked for the National Health Promotion Programs are allocated to smoking control programs. As a result, less than $1 million goes to the national smoking control effort (MOHW, 2002).

In provinces, there are no specific smoking control budgets. Within the health budgets of the provinces, however, matching funds could be provided for health centers, which awarded the national health promotion funds. In counties, if health centers apply for smoking control plans and if they are accepted, they get a smoking control budget from the MOHW. County health centers usually get co-sponsorship from the county government for part of the total smoking control funds. For example, 55% of Gwangju City's health promotion budget came from the MOHW and the other 45% was provided by the county government (Lee et al., 2001). However, there are no formal budgets for smoking control in the counties and provinces.

At the federal level in the United States, the total spending by the DHHS to prevent tobacco use and dependency was more than $1 billion in the fiscal year 2001. The CDC provides national leadership to prevent tobacco use to promote smoking cessation and reduce exposure to environmental tobacco smoke with the fiscal year 2001 appropriations of approximately $104 million. With the annually awarded President's budget of $558 million, scientists were able to investigate behavior therapies and genetic factors for nicotine dependence. The budget was also able to provide funding for innovative research initiatives at the local, state, and national levels. The President's Budget was initiated in 1998 by the Clinton administration and it was awarded to various health and welfare programs annually since then (CDC, 2002; US Department of Health & Human Service, 2001).

At the state level, in 1998, the tobacco industry agreed to pay the 50 states $246 billion to settle civil lawsuits, which were filed to recoup billions of taxpayer dollars spent treating tobacco-caused disease. A report by a coalition of public health organizations found that most states failed to fund tobacco prevention programs at the minimum levels recommended by the CDC in 2001. In California, they spend $3.44 per capita for tobacco control, which was 71% of the CDC's recommended amount in 2001, and this was increased to 83% in 2002. In Washington, less was spent for tobacco control as compared to California. Washington State spends $ 3.08 per capita on tobacco control, which was 62% of the CDC's recommended amount. When we look at the proportion of tobacco control funds among the total budget for the Department of Health (DOH) by state, Washington state spends $26.25 million (8.3%) of the total DOH budget, which was $317 million in the years 2002–2003 (Contra Costa County, California, 2004; Washington State Department of Health, 2004b).

In Alameda County, the total health service budget was $87 million in the fiscal year 2002–3. Among the total budget, the tobacco control amount was $1.6 million. In King county, the total health service budget was $230 million, and the tobacco control budget was $ 1.4 million in 2002. The authority that provided this information, however, mentioned that the tobacco control budget in King County will be increased in the future (Alameda County Public Health Department, 2004; Public Health Seattle & King County, 2003).

Smoking Control Programs and Activities

The Korea MOHW announced smoking control policies in 2001, which included smoking control plans and detailed schedules. The smoking control plans consisted of four components: Minor smoking prevention, protection of passive smokers, supporting smoking cessation, and building a smoking control service system (MOHW, 2002).

At the provincial level, there are no specific smoking control programs or activities at the moment. Some provinces, however, offer smoking cessation schools and smoking cessation day events, and supervise the violation of the smoking related laws and regulations. At the county level, some health centers, especially those selected for health promotion demonstration projects, are providing various smoking control programs for community residents, such as smoking prevention programs for kindergarten to school age children, a smoking cessation camp for high school students, and cessation classes for adults and the elderly (Lee et al., 2001).

In 2002, the MOHW funded about $80,000 per year to each health center selected for health promotion projects. One hundred health centers out of 242 health centers were granted money from the Health Promotion Fund from the MOHW and the grants totaled $8 million. Therefore, the smoking control programs at the health centers will be expanded in the near future.

In the United States, the CDC provides national leadership for a comprehensive, broad-based approach to re-

ducing tobacco use at the federal level. The following are some of the activities of the CDC for tobacco control (CDC, 2004a): Building state smoking control capacity by providing funding and guidance, communicating information to the public, and facilitating actions through partners.

Various programs are implemented at the state level. Examples of the California and Washington State programs include: Community-based programs; school-based programs; smoking cessation programs; public awareness and education programs; youth access programs; surveillance and evaluation programs; and dissemination (California Department of Health Services, 2002; Washington State Department of Health, 2004b).

At the county level, specific programs are provided to community residents. Programs from the Alameda County and King County include education/training, compliance check programs, the 'Teens as Teachers' program, programs to provide educational materials for tobacco control, and programs for community grants. There are health centers at the county level. The activities of the health centers are focused on primary health care for uninsured people. Smoking control programs of American health centers are not as comprehensive as the programs in Korea (Alameda County Public Health Department, 2004; Public Health Seattle & King County, 2003).

Smoking Control Research

Since 1997, when the Health Promotion Fund was initiated in Korea, the MOHW also started to support health promotion research with approximately 10% of the total Health Promotion Fund. The smoking control was included as one of the health promotion research topics. The amount of grants awarded to smoking control research, which was $2 million, was less than 10% of the total health promotion research fund in 2002. The research application forms are available on the web.

The governments at the county and provincial levels don't routinely support smoking control research out of their own fiscal year budget. The local health department at county level, however, can apply for national health promotion research funds to conduct smoking control research. If the proposal submitted by the county health department is accepted by the MOHW, the county should match the funds awarded by the MOHW. The local governments, however, are rarely awarded national health promotion research funds, instead academic institutions and NGOs frequently receive the grants.

In the United States, the NIH conducts clinical research on reducing children's exposure to environmental tobacco smoke, the psychological and physiological effects of nicotine dependence, as well as nicotine replacement therapies. This is done with the President's budget of $558 million, an increase of $29 million over the fiscal year 2000 budget. The NCI awarded grants of $13 million to the New State and Community Tobacco Control Initiative in the first year of a 4-year project, which began in 2000. This research was geared toward state and community tobacco control interventions. The NCI and the National Institute on Drug Abuse recently awarded $70 million to seven academic institutions in order to create Transdisciplinary Tobacco Use Research Centers (CDC, 2004a; National Cancer Institute, 2000; National Institute on Drug Abuse, 2004; US Department of Health & Human Service, 2001).

At the State level, some states apply for research funds from the NIH and CDC. They also manage their own research funds to support local counties. California State spends $6.0 million a year in competitive research grants. In Washington State, approximately $1.4 million was set aside for tobacco control research that provides support for community-based projects, regional community linkage projects, ethnic networks, and statewide projects (California Department of Health Services, 2002; Contra Costa County, California, 2004; Washington State Department of Health, 2004b).

At the county level, the county may apply for state research funds. They use the money to support the local community's tobacco control research activities. King County spent $290,590 in the year 2001–2002 for tobacco control research and $370,000 in the year 2002-2003 to support 25 local tobacco control grants (Alameda County Public Health Department, 2004; Public Health Seattle & King County, 2003). Federal, state, and county agencies provide detailed application guidelines on tobacco control research; application forms are available on all governmental websites.

Smoking Control Surveillance

Surveillance involves the monitoring and evaluation of tobacco use trends and health consequences in order to determine the influence of tobacco on health problems (MOHW, 2002). In Korea, there are three major surveillance systems. Two surveillance systems are the adult health behavior surveys conducted by the MOHW every

year and every three years, separately. The other one is the youth health behavior survey done by the Korean Smoking Control Association every other year (Korean Association of Smoking & Health, 2000).

In the United States, there are 17 data surveillance systems that exist related to tobacco control. Among the 17 surveillance systems, the major national tobacco control surveillance are the Adult Tobacco Survey (ATS), Youth Tobacco Survey (YTS), and the State Tobacco Activities Tracking & Evaluation (STATE) system organized by the Office of Smoking and Health in the CDC; the Behavioral Risk Factor Surveillance System (BRFSS) by the Division of Adult and Community Health in the CDC; and the Youth Risk Behavior Surveillance System (YRBSS) by the Division of Adolescent and School Health in the CDC (CDC, 2004c).

DISCUSSION AND RECOMMENDATIONS

The intention of this study was to compare seven smoking control strategies between Korea and the United States. Compared to the effort of the United States, which was initiated in 1964, Korea's smoking control efforts just began in 1995, when the 'Health Promotion Act' was mandated. Therefore, Korea could learn from the experience of the United States with regard to their successes and failures of their regional and national smoking control strategies. This may assist Korea's efforts in reducing the harmful effects of tobacco use. The seven smoking control strategies between two countries are summarized in Table 1.

With regard to health objectives for smoking control, Korea's 'People Health 2010' does not provide specific objectives for smoking control compared with 'Healthy People 2010' of the United States. Therefore, further research should be conducted to develop national health objectives for various health issues and disease areas including smoking control, which are specific, measurable, and attainable health objectives for Korean health promotion programs.

Table 1. A comparison of Seven Smoking Control Strategies in Korea and the United States

	Korea	The United States
Objectives	'People Health 2010' specifies one smoking control objective.	'Healthy People 2010' includes 21 smoking related objectives among a total of 467 total objectives.
Structure	There are no specific smoking control sections in the governmental infrastructure from the MOHW down to the county government.	In the CDC, the Office of Smoking and Health is the main office for smoking control. At the state and county levels, there are specific smoking control sections showed in the organizational chart.
Law	'Health Promotion Act' (1995) includes several smoking control items. There are no provincial laws in existence.	There are several federal and state laws related to smoking control.
Funding	Nationally, about $3 million is spent on smoking programs. Provinces and counties don't have their own smoking control budgets.	HHS was spending more than $1billion in 2001. States and counties also set aside funds for the smoking control budget.
Programs & activities	The MOHW announced smoking control policies in 2002. At the provincial level, there are no current specific smoking control programs. At the county level, some demonstrating health centers have specific smoking control programs.	Federal, state, and county governments have many smoking control programs and activities. However, health centers were not active in providing smoking control programs.
Research	The MOHW spends about $2 million per year for health promotion research. Less than 10% of these funds were allocated to smoking control research.	At the federal level, the NIH ($87 million in 2000), NIDA ($70million in 2000), and NCI ($13 million in 2000) sponsored smoking control research. States (CA: $6 million) and counties (King County: $370,000) also supported smoking control research.
Surveillance	Three surveillance systems exist, two for adults and the one for adolescents.	Seventeen surveillance systems exist at the federal and state levels. The following are the major ones: Adult Tobacco Survey, Youth Tobacco Survey, State Tobacco Activities Tracking & Evaluation, Behavioral Risk Factor Surveillance System, Youth Risk Behavior Surveillance System.

In the United States Office of Smoking & Health at the federal level, and the Tobacco Control Section at the state level, they have exclusive responsibility regarding smoking control, whereas in Korea, there is no department or division at the central or local government level, which is in charge of smoking control. Therefore, a lack of smoking control structures in various government levels has made the effective provision of smoking control programs more difficult in Korea.

In terms of smoking control laws, both countries have similar laws. The Smoking Control Laws of the United States, however, were more likely to focus on prohibiting access to tobacco by youth and minors. Although both countries have similar smoking control laws, the level of compliance to such laws are significantly lower for Koreans, because unlike in the United States, the supervision and surveillance of violations of the smoking control laws have not been strictly exercised in Korea.

Considering the fund for smoking control programs and smoking related research, the National Health Promotion Fund is the only source of awards and grants for smoking control in Korea. In the United States, however, funds for smoking control were provided by the various levels of government including local, state, and federal governments and institutions. Furthermore, the lack of funding from local government was a barrier in starting these smoking control programs at the county and provincial levels in Korea.

For smoking control programs and activities, health centers at the county level have been at the core of health promotion including smoking control programs, and the provincial governments have played minor roles. For effective smoking control programs, roles and responsibilities of each government level should be defined so as to avoid duplication as well as to collaborate on smoking control.

It is proposed that the experience of the United States in smoking control policies and strategies would provide benefits and ideas in order to decrease the Korea's high smoking rates. Based on the results of this study, the following recommendations are suggested related to smoking control strategies in Korea. Although, the United States exceeds Korea in many aspects of smoking control strategies since they have a longer history of contributing to smoking control programs, recently introduced smoking control programs in Korean health centers may provide lessons for health centers in the United States. Therefore, recommendations for American health centers were included along with suggestions for smoking control strategies in Korea. Recommendations for future smoking control programs of the two countries are as follows:

- Specific and measurable smoking control objectives should be included in Korean health objectives as described in the Health People 2010 of the United States. An example objective of the Health People 2010 includes 'Reduce tobacco use in adolescents from 40% in 1999 to 21% in 2010.'
- Certain smoking control sections and personnel are needed in the Korean governmental infrastructure such as the Tobacco Control Section in California State.
- Smoking control laws should be more specific and be strictly applied in Korea. There has been a loose application of the policies and regulations related to tobacco use in Korea, and violations of the tobacco restriction laws have not been supervised.
- Considering that Korea has the highest smoking rate in the world, smoking control funds and research funds should be substantially increased.
- Smoking control programs and activities should be developed for each governmental level-MOHW, provinces, and counties in Korea. The role of the central government (MOHW) may include providing funds for smoking control research or establishing tobacco restriction laws and regulations. Local governments at the provincial level may develop various smoking control programs and train local health personnel for smoking control programs. The county government is at the forefront of the smoking control programs. They should provide various smoking control programs to their community residents and develop local health policies related to the restriction of tobacco use.
- More diverse and frequent surveillance systems should be developed in Korea. In particular, evaluating systems for smoking control services in the provinces and counties are needed.
- Smoking control activities of the health centers in the United States should be more actively supported as they are in Korea. Health centers in the United States are prone to focus on primary health care services, whereas Korean health centers are actively participating in various health promotion programs. Along with primary health care, various health promotion programs including smoking control pro-

grams should be provided by health centers in the United States.

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