

EDITORIAL

DISCLOSURE OF CIGARETTE INGREDIENTS: POTENTIAL DOMINO EFFECT?

An issue of the year

A new measure of tobacco consumption control, recently coming to public attention, is the regulation of product ingredients. On February 28 1994 the American ABC news program Day One presented evidence that tobacco manufacturers manipulate the nicotine content of cigarettes, between April and June of this year the ingredient issue was heatedly debated in US Congressional hearings. Further evidence disclosed the possibility that dangerous chemicals are mixed with tobacco in the form of *additives*. The US Food and Drug Administration (FDA) has raised the possibility of regulating cigarette ingredients on the basis of nicotine content (Benowitz and Henningfield, 19). Furthermore, during the hearings, Representative Ron Wyden (Democrat, Oregon) called for a stringent regulation of all ingredients, including additives (Wyden, 1994). Currently, only a few countries implement ingredient regulations meaningfully, to protect the public's health, despite the potential negative impact on cigarette manufacturing.

The Ninth World Conference on Tobacco and Health, held in Paris last October proclaimed that tobacco kills about 2 million a year in developed countries and another million a year in developing countries (Peto *et al*, 1992). Given the current smoking trends, the mortality is estimated to reach between 3 and 7 million, in 2025. Already smoking accounts for one sixth of the 11 million adult deaths each year in developed countries and its share in the developing world has been increasing (Peto, 1994).

This picture is not surprising, since tobacco smoke contains more than 4,000 chemicals, many of which are pharmacologically toxic, including at least 43 known carcinogens. Not only tobacco itself is hazardous, but possibly so are many chemicals unnaturally added to generate "flavors". The combination and combustion of those chemicals can generate harmful effects and are presently undergoing evaluation (US Department of Health and Human Services [USDHHS], 1989). The 700 additives claimed to be found in US cigarettes include methoprene (an insecticide), sclareol (liver-damaging), ammonia (alkaline irritant), chlorofluorocarbons (ozone layer

destroying) and ethyl-2-furoate (a once potential warfare chemical) (National Public Radio, 1994). Another list of 2,131 additives allowed in Europe comprise toxic substances such as methylcoumarin (rat poison), naphthalene, creosote and cinnamyl anthranilate (potential carcinogens), and thiabendazole (anti-worming agent) (Duggin, 1994).

As public pressure grew, just before the US Congressional hearings, the tobacco companies for the first time released a top-secret list of chemicals in cigarettes. "Companies have long opposed releasing the ingredients for fear competitors would steal their recipes" but "now they want to prove they are not hiding anything sinister", a news report described (Associated Press, 1994). The list suggested a different picture. The release came with a conclusion by "experts" that the ingredients are "safe for smokers" (TR Staff Report, 1994).

The conclusion as to whether they are safe is indeed premature to make. Under the current US regulation, not only is scientific assessment technically infeasible but even verification of the lists is not yet achievable.

Mild versus meaningful regulations

A common regulation of cigarette ingredients centers on the labeling of contents. Tar, nicotine and carbon monoxide usually represent the ingredients of primary concern. However, since the 1980s tobacco researchers have understood that the labeling information is of limited value and could mislead consumers (Kozlowski, 1981; Henningfield, 1984). For instance, cigarette smokers obtain an average of 1 mg of nicotine from each cigarette they smoke, whether the stated nicotine yield is 0.1 mg or 2 mg. Incorrectly believing that the "light" brand poses a lesser health hazard, health-conscious smokers could continue to smoke rather than quit. Besides, the traditional labeling regulation provides no meaningful information at all to consumers with respect of harmful additives.

Regulations of product additives exist in several countries. But only a few implement a regulation that is intended to protect the public's health. On this

basis, Canada's regulation is considered the most advanced. Since 1989, under the *Tobacco Product Control Act*, the Canadian government has acquired a periodic brand-specific report of tobacco product and has the authority to control any product of unusually high risk. However, Canadian law does not allow public access to the information and hence the public has remained unaware of potential toxic chemicals (The Tobacco Products Control Act, 1989).

In the United States where the political influence of transnational tobacco companies (TTCs) prevails, the existing regulation has proven to be ineffective. The *Comprehensive Smoking Education Act* of 1984 requires that tobacco companies submit annually to the Secretary of the USDHHS confidential lists of ingredients added to tobacco in the manufacture of the products. The Secretary, by law, must treat these lists as confidential information, but may report to any Congressional committee any item which in the judgement of the Secretary poses a serious health risk to cigarette smokers. While the DHHS is authorized to analyze the reported lists, few analyses of the lists exist. The primary reason for this is that the existing law requires insufficient, non-specific information from the industry to permit analysis of the health effects of exposure. The Secretary has not been granted any authority to regulate any hazardous products that may be identified through the analytical process (Eriksen, 1992).

New Zealand and a number of European countries currently implement ingredient regulations but in most cases the legislation is non-specific and therefore ineffective (Collishaw, 1993).

Will Thailand be another domino?

Thailand is another country having the legislative authority in place yet has not put a meaningful regulation into effect. Article 11 of the 1992 *Tobacco Products Control Act* mandates that manufacturers or importers of tobacco products submit to the Ministry of Public Health a periodic report disclosing ingredients in the products. It authorizes the Minister to issue a regulation as to what the report includes and how it is assembled for submission. As of October 1994, the regulation was still under formulation and therefore had not yet come into force, despite a two year lapse since the law was passed.

As in Canada (Collishaw, 1993) when the regulation was about to come into effect, TTCs launched strong resistance. In 1992 a TTC agent was found

illicitly spying in the National Assembly during debate of the *Tobacco Product Control* bill. At that time ingredient disclosure was one of only two issues the tobacco lobby made earnest attempts to abort (Vatheesatokit, 1992). In 1993 the US Ambassador to Thailand approached the Minister bringing the TTCs proposition against brand-specific regulations to his attention (Lamberton, 1993). Where the country has been on the Priority Watch List of the US Trade Representative, this diplomatic approach could influence the economic wing of the government to oppose any regulation potentially affecting US-Thai trade. These incidents suggested that there was an earnest endeavor by the TTCs to hamper implementation of a strong regulation.

Given the relatively small size of the Thai market, the TTCs position suggests their fear of a "domino effect" of the legislation on other countries, rather than concern for the immediate domestic consequences. Future liability, particularly for consumers in the United States, is a probable threat to the industry.

Implications for public health

A meaningful regulation should accomplish three objectives. First, it should discriminate high-risk products from others. Second, it ought to provide adequate information for scientific investigation so questionable ingredients could be examined. Third, it should provide a tool for the control of hazardous products. Regulatory interventions range from supplying of specific information to consumers and removal of hazardous additives to banning of certain high-risk brands.

To achieve the above objectives, Ministries of Health should consider three dimensions of the regulation: (1) specificity of the report; (2) precision of ingredient dosage; (3) access to the reported information. The regulation should comprise three essential features. The report must be brand-specific, otherwise the three objectives will become null and void. Either the maximum level or the exact dosage of each ingredient should be reported unless scientific investigation is not expected. Finally, a mechanism should be devised so the information is reviewed periodically by qualified scientists in cases where complete public access is politically reserved.

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EQUITY, POVERTY AND THE ECONOMICS OF HEALTH CARE CONSUMPTION

Much of the concern of those who work in tropical medicine and public health is with specific diseases and with epidemiologic approaches to health care planning and evaluation. This concern operates against a broader background of macroeconomic realities and constraints. A major factor in this background is the question of equity.

Only a few industrialized countries in the world can claim true equity in access to their health care systems and some, such as the USA, exhibit glaring inequities in this regard. With occasional exceptions, countries in the throes of recent industrial expansion tend to show even greater inequity of opportunity, although low per capita GDP alone does not preclude equitable availability of health care, as occurs in countries such as Sri Lanka, China and Costa Rica (World Development Report, 1993).

Indeed, the very process of industrialization, as it appears to bring good news to finance ministries by way of rapidly increasing per capita GDP, itself can contribute markedly to accentuation of poverty by way of

grossly asymmetric distribution of newfound wealth across individual nations. This asymmetry reflects changing patterns of job opportunities requiring newly upgraded educational qualifications; demographic shifts in investment requiring population movement, especially from rural to urban regions; alterations in food supply and pricing patterns, affecting affordability of basic nutrients; disturbances in social structure which reduce the security of supportive communities. Urban slums and degraded rural villages compete for assistance, often without either being heard as expansion of the middle classes sways political attention to demands for priority spending on improved infrastructure to satiate their expanding pockets.

Analyses of these factors in relation to the health of populations in rapidly industrializing nations are unfortunately too rare, as the health sector tends to closet itself within the more immediate microeconomic concerns its own institutions and programs. Thus the overview by Samtisant (1994) in this issue is particularly timely, focused as it is on poverty, income inequality and health care consumption. In a sense

this focus highlights the most crucial issue inherent in rapid economic development: *equity*. The East Asian "miracle" (Abegglen, 1994) encompasses a range of differing national economies with high, sustained annual GDP growth, leading to burgeoning middle classes and small numbers of very wealthy families. Alongside are the rural poor and rural-to-urban population shifts with crowding of urban poor into city shanty towns.

Poverty and malnutrition are correlated in a positive manner (Biswas and Pinstrip-Anderson, 1985), as Samtisant (1994) emphasizes. And malnutrition is one of the most fundamental ingredients in a wide spectrum of diseases of poverty, as well as being a deterrent to the education necessary to increase the chances of ultimate escape from poverty.

The coincident poverty and wealth typify many rapidly changing economies; in this respect Thailand is in many ways a prototype. The proliferation in that country of expensive private hospitals symbolizes the affluent shadow that hovers over an infant mortality rate of 27 per 1,000 live births, as against the record low of 4 per 1,000 in Japan (World Development Report, 1993). At the root of the problem is unequal distribution of newfound wealth, and little hope of redress in the near future. The figures tell their own story: the Northeast region is the poorest, Bangkok the least poor by a large margin. Within each region villages are poorer than municipal areas (Hutaseranee and Jitsuchon, 1988; Krongkaew *et al*, 1991).

The growth in manufacturing industry production is far greater than in agriculture, hence the drift from the farms to municipal areas and especially to the capital city. Yet Thailand remains one of the top food exporting nations of the world: what is the future of this vital industry as the most fertile land converts to concrete? In the present context, will greater equity of income distribution only come through even greater migration of the rural poor from agriculture into manufacturing industry?

The Thai data illustrate another truism: as Samtisant (1994) observes, poverty is a problem of human capital: high poverty is expected among unskilled labor, unskilled labor has little bargaining power; the children of unskilled parents will tend to have minimal education, perpetuating the poverty cycle. Thailand has a lower percentage attendance at secondary school (<30%) than some neighboring countries (eg Malaysia > 50%), and this discrepancy will affect the pool of skilled labor for one or two generations, so it may be

expected that the escape from poverty of large sections of the population will be slow. Thus, employment related factors are major causes of inequality, since they reflect the nature of the human capital. However, widening income disparities across region, urban and rural settings color the macroeconomic picture (Samtisant, 1994).

Unsurprisingly perhaps, health related consumption follows the income distribution pattern. Rich households spend a higher percentage of their much higher incomes on health related services and enjoy better access to higher quality care. Thus "micro-economic theory will maintain that health care is a necessity...for the rich households while it is a luxury good...for the poor households" (Samtisant, 1994).

Against this somewhat discouraging picture, poverty incidence has improved along with increasing national income, while inequality has deteriorated. This review does not touch on one highly debated issue which also affects poverty distribution and also constrains hope of redress in many areas, namely the question of land rights. This is perhaps a subject for separate consideration, for it pertains not only to equitable access to rural land, but also to the need for resolution of competing interests of forestry, domestic and cash cropping, conversion of agricultural and for industry and infrastructural development, dam construction and energy politic, and a host of other claims.

What this review does most importantly is to highlight the wider dimensions of public health debate, extending them to far-ranging issues of macro-economic and social policy. It is into this arena that much of future health care debates must shift if the questions underlying equity are to be resolved with adequate political understanding. The health sector has perhaps been its own worst enemy until now by seeing its responsibility as confined primarily to health care delivery. Its true responsibilities lie far beyond that terrain.

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