

Strategies to reduce the global burden of tobacco

I have been a smoking researcher for over 30 years. The vast majority of my work has been devoted to developing more effective cessation interventions and working to disseminate those interventions. I am trained as a psychologist and I spent the first 16 years of my career in a psychology department. In 1988 I was recruited to the School of Public Health at the University of Minnesota. My interests had been moving in the direction of public health for some years, and this change in academic departments helped to reinforce this shift. Upon moving to public health, I quickly encountered the concept of “disease vector” and became familiar with the classic example of the Broadstreet pump in London in the 19th century as the cause of a cholera epidemic (Benenson 2003, 367–373). I learned that the tobacco industry is a key disease vector for smoking and is, indeed, the Broadstreet pump of the 20th and 21st centuries. Late in my career, I have come to dedicate myself to collaborative efforts to reduce the global burden of tobacco.

A global emergency

The death toll caused by tobacco is almost unimaginably large and this may be a key part of our problem in communicating this message – the numbers are so large as to become virtually incomprehensible. Current figures indicate that tobacco kills almost five million people worldwide annually. Half of these people live in developing countries. If present

The opinions expressed in this commentary are my own and do not reflect the positions of the Society for Research on Nicotine and Tobacco or any other organization.

trends continue, the annual death toll will reach ten million by 2030. Seventy percent of these deaths will be in poor and middle-income countries (MacKay & Eriksen 2002; Peto & Lopez 2001; World Health Organization). This is clearly a global emergency and one that requires a coordinated international response.

I have learned that piecemeal and isolated approaches to the problem have, at best, limited impact. Thus, although tobacco cessation holds the most immediate promise for reducing the death toll (Peto et al. 1996), cessation approaches by themselves are not the answer. Neither is prevention, which would take far longer to affect the death toll. Furthermore, prevention is extraordinarily difficult in contexts where smoking is normative among adults and there are pervasive pro-tobacco messages. Needed are comprehensive approaches that combine what we know about prevention, cessation, and public health policy.

The framework convention on tobacco control

The recently enacted Framework Convention on Tobacco Control (FCTC) offers a useful starting point (Framework Convention Alliance 2003). This is the first ever attempt of the World Health Organization to use its treaty authority. The FCTC is a reality because of the irrefutable case against smoking. The FCTC addresses a broad spectrum of measures that, in combination, could reduce the prevalence of smoking and other tobacco use. Key provisions include restrictions on advertising and promotion, labeling and prominent health warnings, price and tax measures, public education and awareness initia-

tives, and research and surveillance.

Research played an important role in the adoption of the FCTC, although the final document reflected a mixture of science and politics (Warner Manuscript under review). Both science and politics are now necessary to support implementation of the FCTC and to reduce the global death toll. Research that is country specific is critically important. Relevant topics include epidemiology, potential local impact of policy changes, health effects of environmental tobacco smoke (these may be different in countries with different sources of exposure, such as in China where the impact of other environmental pollutants appears to be substantial), local effects of taxation, effective means of risk communication, and developing and delivering effective low-cost treatment.

Tobacco control versus the multinational tobacco industry: David versus Goliath?

One of the most discouraging aspects of the current situation is the dramatic imbalance of resources between the multinational tobacco industry and those available to advocates of global tobacco reduction. In 2001, in the United States alone, the tobacco industry spent \$11.2 billion on advertising and promotion (Federal Trade Commission 2003). At approximately the same time, an initiative of the Fogarty International Center of the US National Institutes of Health funded 14 grants to support partnerships between primarily US tobacco scientists and researchers in developing countries (Fogarty International Center 2002). This initiative, by far the largest research program targeted at tobacco in de-

veloping countries, is budgeted at approximately \$3.8 million US per year. Simple arithmetic calculations indicate that the entire annual budget of the Fogarty tobacco initiative could support tobacco industry advertising and promotion in the US alone for approximately three hours!

Additional challenges facing tobacco control advocates are the tactics and influence of the multinational tobacco companies. These companies have been able to buy influence in much of the world. Tobacco industry documents reveal consistent patterns of deception (Glantz et al. 1996; Muggli & Hurt & Blanke 2003). Thus, for example, the industry has paid scientists to argue against the importance of environmental tobacco smoke (Muggli & Hurt & Blanke 2003). It has lobbied effectively against legislation that could protect the public, including clean indoor legislation, restrictions on advertising and promotion, and increases in excise taxes (Glantz et al. 1996; Glantz & Balbach 2000; Muggli et al. 2001).

A far more effective coalition of tobacco control stakeholders is needed against this highly motivated and exceedingly well-funded adversary, including researchers, practitioners, advocates, representatives of NGOs, and governmental organizations. We have made some progress, but much more needs to be done. All too often, researchers and advocates fail to see our common interests. Research has made a critical difference, not only in the anticipated adoption of the FCTC, but also in widespread awareness of health harms and reductions in both prevalence and exposure in a number of countries, primarily in the developed world.

Advocates have had considerable im-

pact in raising public awareness about the harm of tobacco and the tactics of the industry. Advocates and researchers can and should play mutually beneficial roles and be resources for each other. Advocates can effectively use research findings to advance the case for effective tobacco control policies. Researchers can greatly benefit from the ability of advocates to lobby for additional funding and increased priority for tobacco control initiatives, including research.

Organizations that address global tobacco control

Although more resources are desperately needed, much can be accomplished with existing resources and networks. My colleagues and I have drafted a paper that describes the current landscape in global tobacco control research (Lando et al. Manuscript under review). We see electronic methods of communication as holding great promise for facilitating linkages and exchange of information, even in poor countries. GLOBALink has done an outstanding job of linking researchers and advocates internationally and of disseminating information on tobacco control (<http://www.globalink.org>). With a membership of 4000+ tobacco control advocates, GLOBALink is a recognized catalyst for dialogue and collective action.

The Global Tobacco Research Network (GTRN) at the Johns Hopkins University Bloomberg School of Public Health is another outstanding resource. GTRN is intended to facilitate coordinated global efforts for tobacco control across a wide range of scientific and technical disciplines, and to help overcome barriers, including a lack of research and data-gather-

ing infrastructure in many countries. GTRN will rely heavily upon web-based resources and communication (Stillman et al. Manuscript under review).

Lando et al. (Manuscript under review) also describe other organizations with interests in global tobacco control research. A number of these organizations emphasize specific regions. The World Health Organization continues to play a major role both through the Framework Convention and its Tobacco Free Initiative at its headquarters and at regional offices (World Health Organization). Foundations and other organizations such as the Open Society Institute, the Swedish International Development Cooperation Agency, and the Department of International Development have supported tobacco control research initiatives. The International Tobacco Evidence Network (ITEN) has been effective in linking economists, epidemiologists, social and other tobacco control experts to provide relevant research on tobacco control issues at the country, regional, and broader international levels. The World Bank has supported tobacco control research in low- and middle-income countries. Emphasis has been on the economic impact of tobacco. Research on International Tobacco Control (RITC) has taken the lead in developing tobacco control research strategies and global partnerships. RITC has played a central role in bringing together potential funders of global tobacco control research. RITC and its partners view tobacco as a threat to equitable and sustainable development in low- and middle-income countries.

Additional organizations, including the US National Institutes of Health (through the Fogarty International Center and sever-

al institutes), the Office on Smoking and Health in the US Centers for Disease Control, and the American Cancer Society have had substantial involvement in supporting tobacco control research and other initiatives, including training of researchers and advocates, and data collection, including surveillance. The Campaign for Tobacco-Free Kids supports global initiatives and has effectively linked researchers and advocates (<http://www.tobaccofreekids.org>). The Society for Research on Nicotine and Tobacco has increased its emphasis on global tobacco research, including initiatives to increase its global membership and reach (<http://www.srnt.org>).

RITC has convened meetings of stakeholder organizations. GTRN will serve a valuable networking function. Last spring, the Society for Research on Nicotine and Tobacco worked closely with the Campaign for Tobacco-Free Kids to draft and solicit support for a concept statement to the Bill and Melinda Gates Foundation identifying tobacco control research as a grand challenge in medical research for developing countries. Although we were not successful in convincing the Gates Foundation to support this initiative, more than 40 organizations in 26 countries signed on to the concept statement. In addition to Tobacco-Free Kids, GLOBALink played a significant role in circulating the statement and gathering endorsements. This type of collaborative effort could be replicated in other contexts.

Potential role of the society for research on nicotine and tobacco (SRNT)

I have worked for the past several years within SRNT to increase our global em-

phasis. SRNT is the only major scientific society devoted exclusively to nicotine and tobacco research. We now have almost 1,000 members. Although our membership is still overwhelmingly from high-income countries, we have made strong efforts to recruit members from low- and middle-income countries as well. We recently awarded free annual membership to 24 scientists from low- and middle-income countries around the world. We continue to have a long distance to go in making our Society more truly global, however. It will be important to partner with other organizations and initiatives, such as the Fogarty grantees, to expand capacity and to attract additional scientists in developing countries.

During my term as president of SRNT, I took the lead in organizing a pre-conference immediately prior to our annual meeting on global initiatives in tobacco research. This pre-conference attracted over 200 registrants and addressed topics including the role of research in global tobacco control; global perspectives: where do things stand now?; global nicotine research and tobacco control for the 21st century; SRNT as a facilitator and broker for research; and call for action: funding. This pre-conference was followed by an interactive workshop during the SRNT meeting on future directions for international research. One key recommendation that came from the workshop was to facilitate opportunities for investigators from developing countries to publish in indexed journals. SRNT cosponsored a one-day workshop at the 12th World Conference on Tobacco OR Health in Helsinki in 2003 on grant writing for researchers from low- and middle-income countries. There were

over 150 attendees at this workshop. The 2005 annual SRNT meeting will be held outside of North America for the first time – in Prague. This venue should attract scientists from countries including those in Eastern Europe that have very high tobacco use, and that have had minimal representation at prior SRNT conferences.

SRNT may have a particularly important role to play in helping to develop training and mentorship programs in coordination with other organizations (Kassel & Ross Manuscript under review). Our mission is to stimulate the generation of new knowledge concerning nicotine in all of its manifestations from molecular to societal. However, there will be difficult challenges in developing training and mentorship. Resources are extremely limited, and effective mentoring can demand considerable time and effort. If such effort is not compensated, this will constitute a substantial barrier. Furthermore, training and mentorship go in both directions — primarily western researchers will have a great deal to learn from researchers in developing countries, especially about local issues and culture. I certainly am finding our own Fogarty project (focused on tobacco cessation in India and Indonesia) to be a learning experience, and I am humbled by my current lack of knowledge about cultural issues pertaining to tobacco in our intervention sites.

SRNT can also play a leadership role in working with other organizations and initiatives to advance science, to lobby for additional resources, and to communicate more effectively about the need for tobacco control research and tobacco reduction initiatives. We can work to increase and improve communication and coordina-

tion between organizations and stakeholders. Global conferences, most notably including the World Conferences on Tobacco OR Health, provide excellent opportunities for networking and for advancing tobacco science, as do regional conferences such as the Asia/Pacific Conferences on Tobacco OR Health. These conferences also provide venues for workshops and training.

Future needs and directions

We must attract committed individuals to the global fight for tobacco control, including additional scientists, practitioners, and advocates. Committed volunteers can make a considerable difference, and many organizations in tobacco control rely heavily upon volunteer efforts. The challenges can seem overwhelming, but even modest initiatives have the potential of saving literally millions of lives. And yet, despite the growing tobacco epidemic, several key organizations actually are reducing or eliminating their financial commitment to global tobacco reduction. It has been difficult to secure new commitments. This is tragic. To maximize impact, additional resources, both human and financial, are essential.

The magnitude of the epidemic is huge, but much can be accomplished. Organizations not currently involved in tobacco reduction efforts should be recruited. Initiatives should be undertaken to increase communication and to pool resources in pursuit of common objectives. Rich countries should be called upon to support tobacco control initiatives in poorer regions. The larger burden of tobacco as a challenge to sustainable development should be more widely recognized. We must not delay our efforts, however, while we lobby for additional resources. Every day, almost 15,000 people around the world die from tobacco-related diseases and these numbers are increasing. Researchers must play a key role in tobacco control initiatives and must be prepared to work in close collaboration with tobacco control advocates. The time is right with the adoption of the FCTC. Together, we can make a critical difference in reducing the global tobacco burden.

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