The 795 Thousand and Ending a Century of Tobacco

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Tonight, a grandfather will read his grandson a soothing bedtime story. Yesterday, a mother saw her son perform a brilliant violin solo. Tomorrow, a grandfather will see his granddaughter complete the first unassisted triple play in their community’s t-ball league history.

What do these vignettes have in common? They represent just three of the 795851 people—the 795 thousand—whose premature deaths from lung cancer were averted in the United States through aggressive tobacco control policies and interventions between 1975 and 2000, as determined by a series of consortium-based sophisticated modeling techniques and reported by Moolgavkar et al. (1) in this issue of the Journal.

Sometimes, we become inured to the sheer number of deaths caused by tobacco—for example, a predicted 1 billion tobacco-caused deaths this century, 100 million people killed by tobacco in the 20th century, 6 million deaths per year globally, 443,000 deaths per year in the United States, etc. But, despite these enormous, and even numbing, numbers, we need to remember that every one of these 1 billion, 100 million, 6 million, or 443,000, was a father, mother, brother, sister, son, or daughter who, if tobacco had not intervened, would have enjoyed, and shared, a longer, healthier, and more fulfilling life.

How did this happen? How did we allow tobacco, over the past 100 years, to kill and cause disease with such abandon? And, more important, how have we begun to turn the tide against the tobacco tsunami and how can we continue to learn from our experience? To best address these questions, we need to take a step back and briefly put tobacco in historical context.

In his Booker Prize–winning novel, The Sense of an Ending, Julian Barnes’ central character defines history as “... that certainty produced at the point where the imperfections of memory meet the inadequacies of documentation” (2). Fortunately, regarding tobacco, our often inadequate memories are offset by extensive documentation, provided—ironically enough—by the tobacco industry itself (3) and by superb historians (4,5). They remind us that tobacco has long had a revered place in America—witness the tobacco leaves blended into the columns of the US Capitol, our cinema industry’s affection for cigarettes, and the nearly 100 years that have passed since manufactured cigarettes began to take their deadly toll in this country.

This reverence for tobacco has only begun to change in the last half century with the publication of the UK Report of the Royal College of Physicians in 1962 (6) and the US Surgeon General’s Report on Tobacco and Health in 1964 (7). Both of these landmark reports concluded, for the first time and with solid scientific evidence, that cigarette smoking is a cause of lung cancer and other diseases. Continuing in this historical vein, and focusing specifically on the 1975–2000 period, Moolgavkar et al. (1) provide us with three scenarios, each predicting the number of lung cancer deaths in the US during that time if: 1) we had done nothing about tobacco use—3,908,048 lung cancer deaths; 2) we did what we have done about tobacco use—3,119,753 lung cancer deaths; and 3) tobacco control efforts had been completely effective—1,397,540 lung cancer deaths.

These data were arrived at through a painstaking collaborative process that should serve as a model for future analyses in public health more broadly. They are tantalizing—especially in the “what could have been” scenario—but, more important, they give us a clear view to what should be the future of tobacco control in the United States. We have known for some time what “works” in tobacco control, that is, a science-based comprehensive approach (8). That approach includes broad-stroke issues such as the promotion of smoke-free environments, increased tobacco taxes, wide availability of tobacco dependence treatment, and aggressive public information campaigns. This comprehensive approach works best if, additionally, more specific interventions are included, such as litigation against the tobacco industry, omitting tobacco protectionism from trade agreements, or, as reported by Primack et al. (9) in this issue of the Journal, limiting the exposure of youth to tobacco imagery in films, which the authors show to be an important contributor to adolescent smoking behaviors.

Yet, despite knowing what “works” and having the science to back that up, we have often lacked the political and financial will to do what is necessary to take full advantage of our knowledge and put an end to the scourge of tobacco in our society. Although we have been quite successful in reducing tobacco use—from prevalence rates of more than 40% in the early 1960s to slightly less than 20% today—and in saving lives, for example, the 795 thousand—Moolgavkar et al. (1) nevertheless show us that, had we been more aggressive, an additional 2.5 million lung cancer deaths could have been avoided.

The good news is that we have become more aggressive in our tobacco control efforts and, there, again, Moolgavkar et al. (1) provide data to back up that contention. Of the 795,811 lung cancer deaths averted mostly because of tobacco control actions between 1975 and 2000, 70,218 of those deaths were in the year 2000 alone, suggesting an accelerated protective effect.

Also, since 2000, the pace of US tobacco control has accelerated. For example, the Affordable Care Act has opened up tobacco dependence treatment to millions more of the 70% of smokers who wish to quit. The Family Smoking Prevention and Tobacco
Control Act has given the US Food and Drug Administration authority to regulate tobacco products and protect both youth and adults from their use. The United States, with the planned addition of graphic warning labels on cigarette packs later this year, has fully embraced, if not ratified, the provisions of the world’s first global public health treaty, the Framework Convention on Tobacco Control. Genetic research on the causes and maintenance of nicotine dependence has had a number of breakthroughs, which may translate to more effective treatment. Tobacco taxes have been raised substantially at the federal, state, and local level. Smoke-free laws and regulations protect millions more smokers and nonsmokers against deadly secondhand smoke at workplaces, in public spaces, and, increasingly, at home. Last, new medications for, and approaches to, tobacco dependence treatment have been developed.

These developments suggest that we may be entering a new era for tobacco control. This era is not without its dangers and potential pitfalls. The tobacco industry remains an aggressive purveyor of cigarettes and other tobacco products within the United States and globally (10); many state governments have reduced their support for tobacco control (11); smoking prevalence rates have stalled at around 20% for the past several years (12); and there remain disagreements within the tobacco control community regarding harm reduction issues (13). Nevertheless, this era has the potential to reinvigorate and expand tobacco control, and, in so doing, bring us closer to the deaths-averted scenario drawn by Moolgavkar et al.

Incidentally, it was my father who, after decades of smoking, died of lung cancer before he was able to see his granddaughter complete that triple play. He was not one of the 795 thousand, but seeing it would have brought tears to his eyes, and thinking of him, and what he missed due to tobacco, brings tears to mine. The data that Moolgavkar et al. (1) provide should, however, give us greater resolve to wipe our tears away, put science to work, and see to it that the 795 thousand grows to many millions of lives saved in the coming decades. We should use all of the tools at our disposal to rein in the rogue tobacco industry, and assiduously apply all of our political, research, advocacy, public health, and clinical skills to end tobacco’s century of death, disease, and disability.

References


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