

## INTRODUCTION

# Innovative approaches to youth tobacco control: introduction and overview

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Cigarette smoking is a vicious cycle. Each year a new generation of children experiments with smoking. In many societies, half of them will become addicted, most destined to smoke for decades thereafter until either they manage to quit or death ends their struggle to do so. The glamorous, seductive, and youthful images of cigarette advertising copy—the ruggedly handsome cowboy pulling on his cigarette, the sexy and impossibly lean female toying with hers—give way over time to the harsh reality of wizened faces and tar coated lungs that gasp urgently for breath. Smoking kills one of every two life long smokers. The unlucky half loses an average of 15 years of life compared with people who never smoke. Their children or grandchildren become their replacement smokers. The cycle repeats itself again and again, year after year.

The fraction of young people who begin to smoke is not constant year to year, however. In the USA, 38.8% of high school seniors had smoked within a month of being surveyed in 1976. That figure fell gradually to a low of 27.8% in 1992 and then rose, rapidly, to 36.5% five years later in 1997. A mere five years thereafter—in 2002—the percentage of monthly smokers had fallen to 26.7%, the lowest figure ever recorded in the 27 year history of the survey. Among their younger schoolmates, the proportionate changes during the 1990s were even more dramatic: 20.8% of 10th graders were monthly smokers in 1991, a figure that jumped to 30.4% in 1996 and then plunged to 17.7% in 2002. Among eighth graders, the comparable figures were 14.3% in 1991, 21.0% in 1996, and 10.7% in 2002.<sup>1</sup>

What is it that caused the proportion of high school seniors smoking to rise by almost a third from 1992 to 1997 and then to drop below the 1992 figure a mere five years later? Why would the number of eighth grade smokers leap by nearly half in the five years from 1991 to 1996 and then plummet by more than 40% five years thereafter? These changes are not inconsequential. A decrease in the smoking initiation rate of 10 percentage points can mean an eventual difference of tens of thousands of lives lost—or rather not lost—to tobacco in a single year's birth cohort. Over just a few years' birth cohorts, it would mean hundreds of thousands of lives not lost prematurely to tobacco. An intervention, or a series of interventions, that could achieve that decline in smoking would thus rank as a public health triumph of the first order. It behooves us, therefore, to learn why youth smoking rates have fluctuated so substantially over a period of a few years. It behooves us, as well, to learn how to move the rates down further than has been experienced to date.

### WHAT WORKS

We have some answers, though much remains uncertain. We know that young smokers and potential smokers are especially sensitive to the price of cigarettes. In developed countries, a price increase of 10% likely reduces youth smoking by about 8%. Most students of tobacco control policy believe that raising prices—typically accomplished through tax increases—is the single most effective means of reducing youth smoking quickly and substantially.<sup>2</sup> In the instance of the recent decline in youth smoking in the USA, tobacco industry wholesale price increases, pursuant to implementation of the Master Settlement Agreement between the industry and the states,<sup>3</sup> served the same purpose, ultimately increasing cigarette prices by approximately \$0.40 per pack of 20. And numerous states have raised their cigarette excise taxes, often substantially, in the name of deficit reduction.

As is reported by Farrelly and colleagues,<sup>4</sup> large, well designed media countermarketing campaigns appear to decrease youth smoking as well. Experience with media campaigns in the two US states with the longest history of well funded comprehensive tobacco control programmes—California and Massachusetts—complements new data from the national truth<sup>sm</sup> campaign, in each case showing impressive reductions in youth smoking. Recent data from other states, including Florida, provides encouraging evidence as well. Florida's state based truth campaign inspired the national campaign.

### WHAT DOESN'T

Some interventions do not work. School health education programmes—the traditional staple of youth tobacco control—look good in theory and sometimes perform well under optimal research conditions.<sup>5</sup> But in practice—in schools with overtaxed teachers not trained in their administration, with curricula leaving little room for additional health education, and with tight budgets that restrict curricular expansion—most of these programmes have not fared well. Often, they change students' attitudes toward smoking in the short run; but years down the road, programme graduates smoke at virtually identical rates to students never exposed to the programmes.<sup>6</sup> Lacking an infusion of substantial new resources, with a substantial new commitment from school administrations, this mom-and-apple-pie intervention is not likely to significantly diminish the burden of smoking in new generations.

Youth access laws, designed to restrict sales to minors, appear to share a similar fate. In theory,

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they can work to reduce youths' access to cigarettes and ultimately their decisions to smoke. In practice, however, lacking an extraordinary commitment to their enforcement, they have achieved little. If the laws are enforced to some degree—and compliance rates have risen substantially in recent years—retail outlet sales to minors do decrease. But resourceful kids (and resourceful providers of cigarettes to them) find other sources of cigarettes, by identifying those retail outlets that will sell to them, “borrowing” more frequently from their parents' supplies, purchasing from older siblings or friends, and so on.<sup>7</sup> Computer simulation analysis demonstrates that the levels of compliance in retail outlets have to be extraordinarily high, likely well over 90%, to impact actual smoking behaviour.<sup>8</sup> One prominent experience, involving a truly committed police officer in Woodbridge, Illinois, succeeded in reducing self reported youth smoking rates by over 50%. Consistent with the simulation analysis prediction, however, that community increased compliance with the law from 30% of stores to over 95%.<sup>9</sup> Although there are arguments to the contrary,<sup>10</sup> the prospects for relying on youth access laws to substantially reduce youth smoking in general seem dim. At least they can serve as a rallying point for community and law enforcement involvement in tobacco control.

### UNKNOWNNS

Any number of other interventions, many of them embodied in formal policies, may or may not affect youth smoking. The data simply are not definitive at this stage. For example, we know that workplace smoking bans reduce adult smoking.<sup>11</sup> But do they also send a message that filters down to change young people's behaviour? We do not know. Similarly, the best evidence now indicates that complete (not partial) bans on all advertising and promotion of cigarettes would decrease smoking, perhaps by as much as 7%.<sup>12</sup> But what would the effect of such a ban be on youth smoking in particular?

The bottom line is that while selected measures in use are undoubtedly reducing youth smoking, and significant progress has been achieved in the USA in recent years, the magnitude of the youth smoking problem vastly exceeds the ability of these measures to resolve it. What are we to do? No public health community worth its collective salt can accept the status quo. The burden of a fifth to a third of each new generation carrying nicotine addiction into adulthood is simply too great; constant repetition of the cycle of initiation, addiction, and death imposes a savage and depressing toll on the public's health.

### INNOVATIVE APPROACHES

What are we to do? No one possesses the magic answer. The limitations of the traditional armamentarium of public health weapons, combined with the urgency of the problem, have fostered searches for innovative approaches, new ways to intervene to interrupt the flow of young people into “the smoking marketplace”. On 8–11 July 2002, 69 researchers, advocates, politicians, media experts, and young people committed to the battle against tobacco gathered in Santa Fe, New Mexico, to examine these new approaches, to assess what we know—and what we need to know—about these novel means of addressing the problem, and perhaps to unearth others. They examined six topics in depth, prompted by the papers included in this special supplement to the journal. As the papers reveal, several important conclusions emerged from the deliberations. Although relatively few of them reflected definitive positive steps to stem the tide, those few may be worth their tobacco control weight in gold. The focus of the conference was on youth tobacco control in the USA. Nevertheless, we believe that most of the issues and findings are highly relevant to tobacco control professionals in other countries as well.

### PUP laws

First on the agenda was the controversial topic of laws prohibiting purchase, use, and possession of tobacco by minors—ironically, if aptly, identified as “PUP” laws—often accompanied by serious penalties for youth who violate them. As Wakefield and Giovino recount in their paper on the subject,<sup>13</sup> PUP laws have offended many tobacco control advocates who view them as blaming the victim and, in the process, taking the heat off the adults who provide youth with access to cigarettes. Further, there is limited evidence that they are effective. In fairness, however, it must be emphasised that evidence of any kind on this issue is sparse.

The conference participants reached a general, if not unanimous, consensus that PUP laws do not appear to hold much potential to interrupt the youth tobacco use cycle and do not warrant significant investment of tobacco control resources. Among the dissenters, a few participants argued that effectively publicised and executed, PUP laws might deter significant numbers of youths from falling into the tobacco experimentation trap.<sup>14</sup> They noted that most states have PUP laws in place, and that respect for the law demanded that they be taken seriously. Even opponents of PUP laws, including the authors of the article, observed that attempts to overturn them likely were not worth the effort, given their public popularity.

### Harm reduction products

In the next conference topic, Henningfield and colleagues<sup>15</sup> focused attention on the relevance to youth tobacco control of the emerging issue of tobacco “harm reduction”. Primarily a concern related to the future of adult tobacco use,<sup>16</sup> harm reduction addresses the possibility of getting confirmed cigarette smokers to switch to less hazardous forms of nicotine delivery. A profusion of new products is entering test markets—everything from reduced carcinogen cigarettes to low nitrosamine smokeless products, from high tech pseudo-cigarettes that heat rather than burn tobacco constituents to compressed tobacco in a lozenge form, from cottage industry products like nicotine water to novel pharmaceutical industry nicotine replacement products. Critics of how these products are regulated, or generally the lack thereof, point to a great irony. The safest nicotine delivery products ever developed, the nicotine pharmaceuticals, are subjected to years of costly testing to establish safety and efficacy. In contrast, the most deadly forms of nicotine delivery ever sold—cigarettes—are subject to no production regulation whatsoever. The potential of these alternative nicotine delivery products to exacerbate tobacco caused disease problems, as well as their potential to reduce the burden—not to mention the sheer confusion that has accompanied their emergence on the scene—has led to a single unified conclusion within the tobacco control community: federal regulation of the harm reduction market is essential to maximise the potential for benefit (or to minimise the potential for harm).<sup>17</sup> Less clear is precisely how such products should be regulated.

Harm reduction products could have a myriad of influences on adult smokers, including aiding them in renouncing the deadly forms of tobacco use and, conversely, extending their dependence on dangerous products by perpetuating their addiction to nicotine. But what of the impact of these products on children? As Henningfield and colleagues recount the risks, novel products could attract kids to lives of nicotine addiction. Absent the availability of these ostensibly less hazardous products, these same kids might eschew tobacco—and nicotine—altogether. Further, some subset of such young people might eventually tire of their “novel” products and “graduate” to the most consumer attractive nicotine delivery product, cigarettes. The prospect that harm reduction for inveterate smokers could translate into the creation of harm for young people sends a chill down the spine of any dedicated

proponent of tobacco control. The Henningfield *et al* paper, and the discussion that accompanied it, reinforced conference participants' universal call for systematic and comprehensive regulation of the harm reduction product market. But the discussion also reflected concern that there is little agreement in the tobacco control community about the details of what regulations should be supported.

### Cessation

In many ways, the conference's next topic, cessation, addressed by Mermelstein,<sup>18</sup> is closely linked to harm reduction. With or without the emergence of new harm reduction products, a majority of each generation of youth experiments with smoking, and approximately half of those—up to a third of all young people—become regular smokers. Gladwell<sup>19</sup> argues that the experimentation is inevitable, essentially unstoppable. This depressing thought, backed by both empirical evidence and the logic Gladwell develops, leads to an important insight: tobacco control professionals committed to reducing youth smoking must focus much of their attention on figuring out how to abate the addiction that follows youthful experimentation with smoking.

To date, little effort has been devoted to this crucial dimension of youth smoking. Three approaches come to mind, only one of which has received much attention: helping addicted kids to overcome their nicotine addiction. Fortunately, a group of researchers has recognised the need for effective youth smoking cessation programmes and has begun experimenting with both adult oriented interventions and novel programmes designed explicitly for youth. Unfortunately, as Mermelstein documents in this volume,<sup>18</sup> no highly effective interventions have been identified. Kids have a harder time quitting with formal programmes than do adults—a much harder time. Pharmaceuticals do not kick-start quitting among addicted youth with anything like their impact on adults. Behavioural programmes—even those designed specifically for young people—exhibit little effectiveness too. Still, this nascent field of research does point to the steps that researchers must take to develop successful youth centric cessation interventions, and Mermelstein gracefully lays out the path that must be followed. The number of young people who are addicted, and the sizable proportion of them who genuinely want to quit, warrants serious investment of intellect and effort in this endeavour, its lack of success to date notwithstanding.

A second approach to abating the addiction that follows youthful experimentation with smoking received little attention during the conference, although it was recognised: science needs to find a way, or ways, to reduce the probability that addiction will follow experimentation in the subset of experimenters who move on to sustained tobacco use. Any number of possibilities come to mind, although each represents a scientific leap forward that does not yet appear on the horizon. One involves delving deeply into the genetic helix to ascertain which kids will succumb to nicotine addiction and which will not. (Similarly, novel genetic understanding could greatly enhance the quitting process in adults, identifying, for example, those in need of intensive pharmaceutical intervention versus those likely to benefit from behavioural modification programmes.)

A third approach entails developing new formulas for cigarettes (and other tobacco products) that will greatly reduce the prospect of the onset of addiction. This is an important topic that bridges two of the conference's main topics, harm reduction and cessation. Several years ago, Benowitz and Henningfield<sup>20</sup> proposed gradually phasing nicotine out of cigarettes as a means of eliminating addiction in future generations; the technology for removing nicotine from cigarettes has been readily available for at least a couple of decades. But this solution to the youth initiation problem

would create a myriad of problems for heavily addicted adults, and would raise the prospects of black market cigarettes and novel nicotine infusion devices (for example, nicotine sprays or injection equipment that could “re-nicotine” a de-nicotined cigarette). Still, the Benowitz–Henningfield proposal represents a start at creative thinking about how to intervene between youth experimentation and slavish addiction. Few tobacco control proponents have ever seriously contemplated a physical science contribution to stemming the tide of youth tobacco addiction.

### Role of the media

After discussing topics related to law and regulation, the conference turned its attention to media strategies that offer potential for manufacturers to sell tobacco products to youth, but perhaps even greater potential for tobacco control advocates to use new media tools to discourage youth tobacco use. One of contemporary parents' greatest fears is that their 21st century children are increasingly becoming products of the mass media. Over the past decade or more, public health professionals have discovered the power of the broadcast media to market a variety of unhealthy behaviours to audiences both young and old. As a consequence, substantial interest in, and occasional practice of, broadcast countermarketing has emerged as well. Today, all eyes are focused, too, on that newest of the powerful media—the web. The use of television (and to a lesser extent radio) and the web to both sell kids on smoking and turn them against it generated a great deal of interest among conference participants. Discussion was divided into two segments, by medium: TV and the web.

#### Countermarketing campaigns on the broadcast media

Farrelly and his colleagues present a history of the tobacco control community's attempts to harness the power of television and radio to unsell smoking.<sup>4</sup> It is an uneven history, dating back to the “Fairness Doctrine” counterads of 1967–70 that presaged the demise of broadcast advertising of cigarettes. Those ads contributed to the first four year decline in cigarette smoking in the 20th century, followed by a brief uptick the first three years following the banning of broadcast media advertising of cigarettes, which eliminated the necessity for—and presence of—the counterads.<sup>21</sup> Subsequent campaigns were not so effective. In more contemporary times, major state based campaigns, particularly in California and Massachusetts, have clearly contributed to a measurable, and meaningful, reduction in smoking.<sup>22 23</sup>

Few campaigns have targeted youth smoking *per se*. As noted above, Florida's truth campaign introduced the idea of a youth only campaign and did so with an edgy “guerilla marketing” approach that seemed to resonate with the state's kids.<sup>24</sup> Subsequently, the concept was taken national in the form of the American Legacy Foundation's truth<sup>sm</sup> countermarketing campaign. Legacy was a product of the multistate Master Settlement Agreement (MSA) between the states and the tobacco industry.<sup>3</sup> The truth<sup>sm</sup> campaign represents by far the foundation's largest programme.<sup>25</sup> This social marketing campaign is comparable in magnitude to those of heavily advertised products with major brand name recognition. Itself an “edgy”, “in your face” campaign, truth<sup>sm</sup> tackles the vector of childhood smoking, the tobacco industry, and not merely the behaviour itself. Recent research finds that the campaign has had a significant impact on youth smoking, perhaps rivaling that of price increases.<sup>4</sup>

Although not all countermarketing campaigns have been effective, the new evidence suggests that properly designed, well funded, and sustained campaigns can make a difference in youth smoking, possibly a big difference. The message for the future of youth tobacco control appears to be a strong message that meeting kids where they live—on MTV, WB, and

a variety of other networks that are alien to their parents—must be an essential ingredient in aggressive, effective tobacco control.

### The internet

Less clear are the implications of another medium, a newer medium with which the young generation has grown up—the web. Kurt Ribisl, a researcher at the University of North Carolina, has been the principal chronicler of youth oriented tobacco presence on the web.<sup>26</sup> In his fascinating description of nicotine in cyber space, Ribisl introduced conference participants to the multiple types of websites that relate to tobacco and youth, ranging from tobacco company websites, with their espoused commitment to helping young people avoid smoking, to tobacco fetish websites; from teen tobacco chat rooms—both pro- and anti-tobacco—to online tobacco product stores.

To date, Ribisl has concluded, websites are likely playing only a minor role in kids' decisions of whether or not to smoke. Movies with role modelling stars lighting up likely encourage more kids to smoke than do teen pro-smoking chat rooms; TV campaigns like *truth*<sup>sm</sup> clearly discourage youth smoking far more than all of the anti-tobacco material on the web. According to their own self reports, kids have not accessed online stores much, a reflection of the stores' requirements of bulk purchases (typically several cartons of cigarettes), mechanisms in place at some stores to screen out underage buyers, and the need for a credit card to which purchases can be charged. Still, tobacco control advocates would be foolish to dismiss the future potential of the web, either as a centre of seduction of children susceptible to smoking, or as a source of effective prevention of youth tobacco use. Tobacco on the web demands vigilance, as well as creative thinking about the positive uses of the web in the battle against addiction.

### Young adult new smokers

Combined with understanding of the effects of the more traditional youth prevention interventions,<sup>27</sup> the first five papers in this supplement offer guidance for the possible future of youth tobacco control. What they do not address, at least directly, is a phenomenon that has sneaked up on the tobacco control community in the past several years: the possibility that a significant fraction of new smokers is coming from the population of young adults, typically identified as 18–24 years of age. Until recently, a mantra of tobacco control stated that smokers start to smoke as children. A more accurate statement would have been that the vast majority of smokers begin to smoke as children, since all major studies have found four fifths or more of smokers having begun by the age of 18. In part because it served our interests, however—strong, even coercive interventions to prevent the initiation of smoking can be justified when beginners are minors—we ignored the fact that some people were beginning to smoke as young adults. Perhaps more importantly, we overlooked the possibility that the tobacco industry could compensate partly for successful public health efforts to reduce youth smoking by recruiting more young adults into the fold.

The final conference paper, by Paula Lantz, examines the issue of young adult initiation of smoking in its multiple dimensions.<sup>28</sup> Lantz carefully analyses the longitudinal data on smoking by 18–24 year olds and concludes that, to a significant degree, the surge in young adult smoking in the late 1990s was merely a demographic phenomenon, a reflection of the surge in youth uptake of smoking during the first two thirds of the decade. But there is something more here too: the increase in young adult smoking cannot be explained completely by the same generation's enthusiasm for smoking during their middle and high school years. Smoking initiation did occur among young adults to a larger extent than it had in the past.

What accounts for this novel behaviour? It seems to run contrary to decades of experience during which the smoking initiation age declined, from the late teens and early 20s in the early part of the 20th century, to the middle teens by the end of the century. One candidate explanation relates to the practices of the tobacco industry. The industry today finds itself deprived of many of its conventional approaches to encouraging youth initiation, formally by marketing restrictions in the MSA and also by more careful and informed scrutiny of its behaviour in general. Consequently, the companies have begun to target young adults, figuring them “fair game”, immune from the criticism that the industry is targeting children. Two of the conference participants, Pamela Ling and Stanton Glantz, have documented one dimension of this new young adult oriented marketing: aggressive promotions in bars and clubs.<sup>29,30</sup> Young adults frequent bars and clubs in disproportionate numbers and may be particularly susceptible to the come-ons of an industry desperately seeking new customers. The resourcefulness of the industry constantly renews the challenges that confront the public health community.

Lantz's analysis offers one cheerful note: as smoking has been declining among middle and high school students over the past several years, so too will smoking prevalence fall during the young adult years. Survey data from the early part of the current decade should reflect this trend quite clearly. Still, the conference participants viewed the new industry assault as worrisome, and called for an extension of our traditional concern with youth smoking initiation to include young adults as well. One specific suggestion: extend the *truth*<sup>sm</sup> campaign to target the young adult population. This would have the virtue of offering a non-coercive intervention—it does not force any adult not to do anything he or she wishes to do—while offering the potential of significant effectiveness, consistent with the recently documented success of the *truth*<sup>sm</sup> campaign in influencing high school students not to smoke.

### CONCLUSION

Each of the conference papers was presented in Santa Fe in a manner that permitted extensive discussion of the issues it raised. After the lead author summarised his or her paper, a panel consisting of two adult conference participants and one youth participant critiqued each paper. Young people are playing increasingly important roles in tobacco control, under the encouragement and guidance of such organisations as the American Legacy Foundation and the Campaign for Tobacco-Free Kids. In their roles as panellists and, more generally, as members of the conference audience, the half dozen youth participants supplied trenchant and insightful commentary as to how youth might react to the participants' various proposals.

Following the panellists' remarks, half of each session, a full 45 minutes, was dedicated to questions and comments from the audience. These highly interactive discussions set the stage for the conference's concluding sessions, designed to maximise the exchange of ideas. The final day began with small group discussions. The groups were charged with eliciting the participants' best judgments as to which of the novel interventions debated at the meeting warranted further consideration by the forces of tobacco control and which did not, either as interventions deserving widespread implementation or as subjects of further research.

During a concluding plenary session, after small group leaders summarised their groups' conclusions, participants identified “wild card” ideas for intervention that were not covered in the topic specific sessions. Their creative juices flowing, the participants offered a veritable cornucopia of proposals, ranging from the serious and pragmatic, such as the aforementioned notion of extending the *truth*<sup>sm</sup> campaign to target young adults, to some pie-in-the-sky ideas. One of the latter in particular was greeted with rousing, unanimous

enthusiasm: running Mississippi Attorney General Mike Moore for President. The first attorney general to sue the tobacco industry to recoup state incurred, smoking related health care costs, Attorney General Moore fired up the troops with his infectious and compelling commitment during remarks at a reception the previous evening.

Since the small group and wild card sessions generated many more ideas than we could easily summarise here, we are including longer summaries in an appendix at the end of this volume. The summaries were prepared by Pyramid Communications, which expertly handled the conference logistics. We strongly encourage interested readers to examine the summaries both for ideas on additional research topics and for insights germane to tobacco control advocacy.

According to their evaluations, conference participants left the meeting with a renewed commitment, tempered by the reinforced realisation that there is no magic bullet to break the cycle of tobacco addiction and death. The apparent impact of at least one of the innovative interventions discussed at this conference, an aggressive and substantial youth oriented countermarketing media campaign, buoys all of us who want to believe that more can be done and done successfully. That the impact of the truth<sup>sm</sup> campaign was documented virtually concurrently with the presentation of the conference indicates the dynamism of the field in which we work.

The glass of tobacco control in the USA has long been either half empty or half full, depending on the perspective of the viewer. With progress such as that achieved in the domain of youth smoking over the past five years or so, one can hope, with reason, that the cup will increasingly be viewed as filling up fast. One prediction is virtually assured, however: for every effort the public health community makes to fill the cup, the tobacco industry will be doing its best to drain it. The battle goes on.

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