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Nicotine addiction

Should be recognised as the central problem of smoking

News p 397
Reviews p 454

Last week the Royal College of Physicians of London published its latest report on smoking,[1] the sixth since 1962. It reminds us that almost 40 years after the first report smoking cigarettes remains the single largest cause of premature disability and death in the United Kingdom. Moreover, smoking prevalence has stabilised at one in four of the adult population, with much higher levels in deprived sections of society. This greatest of all health problems refuses to go away. What is new is the report's emphasis on nicotine as an addictive substance and the actions that should flow from that recognition.

The central theme of the report, refined across 200 pages of lucid, carefully researched text, is that cigarette smoking should be understood first and foremost as a manifestation of nicotine addiction. Nicotine is as addictive as "hard" drugs such as heroin. Smokers usually start the habit as children, are addicted to nicotine by the time they are adults, and thereafter the choice to stop becomes an illusion. Thus, although two thirds of smokers want to quit, and about a third try each year, only 2% succeed.

The modern cigarette, developed and fine tuned by the tobacco industry over decades, is a wonderfully efficient nicotine delivery device, delivering the optimum dose of nicotine, rapidly, to the dependent brain. With the help of many additives the smoke of the cigarette is made more pleasant. Yet, although cigarettes are highly efficient drug delivery systems, they have largely escaped any regulation of their structure or composition. The limited information provided on nicotine and tar yields is worthless, and indeed probably harmful.

Stated tar and nicotine yields are based on the way that machines, not people, smoke cigarettes. Smokers addicted to nicotine smoke in ways that will enable them to achieve the desired nicotine levels and thereby avoid nicotine withdrawal. A cigarette with a low nicotine yield when smoked by a machine in a laboratory will be smoked more aggressively by a smoker. By taking deeper and longer inhalations, holding the smoke in the lung, and covering the perforations around the filter, the smoker can achieve the nicotine intake that he or she needs. When the tobacco industry claims that a cigarette is "light" the smoker may be deluded into thinking that this is really so, and this may undermine any resolve to quit.

Given that the central problem is nicotine addiction, nicotine replacement therapy is a rational and indeed effective therapy. Many clinical trials confirm that nicotine replacement therapy doubles quit rates, which is significant in public health terms because of the large number of smokers and remarkably cost effective. Nevertheless, from the perspective of the smoker addicted to nicotine, replacement therapy has serious deficiencies: patches and gums deliver nicotine too slowly, often to a suboptimal level, and nicotine sprays are often unpleasant. Up against the cigarette, it is hardly surprising that nicotine replacement therapy usually fails to capture the heart and mind of the smoker. Nicotine replacement therapy should undoubtedly be promoted, available on prescription, and widely available for general sale, but it must also be made much more effective if it is to become a real (albeit safer) rival to cigarettes.

The recognition that cigarettes are primarily nicotine delivery systems causing and sustaining addiction demands several actions. Warnings on cigarette packets should emphasise the addictive nature of smoking. The near certainty of addiction should be central to health education strategies; treatment facilities for smoking cessation should be provided throughout the NHS; nicotine replacement therapy requires urgent and substantial research and development; and cigarettes should be regulated in the same way as other drug delivery devices.

The separate regulatory systems for tobacco products (weak and ineffectual) and the treatment of nicotine addiction (as stringent as for all drugs) has so far greatly favoured the tobacco industry. Nicotine and the many constituents of "tar" and additives all require the strict regulation required of medicines. The measures that governments have introduced to control tobacco products have not greatly improved health, and cigarettes remain as dangerous as ever. The royal college's report makes the case that making all nicotine delivery systems—cigarettes and nicotine replacement therapy—subject to the same nicotine regulatory framework would facilitate convergence. Nicotine replacement therapy would develop many of the crucial attributes of cigarettes, to meet the needs of addicted smokers who want to avoid the dangers of tobacco and prepare to break the addiction, and cigarettes would be regulated to control additives and nicotine and tar delivery, to make smoking safer. The final, and perhaps most important, recommendation of the report is therefore to establish an independent expert committee to examine the institutional options for nicotine regulation and to report to the secretary of state for health on future regulation of nicotine products and the management and prevention of nicotine addiction in Britain.

BMJ 2000;320:391–2

What is the role of doctors? The medical profession has been in the vanguard of the struggle against smoking for 50 years. Doctors have, however, mainly concentrated on identifying the diseases caused by smoking and educating patients about the dangers of smoking. They now need to recognise that nicotine addiction is the central problem. In helping smokers they are seeking to help nicotine addicts. Treating nicotine addiction should be a core activity and responsibility, and all doctors should be familiar with the benefits of nicotine replacement therapy.

Doctors should demand comprehensive smoking cessation facilities for their patients affected by nicotine addiction, including nicotine replacement therapy on prescription in the NHS. On the wider political stage, doctors should demand a level playing field. The industry that promotes nicotine addiction should be regulated and the therapies that treat it not disadvantaged in relation to smoking. All doctors, on behalf of their many current and future patients who smoke, will want to help the Royal College of Physicians achieve its goal of persuading the government to set up a Nicotine Regulatory Authority embracing tobacco products and nicotine therapies.

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1 Tobacco Advisory Group, Royal College of Physicians. *Nicotine addiction in Britain.* London: RCP, 2000.

Voluntary organisations: from Cinderella to white knight?

We need evidence of effectiveness of those that deliver care directly

For much of our history medical care was delivered by religious organisations or philanthropic individuals and institutions.[1] Immediately before the second world war the prestigious forerunners of Britain's present day teaching hospitals were financed by charitable contributions. The advent of the NHS displaced voluntary organisations from organised health care. Such organisations have not withered, however, but have prospered: half of the current national organisations have been started over the past 20 years.[2] Now, after many years in official wilderness, voluntary organisations are back on the political agenda, their potential contribution having been highlighted in recent white papers on the future of health care.[3 4] The cynic might quibble that there is no formal strategy to increase the role of voluntary organisations and that no financial support has been earmarked to achieve this. But this does not deflect attention away from the real question: why should voluntary organisations be attracting this level of interest now?

The answer may lie in the growing pressure on NHS resources and the consequent need to find ways to augment the delivery of care without increased cost. The voluntary sector has a substantial income of £12bn ($19bn) a year,[5] and within health care it can provide an abundance of volunteers with the time to devote to individual patients. Further, given the immense numbers of voluntary organisations, there is likely to be at least one which could provide help for every type of patient presenting to the NHS. The major disease groups such as cancer, stroke, and heart disease have their well known champions, but there are also many support organisations for patients with rarer conditions such as neuroblastoma and Behçet's and Sjøgren's syndromes.[6]

But, although use of voluntary organisations by the statutory sector may be expedient, it would not be wise to rush headlong into their incorporation into the NHS. Especially in this age of evidence based medicine, we need some reassurance that the involvement of these bodies in health care will result in the hoped for health gains. Thus the paper by Grant et al in this issue helps provide reassurance (p 419).[7] It shows in a randomised controlled trial that referral of patients with psychosocial problems to the voluntary sector significantly improved wellbeing compared to usual management by general practitioners.[7] Not only is this a particularly difficult group of patients to study; they also make substantial demands on healthcare resources.

General practice p 419

However, this paper does raise the question of when we need evidence for effectiveness. Given the diversity of voluntary organisations, it would not be practical to require evidence for every one: this would effectively debar their use. Clearly for some we need no evidence: the provision of tea by the Women's Royal Voluntary Service, for example, or of drivers of minibuses for patient transport. But we do need evidence for the type of care provided in Grant et al's study. The distinction lies in whether volunteers provide care directly or whether they merely support the delivery of conventional care. The more voluntary organisations act as an alternative to the NHS, the greater the need for evidence. Grey areas will certainly emerge (such as self help groups for patients with cancer), where we may have to accept on trust that the provision of support is inherently beneficial.

A second question is whether the voluntary sector should go further than providing support services. Should voluntary organisations be involved in planning and implementing policy, acting as the champion of patients' needs? The increasing recognition of the importance of the patient's perspective suggests that this is a legitimate role. Certainly it is one that many voluntary bodies want. For example, an umbrella body of 96 national voluntary organisations was formed in 1990 to influence policy and practice because of concerns about reforms to the NHS.[8] Thus the question is less whether than to what extent they should influence policy and planning.

Finally, there is the question of how to integrate the voluntary sector within the NHS. In the past, health professionals were reluctant to become involved with voluntary organisations[9] and viewed them as a threat to

BMJ 2000;320:392–3