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EFFECTIVENESS OF MEASURES AGAINST SMOKING

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Abstract

The objective of a program to control cigarette smoking is to reduce illness and early mortality. This requires

a) reducing the taking up of smoking,

b) increasing the giving up of smoking,

c) reducing the dosage of harmful substances received by the smoker, and

d) protecting the non-smoker.

Such a program requires both an educational effort and a management approach. The success of past educational efforts has changed the nature of current efforts from an emphasis on persuading people to stop smoking to an emphasis on encouraging those who have been unsuccessful to try again, to assist them, and to use dosage reduction as an alternative to quitting. Managerial efforts most promising are the gradual reduction of harmful substances in the smoke, economic disincentives, and limitations of smoking in public places, thereby protecting both the smoker and the non-smoker.

Zusammenfassung

Das medizinische Ziel einer Kampagne gegen das Zigarettenrauchen ist die Verminderung von raucherbedingten Krankheiten sowie eine Senkung der Frühmortalität. Dies erfordert

a) eine Verminderung der Zahl von Personen, die zu rauchen beginnen,

b) eine zunehmende Zahl von Rauchern, die das Rauchen aufgeben,

c) eine Herabsetzung des Gehaltes von schädlichen Stoffen in der Zigarette, und

d) einen Schutz des Nichtrauchers.

Eine solche Kampagne erfordert sowohl eine Anstrengung bezüglich Aufklärung sowie auch bezüglich Organisation. Frühere erfolgreiche Aufklärungsaktionen haben die Taktik von

gegenwärtigen Aktionen deutlich beeinflusst: Während früher der Akzent darin lag, Raucher zu überzeugen, dass sie das Rauchen besser aufgeben, werden heute vor allem diejenigen angesprochen, die bisher beim Versuch, das Rauchen aufzugeben, erfolglos waren. Diese Population von Leuten soll ermutigt werden, und im besonderen soll auch eine Einschränkung des Konsums als Alternative zum Aufhören angeboten werden. Organisatorische Anstrengungen sollen vor allem zum Ziel haben, den Gehalt von schädlichen Stoffen im Zigarettenrauch allmählich zu vermindern. Es sollen wirtschaftliche Nachteile des Rauchens betont werden, es soll auch auf Rauchverbote in der Oeffentlichkeit hin tendiert werden; dies bewirkt gleichzeitig einen Schutz sowohl von Rauchern, als auch von Nichtrauchern.

The objective of a program to control cigarette smoking is to reduce the burden of illness and early mortality that results from the smoking of cigarettes. The annual cost to the USA of the consequences of smoking is between 20 and 30 billion dollars a year in terms of medical care costs, lost productivity, destroyed lives and destroyed property - about 3 or 4 times the total value of the tobacco product.

This can be accomplished by:

1. Reducing the number of young people who take up smoking.
2. Increasing the number of people who are successful in giving up smoking.
3. Making significant reductions in the dosage of harmful materials received by the smoker
   a) by changing the cigarette so that it delivers lower quantities of harmful substances, and
   b) by teaching the smoker to reduce his intake of harmful substances by alterations in his style of smoking.
4. Protecting the non-smoker from exposure to pollutants that result from smoking by others.

A program to control cigarette smoking needs to blend two quite different approaches:

1. An educational approach aimed at developing a better understanding of how cigarette smoking can harm the individual, encouraging him to protect himself by stopping or reducing his intake of harmful materials in smoke, and helping him to be successful in making these changes.
2. A managerial approach aimed at reducing the total amount of smoking by reducing the promotion of smoking, reducing the places and times at which smoking is permitted, reducing the amount of harmful material produced in the smoking of cigarettes by setting upper limits to the amount of various constituents of smoke that a smoked cigarette may produce, differential taxes imposed according to the level of harmful materials produced, and increasing taxes to reduce overall levels of consumption.

Educational Programs Aimed at Reducing Smoking

The potential for accomplishment in the reduction of smoking through education is excellent. From the early 1950's, when the effect of smoking in producing lung cancer was first identified until the present time, there has been a tremendous increase in the extent to which the U.S. public accepts cigarette smoking as harmful, a large increase in the number of people who have tried to quit, and a substantial improvement in the success rates of those who have tried to quit. These changes have changed the nature of the problem. Just 12 years ago, most of our cigarette smokers had never even made the attempt to stop; now, the bulk of adult smokers are people who have tried to quit and failed, are discouraged about their prospects of ever quitting, and have, in many instances, sought at least a partial solution by turning to cigarettes of lower tar and nicotine content. The problem is not persuading smokers that they ought to quit, but encouraging them to try again, teaching them how to be more successful, and providing the alternative of lower dosage smoking for those who cannot quit. The expanding interest in lifestyle changes that will improve health also offers opportunities - success in changing one harmful habit encourages people to try to change others.

The maximum achievement possible through education is probably exemplified by what has happened to smoking by physicians. In 1950, about 65 % of physicians in the USA were regular cigarette smokers; by 1975, this figure has dropped to 21 % compared to 39 % in the adult male population. At the present time, two thirds of the physicians who were ever regular cigarette smokers have quit. Of those who still smoke, daily consumption is about one-third less than among the comparable general population that smokes and the tar and nicotine levels of their cigarettes are lower by about one-fourth than their counterparts nationally.

Among women, each successive generation has taken up smoking at levels approaching those of men - a trend that has achieved equality of the sexes in smoking rates among those who are now 21 years of age. Although women were slower to accept smoking as harmful and more resistant to changing their habits, this has begun to change and rates for cessation of smoking among women are beginning to approach those for men.

Among teen-agers, males have stabilized at a level significantly below that of 20 years ago, and, now that females have reached the same rate of smoking as their male age-equals, recent increases may halt. Furthermore, the number of teen-agers (ages 13 - 19) in the population reached a peak in 1976 and has begun to decline, reflecting dropping birth rates in the 1960's. By 1982, the total number of teen-agers in the USA will be about 3 million less than the peak year, so that the number of potential recruits to smoking will be appreciably less. Even keeping the rate of smoking to the present level of 20,2 % would mean a drop of 630'000 teen-age smokers by 1982.

The two most critical areas for the immediate future are (1) to improve our efforts with young people and (2) to develop better methods of encouraging and helping the more than 40 million adult smokers who want to stop smoking, need to stop smoking, but are discouraged about the ability to accomplish this.

School-age young people are a particularly appropriate target group for education on the health hazards of smoking. They can be reached before smoking is taken up, or at a very early stage of the formation of the habit. True primary prevention is possible with this age group - prevention of unnecessary disability and untimely death years in the future.

At the same time, education of young people related to smoking is complicated. The decisions associated with smoking are interwoven with many other attitudes and behaviors. Since risk-taking and rebellion against authority have considerable appeal for the young, effective education is not so much a matter of trying to get young people to do what those in authority consider best for them, as it is helping them to develop the capacity for making their own decisions in full knowledge of the consequences. If they can be brought to realize that health is a valuable asset and that their own behavior has a significant effect on their health and happiness, then they will be able to judge whether the pleasure derived from a habit that can be so harmful to health justifies the risks involved.

Our underlying premise is that the decision to smoke or not to smoke - or to continue or quit - needs to be consciously made, as one of a set of lifestyle decisions that affect health. Another premise is that wise decisions are unlikely to be the result of a single educational intervention but rather of a number of stimuli in school and out, that are mutually reinforcing over a considerable period of time.

Target Audiences for Smoking Education

Children (12 and under). Continued support is needed for general health education in the schools and in child-serving organizations. It is doubtful that additional mass communication or programs singling out "smoking" as apart from "health" would be beneficial. The influences of the environment provided by family, friends, and schools are paramount.

Youth (ages 13 - 19). There needs to be a sharp increase in programs aimed at this group through the schools, organized group affiliations and mass communications, especially radio. The key program approach is <u>not</u> the stressing of the harmful consequences of smoking - already well known and accepted on a cognitive level - but an approach that makes the decision making process a conscious one.

Adult Target Groups. There are two basic approaches needed: 1. Developing a low cost mass communication effort designed a) to encourage the current smoker to try to quit, with emphasis on the person who has tried and been unsuccessful and b) to reinforce the recent ex-smoker and help him resist returning to smoking.

We need to develop and test a system that will enable the individual smoker to evaluate the urgency of doing something about his smoking. The epidemiological facts are clear: the importance of quitting smoking or reducing dosage is determined by a combination of dosage, levels of exposure to other risk factors that produce or exacerbate smoking related disease, and host resistance. We already know a great deal about how to measure the risk; the need is to develop a system to help the individual do this for himself, thereby, making him the key person responsible for his behavioral change, and providing resources that are appropriate to the level of risk. With over 50 million cigarette smokers, there is no other way to allocate limited resources. The following population groups are most promising for maximizing benefits to be achieved:

a) occupational groups
b) hospital patients
c) pregnant women
d) organized groups such as recreational, religious and other populations which may be reached as group members
e) mass communication audiences

Research and Evaluation Needs

Continuing monitoring of the nature of the behavioral problems in smoking is needed as well as further refinements in knowledge of how change in this behavior takes place.

The most critical research need is a research program designed to develop better ways of identifying the best cost-effective methods for high risk individuals to use in quitting smoking. At the present time, the problem is not that of helping people get off cigarettes; the problem is how to help them stay off.

Regulatory and Legislative Opportunities

At the present time, no government agency has any control over what goes into the cigarette or what comes out of it when it is smoked. The primary opportunities that need to be considered for reducing the magnitude of the health consequences of smoking are the following:

1. Provide for setting upper limits to the amount of harmful substances produced by smoking a cigarette in both the main stream of cigarette smoke (primarily affecting the smoker) and the side stream smoke (primarily affecting the nonsmoker).
2. Increase the cost of cigarettes through higher taxes. We have demonstrated that in a population that is concerned about the ill-health that results from smoking this provides an incentive for trying to quit or cut down. Taxation can also be used to provide incentives for using less hazardous cigarettes especially in terms of tar, nicotine and carbon monoxide and possibly several other constituents of smoke.
3. Reduce the promotion of cigarettes either by banning forms of advertising, limiting advertising to useful information or by declaring advertising and promotion costs as non-deductible business expenses.
4. Protection of the rights of non-smokers
   a) In public places
   b) As hospital patients.
5. Protection of the rights of non-smokers in the work place, especially where occupational exposures interact with smoking to increase risk of disease (presumably with the power of OSHA to regulate).

We have come a long way in the past 20 - 25 years. The growth of cigarette smoking has been halted and decreased substantially among men, and finally halted in women. The cigarette in use today has about 50 percent the capacity to harm people than it had then. Much remains to be done. There is probably no other single action that could do so much to improve health through primary prevention than encouraging the general public to do to their smoking habits what physicians have to theirs - cut it by at least two-thirds, and, in per capita dosage, by about five-sixths.

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