

RESEARCH AND PRACTICE OF HEALTH PROMOTION

COMMUNICATION STRATEGIES FOR SMOKING CESSATION

A review of the scientific literature on
the subject

VOLUME 11

Federal Centre for Health Education

BZgA

The Federal Centre for Health Education (BZgA) is an authority in the sphere of responsibility of the Federal Ministry of Health and is based in Cologne. In the field of health promotion, it handles both information and communication tasks (education function), as well as quality assurance tasks (clearing and coordination function).

The information and communication tasks include the provision of information and education in subject areas with particular priority as regards health. In cooperation with partners, the BZgA implements campaigns in various fields, such as AIDS prevention, drug prevention, sex education and family planning. The target group-specific work of the BZgA currently focuses on promoting the health of children and young people. The key tasks of the BZgA in quality assurance include the formulation of basic scientific principles, the development of guidelines, and the elaboration of market overviews of media and measures in selected fields.

As part of its quality assurance tasks, the BZgA organises conferences and commissions research projects, expert reports and studies on current topics of health education and health promotion. For the most part, the results of this work are incorporated into the series of scientific publications from the BZgA, in order to make them accessible to the interested public in the various fields of health promotion. The "Research and Practice of Health Promotion" booklet series is intended to be a forum for scientific debate. The primary aim is to expand and promote the dialogue between science and practice and to establish a basis for successful health promotion

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Bibliographic information published by Die Deutsche Bibliothek

Die Deutsche Bibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available in the Internet at <<http://dnb.ddb.de>>

Published by the
Bundeszentrale für gesundheitliche Aufklärung
(Federal Centre for Health Education – BZgA)
Ostmerheimer Str. 220, 51109 Köln, Germany
Tel: +49 (0)2 21/89 92-0
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English edition: Unit “International Relations”

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Editorial staff: Katharina Salice-Stephan
Translation: Davis & Jungbluth, Köln
Composition: Salice-Stephan, Köln
Printed by: Schiffmann, Bergisch Gladbach

Impression: 1.1.12.02
Printed on recycled paper.

Research and Practice of Health Promotion, Vol. 11: *Communication strategies for smoking cessation*. A review of the scientific literature on the subject. Cologne: BZgA, 2002. ISBN 3-933191-80-7. [This volume is a translation of the German edition: *Kommunikationsstrategien zur Raucherentwöhnung*. Köln: BZgA 2002 (Forschung und Praxis der Gesundheitsförderung, Bd. 18). ISBN 3-933191-74-2]

The specialist booklet series “Research and Practice of Health Promotion” is intended to be a forum for discussion. The opinions expressed in this series are those of the respective authors, which are not necessarily shared by the publishers.

Volume 11 of the specialist booklet series can be obtained from BZgA, 51101 Cologne, Germany, or on the Internet at <http://www.bzga.de>

Order number: 60 811 070

Preface

For over 20 years, the Federal Centre for Health Education (BZgA) has been promoting non-smoking by addressing the public with nationwide campaigns on the subject of smoking and by running campaigns and measures to encourage not smoking. Thus, for example, the *Make children strong* campaign, which does not target specific drugs, is intended to strengthen the self-confidence and life skills of children and young people with the effect of also preventing the development of regular smoking behaviour among young people. Since 1999, the BZgA has also extended the three central areas of promoting non-smoking, aids for smoking cessation and non-smoker protection, and has compiled a wide range of media, materials, advice and practical help in the context of its current campaign *Smoke free – I can do it!*

Persuading smokers to stop smoking requires not only an awareness of the measures available for cessation and how effective they are, but also a knowledge of how smoking cessation can be successfully communicated. Accordingly, the topic of communication strategies for smoking cessation is one of the core elements in the WHO Partnership Project to Reduce Tobacco Dependence, in which the United Kingdom, France and Poland are involved alongside Germany, where the “Coalition against Smoking” is supported by the Federal Ministry of Health.

Within the framework of this Partnership Project, the task of the BZgA, with the aid of various partners at the national, regional and local governmental level, and of the non-governmental sector, is to develop and evaluate appropriate communication strategies for altering smoking behaviour. It is against this backdrop that the BZgA commissioned the IFT, Institute for Therapy Research, in Munich to compile and discuss the current state of knowledge regarding communication on smoking cessation. The result of this research is now being presented as Volume 11 of the specialist booklet series “Research and Practice of Health Promotion”. It provides a review of the various communication strategies and their effectiveness and describes in detail the most important international studies, with respect to both comprehensive smoking cessation campaigns, individual campaigns and specific aspects of communication.

Cologne, November 2002

Dr. Elisabeth Pott
Director of the Federal Centre
for Health Education

Outline of the project

Project title:	Communication strategies for smoking cessation
Goals:	<p>Compilation and discussion of the available knowledge on the following points, taking into account the international scientific literature on smoking cessation:</p> <ul style="list-style-type: none">• What communication problems arise in motivating smokers to stop smoking?• Is it necessary to differentiate between target sub-groups when addressing smokers?• Which messages (contents), which communication methods and media (mass communication, Internet, personal communication), which multipliers and which settings promise effective communication with smokers?
Method:	Literature search on the Internet via Medline and using Internet search engines
Implementation period:	May to September 2000
Project implementation:	<p>IFT – Institut for Therapy Research Parzivalstrasse 25, 80804 München, Germany</p> <p>Dr. Christoph Kröger, Dipl.-Psych. Kathrin Heppekausen, Dipl.-Psych. Karin Ebenhoch, Dipl.-Päd.</p>
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Introduction

In Germany, 34.8% of the adult population (38.9% of men and 30.6% of women) aged between 18 and 59 years smoke (Kraus/Augustin, 2001). Most of these smokers are dependent on nicotine (Batra/Fagerström, 1997). Tobacco abuse and tobacco dependence are listed as a diagnosis in the WHO “International Classification of Diseases” (ICD; Dilling/Mombour/Schmidt, 1991). In addition, smoking is responsible for the development and exacerbation of various physical diseases.

Smoking behaviour is highly resistant to change. Only about 3% achieve the goal of remaining “smoke-free” in an attempt to give up. One of the reasons for this low rate is the fact that smoking is an addiction and the cessation of tobacco use is prevented by the characteristic features of addictive behaviour – such as withdrawal symptoms, compulsive craving for the psychoactive substance, relapses – together with low motivation to change and ambivalence.

The World Health Organisation (WHO) has recognised that smoking is an important problem for the health of the world’s population and is promoting interventions to reduce the prevalence rate of smokers in the population. Various strategies are proposed to achieve this goal (Samet et al., 1998; Reid, 1996), such as:

- High taxation of tobacco products,
- Restriction or prevention of tobacco advertising,
- Anti-smoking campaigns,
- Restriction on young people’s access to tobacco products,
- Health-promoting measures,
- Restricted permission to smoke in public facilities,
- Offers of help and support for smokers wanting to stop,
- Establishment and promotion of government and private organisations committed in the field of non-smoking.

All these measures are important elements of a comprehensive strategy for reducing the number of smokers. On the one hand, communication measures are a sub-measure while, on the other hand, they form the framework for the overall strategy, since the goals and contents of the measures have to be communicated in order to implement and realise the various strategies.

Within the framework of the “Third Action Plan for a Tobacco-free Europe”, the WHO Regional Office for Europe in Copenhagen has created the *European Partnership Project to Reduce Tobacco Dependence*. This project is a concerted action by the WHO and four European partner states (Germany, United Kingdom, France and Poland) and private enterprises (the pharmaceutical industry). In Germany, the Partnership Project is being implemented by the “Coalition against Smoking”, with support from the German Federal Ministry of Health.

Five core activities have been defined for the project:

- Processing of data on tobacco dependence
- Statutory regulations on tobacco products and smoking cessation products
- Protection of non-smokers in public and at the workplace
- Realisation and further development of quality-assured smoking cessation
- Communication strategies for smoking cessation

The Federal Centre for Health Education (BZgA) holds a key position in Germany in the field of communication regarding smoking cessation. This report was commissioned in order to update the state of knowledge on this subject.

Objective of the present paper

This paper deals with communication strategies used for smoking cessation. In dealing with this subject, the problem arises of drawing a line between communication strategies, on the one hand, and smoking cessation, on the other, since a distinction of this kind is not easy to make as a result of a number of overlapping areas.

Communication strategies include all communication measures that

- a) Persuade a smoker to stop, or
- b) Persuade a smoker to make use of a measure designed to help stop smoking.

Smoking cessation is a process through which all smokers have to go when giving up. This process may involve external support measures, although it may also be completed without external assistance. These support measures include all interventions and measures that reach a smoker from external sources and support him in, or lead him to, stopping smoking.

Since communication measures are an essential element of these smoking cessation measures, overlaps arise between the communicative parts of smoking cessation itself and those of the communication measures intended to lead to smoking cessation. This overlap is less of a problem in mass media communication, since this is not generally counted as part of smoking cessation. Personal communication, on the other hand, is regarded principally as an element of smoking cessation and less as communication of smoking cessation. This problem can be described by the following example:

If a doctor speaks to a patient about his smoking behaviour and encourages him to stop smoking, this can be rated as a personal communication strategy regarding smoking cessation, i.e. the doctor is encouraging the patient to tackle smoking cessation for himself. However, the view most frequently held in the scientific literature is that this communication measure by the doctor is itself already an element of smoking cessation.

The present paper will primarily look at communicative strategies that can be clearly distinguished from smoking cessation. These are principally mass media communication strategies, since personal communication is seen as being part of smoking cessation. If, therefore, the focus in this paper is on mass media communication, this in no way means that personal communication is less important in smoking cessation. Rather, mass media and personal communication are mutually complementary.

The first section of this paper will start by identifying and describing the available communication strategies (*Chapter 1*). The second section contains the search for scientifically confirmed information on the effects of communication of smoking cessation. After a brief description of criteria for assessing the effects of communicative measures (*Chapter 2*), the relevant scientific publications will be examined and presented (*Chapter 3*) and their results summarised and discussed from various different perspectives (*Chapter 4*).

The following questions will be examined:

- Which methods of communication (mass communication, Internet, personal communication) promise effective communication with smokers?
- Which messages (contents) promise effective communication with smokers?
- Which multipliers promise effective communication with smokers?
- Which settings promise effective communication with smokers?
- What communication problems arise in motivating smokers to stop smoking?
- Is it necessary to differentiate between target sub-groups when addressing smokers?

Finally, after discussing the results presented, conclusions are drawn in *Chapter 5* with respect to the effectiveness of communication measures and the requirements to be taken into account, particularly as regards mass media communication. *Chapter 6* gives a complete review of the literature used. In conclusion, the *Annex* describes in detail the most important studies considered in this report.

Method

An Internet literature search was carried out via Medline for this report. The focus was on publications appearing after 1990. All searches were carried out under the search term *smoking cessation*, which was combined with the following terms: *mass media* or *media*, *television*, *internet*, *radio*, *telephone*, *hotline*, *mail* and *communication strategies*. In addition, the bibliographies of the literature examined were searched for grey literature, and in particular for unpublished research reports.

A further search, using the same search terms as in the search of the scientific literature, was carried out using Internet search engines so as to find additional unpublished literature via the websites of non-governmental organisations (NGOs) or governmental institu-

tions. In particular, the websites of the US National Institute of Drug Abuse (NIDA) and the US Centers of Disease Control and Prevention (CDC) were searched for unpublished reports.

The literature identified and rated as relevant was requested or downloaded from the Internet. Several international colleagues were written to personally in the hope of receiving assistance and copies of unpublished materials.

REVIEW OF THE COMMUNICATION STRATEGIES



This chapter provides a review of the various communication strategies that are ultimately used with the aim of reducing smoking prevalence in population. The communication media are described, together with the content, mediators, settings and target groups.

1.1 Communication media

In the field of smoking cessation, media are used to communicate information, offers of help and/or appeals. The various media used can be divided into mass communication and personal communication media, although the borderline between the two is not clearly defined. The new media, such as the Internet and customised print media, are interactive and allow personal address. The classical mass media include television, radio, billboards and print media. On the other hand, personal conversation is the classical method of personal communication.

The following media are used in communicating smoking cessation:

- Television, cinema,
- Radio,
- Billboards,
- Print media (flyers, posters, magazines, newspapers),
- Labelling tobacco products,
- Give-aways,
- Exhibitions,
- Internet,
- Personal conversation,
- Telephone helplines (smokers' hotlines),
- Personalised address via media (direct mailings, active address by telephone).

Television

In the industrial nations, television is the one medium that is regularly used by the majority of all population strata. Because of its wide reach, it can be used to address a broad sector of the public simultaneously with information and messages. Different groups of people can be addressed using this medium, depending on the broadcast time and channel selected. If the intention is to reach primarily adults in one region or one country, a late evening spot will be chosen for transmitting a piece. In contrast, information and messages aimed at children and young people should rather be broadcast during the day and/or on specific children's or music channels. In addition, television makes it possible to trans-

mit contents and messages of various sizes. For example, either short TV spots can be broadcast, or more detailed, editorial pieces.



Cinema

Short spots can be shown at the cinema as well as on television. Using the cinema means that fewer people can be addressed at the same time than via television but, depending on the choice of the films in which the spots are placed, it is possible to specifically reach different target groups with the information. A distinction can be made between children's, young people's and adult films, these being clearly defined by the age limits for admission.

Radio

Radio is another mass medium with a broad reach. Either short pieces of information or editorial pieces can be communicated specifically to particular target groups – depending on time and radio station – in a similar way to that described for television. Radio is also referred to as an “intimate” medium, partly because it is switched on by a single individual to accompany his or her activities (e.g. while driving or doing the housework). Using this setting, for example, a British campaign (*Quit for Life*) broadcast its encouraging appeals from ex-smokers specifically on the radio in the form of tips and suggestions. The intention was to give those smokers who were motivated to quit a feeling of being personally addressed. Active involvement of the audience going beyond this can be achieved if the radio presenter takes telephone calls during the broadcast. In this way, listeners can express their opinions on the topics being discussed or put questions to experts in the studio.

Print media

Editorial articles and advertisements in daily or periodical print media, such as magazines and newspapers, can also address a broad public. Depending on the magazines and newspapers selected, it is possible to reach quite specific target groups with information and messages. Thus, for example, advertisements in women's magazines are seen principally by women, while pieces in daily and weekly papers address male and female readers equally. Further specific target groups can be reached by means of articles in young people's and family magazines. In addition to the traditional print media, posters, flyers and brochures can also be produced and used in highly targeted fashion for disseminating specific information or as self-help guides.

One special form of print media is what are known as tailored print communications. These “made-to-measure” print media include brochures, information booklets or letters that – on the basis of a preceding survey of the target group – are tailored directly to the recipi-

ent in terms of content. This form of communication can be used to convey information and achieve increased understanding in the person addressed. Behavioural changes are often recommended and strategies for such changes provided that are precisely matched to the problem areas of the individual recipient.

Labelling tobacco products

In some respects, the cigarette or tobacco packaging itself also functions as a print medium in many countries. In Germany, every pack bears a fundamental notice about the health risks of smoking (“The EU Ministers of Health: Smoking damages health”) as well as alternating additional specific warnings (e.g. “The EU Ministers of Health: Smoking damages the health of your child even during pregnancy”). In other countries, the warnings are formulated even more drastically and their message may even be reinforced with medical pictures of the affected organs of smokers who have died. In this way, the cigarette user is reminded of the consequences of smoking directly before lighting each cigarette.

Billboards

The fourth classical method of mass media communication, in addition to television, radio and print media, is bill posting. The large posters are put up outside buildings in public areas, particularly on heavily used traffic routes.

Give-aways

Give-aways (promotional gifts/sample packs) can be turned into an information medium by means of short printed messages. Since these advertising media are usually everyday utility items (e.g. pens, lighters), the user notices the message every time he or she uses the item. The messages can be transmitted in targeted fashion by restricting the recipient group.

Internet

The Internet is a modern mass medium whose importance is already significant and still growing. Setting up chat-rooms and websites makes it possible to create platforms for communicating specific, health-related topics and contents. The interested individual can actively search the Internet for informative sites or communicate with others (including experts) in chat-rooms.

Exhibitions

Communication can also take place via public exhibitions on specific subjects. For instance, attention can be drawn to the subject of “smoking” at various public locations by means of display stands. The BZgA, for example, runs an information stand that it sets up in various institutions (e.g. companies) on specific occasions, in order both to point out the risks of smoking and to provide information on the help available.

Personal conversation

Direct personal communication takes place in personal conversation with the smoker. This personal contact is primarily established through people involved in the health system (doctors, nursing staff, therapists, counsellors). These conversations take place not only in medical care facilities, but also at the workplace, in a leisure context and within the family.

Telephone helplines

The telephone can be used to build up direct personal contact with the person affected. On the one hand, setting up and publicising telephone advice lines can give a target group the opportunity of using this medium to obtain support and advice. Contact can be made and information exchanged by telephone, regardless of distance and anonymously. On the other hand, proactive telephone calls can be used by advisers to address target persons directly and personally.

Personalised address via media

The direct, personally addressed letter, sent by post in the form of a letter or brochure, can be described as another proactive communication medium. Another possibility is to reach the target person directly by e-mail. Mailings of this kind can be used to send the recipients specific information, for instance about tobacco use and its consequences, as well as about the help available.

1.2 Communication content

Various contents and messages can be conveyed via the media described above in the context of smoking cessation campaigns. According to Flay (1987), a distinction can be made between three types of programmes, depending on the content of the communication:

- Information and motivation programmes,
- Programmes for supporting smoking cessation programmes,
- Self-help programmes.

Information and motivation programmes

The communication contents of information and motivation programmes within the framework of smoking cessation campaigns consist of information about smoking and its consequences.

The various media can either accommodate brief pieces of information about smoking (e.g. “Smoking damages health!”), or they can convey more detailed content, e.g. using newspaper articles. The information about smoking may involve a description of the physiological processes and presentation of disease figures, or it may focus on the negative consequences and hence take on the character of an indirect appeal. The information can be communicated in a variety of ways:

- As a factual description, or
- In the form of appeals.

Appeals are persuasive messages that are either aimed directly at the recipient (“Be smart – don’t start!”) or conveyed indirectly via the portrayal of negative consequences of a certain kind of behaviour. The type known as “fear appeal” uses verbal and/or non-verbal material with the aim of triggering fear and hence provoking changes in attitude and behaviour in an individual.

Attempts are being made in the USA, in particular, to combat the positive image of smoking, as pushed by the tobacco industry’s publicity campaigns and event sponsorship, by strengthening the positive image of not smoking. The focus here is on the strategy of counter-advertising, i.e. tobacco industry representatives are publicly condemned for their marketing strategies.

The content of information and motivation programmes is principally conveyed by mass media. It can also be transmitted via personal communication, with brief interventions by doctors forming an important strategy in this context.

Programmes for supporting smoking cessation programmes

Mass media and personal communication are used in these programmes to communicate information on stopping smoking or on smoking cessation measures. The smokers addressed are encouraged to give up smoking, tips on stopping are given or information provided about advice centres and telephone helplines, aids to quitting and effective cessation strategies. This information can be offered with different degrees of intensity and directness, for example by including the telephone number of a telephone helpline or describing a smokers' telephone hotline in advertisements and TV spots. In this way, direct cessation strategies or indirect offers of help can be made available to the people affected.

Challenges to take part in competitions also fall within this contextual framework. Smokers who enter these competitions (e.g. *Quit and Win*), undertake to stop smoking cigarettes for a set period. If they successfully complete this period of abstinence, they have the prospect of winning a prize, by being given a lottery ticket, for example. A distinction can be made between local and national competitions, depending on the size of the target group addressed. School competitions are also run, where classes compete against one another (*Be smart – don't start!*).

Incentive programmes – e.g. at the workplace – involve a similar procedure to competitions. In this case, companies and businesses offer their staff rewards in the form of cash or holidays if they stop using tobacco. In contrast to a competition, the reward for the successful participants in an incentive programme is certain. These programmes are also used in schools or by parents to prevent or reduce tobacco use by children and young people.

Self-help programmes

The third type of communication content is the provision of self-help guides. Self-help programmes are distributed to the target persons in the form of brochures or handbooks, or broadcast on television (broadcast cessation clinic) and radio.

1.3 Mediators of communication content

The mediators of communication content coming into direct contact with smokers are individual people or, as initiators of the communication, institutions and organisations. These may be any of the following:

- Individuals affected (testimonials),
- Models (idols, celebrities),
- Experts from the health sector,
- Governmental agencies,
- Non-governmental organisations (NGOs),
- Pharmaceutical industry,
- Tobacco industry.

Reports by people affected

One way of providing information about the negative consequences of a behaviour and conveying direct or indirect appeals is reports by people affected (testimonials), i.e. by people who, for example, are suffering from serious diseases as a result of their tobacco consumption. The portrayal of these stories of disease is intended to prompt the recipient to reflect on his or her own smoking behaviour and its possible consequences, and to drive from this the motivation to stop.

Models

Celebrities (e.g. actors, sportspeople) can serve in the media as models and examples of health-conscious behaviour. Either these models take part in a cessation programme themselves within the framework of a campaign (like Werner Lorant, trainer of the TSV 1860 München football club in the advertisements for a nicotine chewing gum), or they take on the role of an “educator”.

Institutions and organisations

In addition to these direct mediators, the organisation or institution responsible for the communication is of relevance in mass media communication. Mass media campaigns are sponsored by governmental and non-governmental organisations whose goal is to reduce the number of smokers (e.g. the BZgA). However, the tobacco industry itself also takes on responsibility for anti-smoking campaigns (e.g. the *Cool Kids Can Wait* campaign). The

pharmaceutical industry addresses smokers with advertisements for its products for drug-assisted smoking cessation.

Health experts

Members of the health and welfare professions (doctors, surgery and hospital staff, psychotherapists, addiction therapists) appear as mediators in both personal and mass media communication regarding not smoking. The possibility of incorporating additional professional groups remains open. In Germany, personal communication of smoking cessation is also offered by committed individuals who are not in a health or welfare-related profession and who are often ex-smokers.

1.4 Settings and target groups

The individual cessation campaigns may be addressed either to the whole population of a country or to specific sub-groups.

Campaigns intended to reach all smokers, ex-smokers and non-smokers in a country or state make simultaneous use of various media with different messages and appeals. Using the mass media – television, radio and print media – makes it possible to address a very broad public with information on the risks of smoking and the help available. The Australian programme is an example of a comprehensive national campaign, where the population was informed of the health-related consequences of tobacco consumption by means of television films, radio programmes and advertising campaigns (see *Chapters 3.1* and *7.1.1*). Apart from these national interventions, individual communities can also implement local measures, e.g. by setting up a local smokers' helpline or counselling centre and publicising this using regional media.

If a campaign is intended to address not the whole population or all the smokers in a country or state, but only specific target groups, either the media favoured by that target group can be used, or specific event locations (e.g. school, workplace, hospital) can be selected for the programmes. For example, in an attempt to primarily reach women smokers with an advertising campaign, a British campaign (*Testimonials*) printed its advertisements mainly in women's magazines. It is easy to imagine an education campaign for young people, for which specific television stations (e.g. VIVA, MTV) or radio programmes would be selected for placing the pieces. Adult smokers would then be less likely to notice these measures.

Known locations for the implementation of interventions are schools, hospitals and workplaces because large numbers of target individuals are encountered in these institutions. Education programmes on the subject of “smoking” and competitions are used in schools to prevent pupils starting to smoke and to persuade young people who are already smoking to stop. Smoking cessation programmes are also among the health-related interventions carried out at the workplace.



CRITERIA FOR EVALUATING THE EFFECTS OF COMMUNICATION MEASURES

The success of smoking cessation communication can be measured against various criteria. These criteria are as follows:

- Reaching of target groups (exposure). This criterion is a measure of whether the target group is familiar with the intervention. This question regarding degree of familiarity can be put in “aided” fashion, i.e. the logo or slogan is presented (shown, played) and the respondent asked whether he or she recognises it. An example of phrasing the question in an open or “unaided” manner is to ask which anti-smoking television spots the respondent is familiar with.
- Changes in attitude to smoking and related aspects;
- Increase in knowledge during or after a campaign as compared to the preceding period;
- Use made of help offered (e.g. calls to a smokers’ helpline);
- Willingness to quit smoking;
- Number of attempts to quit smoking;
- Reduction in tobacco products sold/smoked;
- Change in smoking behaviour (reduction in the number of cigarettes smoked);
- Prevalence of smoking.

How the success of a measure is assessed always depends on the goals set for that measure. These are generally goals that are achievable and demonstrable in the short term. Ultimately, however, the most important criterion for assessing a measure is the reduction in prevalence among the population or the target group.

If the effects of a communication strategy for smoking cessation are to be measured directly in the target group, the difficulty arises that direct effects are almost impossible to detect, especially those of mass communication measures, since they are only rarely tested or carried out under controlled experimental conditions. This means that, if changes can be measured at all, it is virtually impossible to attribute the effects to a single measure. This applies, in particular, when measuring changes in smoking prevalence. Because effects like the utilisation of offers of help are easier to measure and track, these indicators are frequently used as measures of success.

In addition to the effects, the cost/benefit ratio is also rated as an indicator of the success of a measure, i.e. the costs incurred in order to achieve a target criterion. The cost/benefit ratio is expressed, for example, as the costs per quitter or costs per year of life saved. A combined yardstick comprising the effectiveness (success rate) and reach is the impact of a measure. The reach is a measure of the proportion of the target group actually reached by the measure.

From the point of view of health policy, the measures regarded as being most effective are those that combine the greatest impact with the lowest costs to the health system.

EFFECTIVENESS OF THE COMMUNICATION STRATEGIES FOR SMOKING CESSATION



This chapter will present the results from the scientific literature on the effects of communication measures for smoking cessation. The chapter is divided on the basis of the questions formulated in the “Objective” section of the *Introduction*. It is based on the results of relevant studies and review papers. The most important of these papers are also described in detail in the Annex, where – in addition to a brief description of the interventions studied – the methods of the studies, the detailed results and the conclusions drawn by the authors are presented.¹

3.1 Which communication methods (media) promise effective communication with smokers?

Mass media campaigns

Comprehensive evaluations of mass media campaigns principally communicated via television are available from the United Kingdom and Australia.

The Australian campaign *Every cigarette is doing you damage!*

The Australian campaign with the slogan *Every cigarette is doing you damage!* gained international recognition and, since its implementation in Australia, has been adopted in the USA (Massachusetts), New Zealand, Canada (British Columbia), Poland and Singapore.

The central feature of the campaign was principally television spots, supported by additional materials (radio, billboards, full-page advertisements) (Commonwealth Department of Health and Aged Care, 1999/2000*; see *Chapter 7.1.1*). The television spots, in which the negative consequences of smoking were described in drastic form (pictures, music, narrator voices), were intended to address smokers in the 18 to 40 year-old age group. With reference to the use of television spots, the evaluation of the intervention showed that they were seen by the majority of the smokers and non-smokers questioned (up to 87%) in the first weeks of the campaign, that an increase in knowledge regarding the health effects of smoking was achieved (from 14% to 23%), that the number of smokers who thought about stopping increased (from 25% to 35%) and that tobacco consumption was reduced. These effects declined slowly during the intervention, with the result that, for example, the campaign was still noticed by 51% in the last weeks and by 41% after the second implementation phase. The campaign achieved a greater effect among young people (14 to 17 years of age), who were not actually part of the target group. 96% of young people questioned were aware of the campaign, 49% reported acquiring new knowledge regarding the health risks of

¹ The papers described in the *Annex* are marked with an asterisk (*) in the text.

smoking and 67% of them were motivated to stop, although the majority (80%) did not feel that the campaign addressed them. At the national level, this campaign achieved a 1.7% reduction in the prevalence rate of smokers, from 23.5% to 21.8%.

The Australian campaign was adopted in Singapore with minor changes. The media used were television, radio, cinema, newspapers, posters, messages on taxis and posters in schools. The implementation was evaluated on the basis of public reactions, calls to the telephone quit-line and a pre-/post-test comparison. The campaign was the subject of intensive discussion among the public and in the media. The number of callers to the quit-line increased one hundred-fold. The campaign was seen by 96% of the target group surveyed. 44% of the smokers questioned decided to stop smoking. The pre- and post-test comparison showed that, after the campaign, 51% of smokers (as compared to 41% in the pre-test) were aware that smoking damaged their health. After the campaign, 52% admitted that smoking can cause a stroke, as compared to 29% in the pre-campaign survey. A total of 61% of the smokers surveyed were urged by people from their environment to stop smoking (as compared to 43% in the pre-test) (Yeong et al., 2000).

3

Smoking cessation campaigns in the United Kingdom

Various smoking cessation campaigns were developed in the United Kingdom between 1992 and 1999, using television as the main medium (Health Development Agency, 2000*; see *Chapter 7.1.2*).

• The *John Cleese* campaign

In the *John Cleese* campaign (1992–1995), humorous television spots were used, all of them presenting the actor and comedian John Cleese (of Monty Python fame) as the key figure and promoting a telephone helpline for smokers. With appeals, such as “Smoking can kill!”, these spots were designed specifically to address and motivate smokers and ex-smokers aged 25 to 44. The prevalence rate fell by 1.2% to 26.8% after the campaign. When the campaign was implemented on a trial basis in selected English cities, the television spots were able to increase the figure for non-smokers in this sample by 53%.

• The *Break Free* campaign

The aim of the subsequent *Break Free* campaign (1995–1996) was to address specifically those smokers who were almost at the point of making the decision to stop smoking. The slogan “*You can be free!*” was presented in TV spots and on posters in order to create motivation and self-confidence among smokers who wish to quit.

In the evaluation, 62% of the respondents stated that the campaign made it seem easy to stop smoking. The campaign imparted greater confidence with respect to their efforts to stop for 42% of the respondents. In addition, 47% felt sympathy and support, while the feelings aroused were more of guilt for 38%. The campaign was rated as being not very successful since there was low spontaneous recall of the TV spots and only 49% of respondents said the campaign motivated them to stop smoking.

• **The *Quit for Life* campaign**

The *Quit for Life* campaign (1996–1997) used the media of television and radio. While the positive consequences of stopping smoking were communicated via television, radio items were used to provide practical help and encouragement for smokers willing to stop. The use of two separate media with different messages was intended to make the campaign's statements clearer and easier to understand.

The evaluation of the intervention showed that the TV spots were too weak to address smokers, although they had been rated positively by smokers in a preliminary study. On the other hand, the radio transmissions proved to be effective in motivating and supporting smokers who wanted to quit. Respondents found them realistic and relevant. In contrast to the TV spots, the central statement was recognised in the radio items.

• **The *Testimonials* campaign**

The last British campaign to be implemented was entitled *Testimonials* (1997–1999) and presented older smokers in the TV spots, who were telling younger people about their tobacco-related diseases. The main aim of the campaign was that young people should stop seeing the health risks as remote events in the future and that the risks should acquire personal relevance (“It could happen to me” instead of “It won’t happen to me”). In addition, pieces by smokers and ex-smokers were broadcast on the radio, intended to provide hints and support for smoking cessation. Advertisements in women’s magazines, picking up on the contents of the television spots, were intended to address female smokers in particular.

Qualitative surveys regarding the effect of this campaign showed that the TV spots were rated as impressive. Of the smokers surveyed, 72% felt that they were being addressed by the campaign and 67% became more aware of the health risks. The radio advertisements were rated positively, but had no effect in the group of 16 to 24 year-old smokers. The advertising campaign in women’s magazines proved to be the weakest medium within overall campaign.

The tabular comparison of the recall figures for the four campaigns from the United Kingdom shows that the *John Cleese* campaign was recalled by more people (92%) than all the subsequent British campaigns (54–66%). 90% of respondents were still able to remember this campaign a year after it was carried out.

Attitudes to the individual campaigns were recorded on the basis of acceptance or rejection of given statements. Both the *John Cleese* campaign and the *Break Free* campaign, for which the statement “I’m fed up with seeing the adverts!” was used, were rejected by only few people. The *Testimonials* campaign was very encouraging of thoughts about stopping smoking (57–60%), followed by the *Break Free* campaign (59%). The *Quit for Life* campaign, which dealt in particular with the positive consequences of stopping smoking, had an encouraging effect on only 44% of respondents. However, the results suggest that the *Quit for Life* campaign gave the greatest confidence for quitting compared to the other interventions.

Feelings of guilt about smoking were provoked by the Testimonials campaign, followed by the *John Cleese* campaign to a greater extent than the other two campaigns. All four of the campaigns compared were rated to a similarly low extent as “unfair to smokers”. Acceptance of this statement varied between 19% (*Break Free*) and 20% to 24% (*John Cleese*).

Campaign and year(s)	John Cleese (1992–1995)	Break Free (1995/96)	Quit for Life (1996/97)	Testimonials (1997–1999)
Evaluation question				
Aided recall of the campaign	92	54	63	66
“I’m fed up with seeing the adverts”	20–22*	16	–	–
“Encourages me to think about giving up smoking!”	–	50	44	57–60*
“Gives me more confidence to give up!”	35	42	49	41
“Makes me feel guilty about smoking!”	42–43*	38	38	49–55*
“Is unfair to smokers!”	20–24*	19	23	20–21*
– = Question was not asked * = Range of figures from various surveys				

Table 1: Comparison of the evaluation results of the four British campaigns (data in per cent)

The Dutch campaign *Quit Smoking Together*

The *Quit Smoking Together* campaign (Mudde/de Vries, 1999*; see *Chapter 7.1.3*) was run in the Netherlands using various media (e.g. television, telephone, print media). Television was used, on the one hand, to present famous celebrities as models proposing various cessation strategies, and, on the other, to offer assistance in using self-help manuals in the context of television smoking cessation.

The analysis of the relationship between intervention and behavioural change in the evaluation showed that the frequency with which the television broadcasts were seen was positively linked to cessation attempts between pre-test and post-test. Furthermore, both cessation attempts and abstinence between the post-test and the follow-up increased with the frequency with which the people had seen the television smoking cessation programmes (television clinic). The length of abstinence showed a relationship with recall of the campaign and with seeing the television clinic in that people who stayed abstinent for a longer period could remember more elements of the campaign and also reported having seen the television clinic more frequently. With these results, the study proves that intervention with a multi-faceted smoking cessation campaign, directed through mass media, is able to stimulate cessation attempts and increase abstinence rates. The observation that the abstinence rates were not accompanied by more active participation (e.g. in group programmes) suggests that the success of the campaign can be attributed to the use of the mass media.

Television cessation programmes (broadcast cessation clinics)

Cessation programmes broadcast on television (broadcast cessation clinics) demonstrate good success in studies (Sparks/Green, 1998).

In 1977, a cessation clinic was broadcast/run weekly on a private television channel in Bellingham (Washington). It reached 1,403 viewers, of whom 12% gave up smoking either during or after the campaign.

The University of Saskatchewan ran a cessation programme in 1992 that was broadcast both on television and radio. A total of 2,113 viewers/listeners were reached, of whom 27% reported abstinence on the twentieth day of the programme (20% after 14 months). It was seen that a combination of radio and TV is more successful than TV presentation alone (in: Sparks/Green, 1998).

Valois et al. (1996; cited after Sparks/Green, 1998) evaluated a six-week cessation programme (*Cable Quit*), carried out in Austin (Texas). The evaluation found that, of 58 test subjects, 22% were abstinent after six weeks, 21% after six months, and 17% after one year. One interesting result is the observation that no relationship was found between the degree of liking for a studio model and abstinence, i.e. the presentation of models in the cessation broadcasts does not appear to play a particularly important role.

In an experimental study with employees in Chicago (USA), participants were given a self-help manual and asked to watch a television broadcast about this manual twice a day. In addition, some of the volunteers were given support in group sessions and rewarded for abstinence with lottery prizes. The group of people given additional support and rewards showed significantly higher rates of abstinence of up to 24 months after the intervention. The researchers concluded from these results that the effectiveness of media-supported smoking cessation programmes can be improved by offering lottery incentives (Salina et al., 1994*; see *Chapter 7.2.5*).

The role of radio

In the studies examined, radio was used only in combination with other media in cessation campaigns. In the British *Quit for Life* campaign (1996–1997), radio advertisements were used alongside the medium of television supplying practical help and encouragement for smokers willing to quit in the form of tips and hints from ex-smokers. The use of two separate media with different messages was aimed to make the statement of the campaign clearer and easier to understand. However, surveys following the campaign revealed that the statement was understood better in the radio advertisements than in the television spots (Health Development Agency, 2000*).

The combination of different mass media with other elements

Mass media communication does not generally take place via just one mass medium. Rather, the classical media of television, radio, posters and print media are used in combination within the framework of smoking cessation campaigns.

In addition to a mass media mix of this type, the large-scale campaigns in the USA also include structural measures, such as price increases, reduced availability and tightening of the laws (Popham et al., 1993*; Pierce et al., 1998*). It is therefore difficult, when interpreting the results of such campaigns, to isolate the effect of individual elements of the campaign.

In California (USA), the comprehensive *California Tobacco Control Program* has been running since 1989 (see *Chapter 7.1.4*). In addition to many structural changes, it also included a mass media campaign, in which television, radio, display boards and print media were used to transmit and disseminate content and messages. In a survey of people who had stopped smoking during the campaign, 6.7% of them responded to the open question about their reasons for giving up by saying that they had been motivated by television and radio items. In response to a direct question about the media campaign, 69.1% of the ex-smokers said they had noticed a campaign and 34.3% that this had had an effect on their decision to stop smoking (Popham et al., 1993*; see *Chapter 7.3.4*).

The *California Tobacco Control Program* reduced the prevalence rate of smoking among the population. The decrease in smokers was significantly greater in California than in the other US states. The smoking rate fell continuously over the years before finally stagnating at a figure of 18%, as opposed to 22.4% in the other states (Pierce et al., 1998*).

Print media

Although the focus in the large media campaigns described has generally been on television spots, the campaigns are supplemented by the use of print media (flyers, posters, magazines, newspapers).

The evaluation of a Norwegian campaign (the *Buskerud* campaign) showed that the target group of young people paid more heed to the print media than to the TV and cinema spots (Hafstad et al., 1996; cited after Sparks/Green, 1998).

One campaign based principally on print media, *Rauchfreie Universität* (Smoke-free university), was intended as preparation for the introduction of structural measures at a university in Switzerland. Newspaper articles, flyers, posters and printed consumer items (e.g. lighters, pens) were used to draw the attention of students to “smoke-free zones” on the university campus. Surveys before, during and after the introduction of the smoking ban showed that the majority of the students welcomed the introduction of “smoke-free zones”, that less nuisance from smokers was perceived, but that neither smoking behaviour nor attitudes to smoking were affected (Etter/Ronchi/Perneger, 1999*).

Tailored print communication

One special form of communication using print media is what is known as tailored print communication. Studies of the effectiveness of this form of communication show that tai-

lored messages are recalled better than normal content and tend to be read and/or perceived to a greater extent. Furthermore, they provide evidence of the fact that personalised messages have a greater influence on behavioural change than non-personalised messages.

Campbell et al. (1994; cited after Skinner et al., 1999*), for example, compared the effect of doctor's letters personally addressed to patients regarding a more healthy diet with non-personalised letters and found that the patients receiving the customised letter exhibited greater recall of the recommendations (73% as compared to 33%).

In addition to this observed greater efficacy of personalised letters, there are also indications that personalised self-help programmes are more effective than standard programmes (Strecher, 1999; Lancaster/Stead, 2000; Fiori et al., 2000). Curry et al. (1991; cited after Skinner et al., 1999*) compared the effect of simple self-help brochures, personalised brochures and financial incentives by allocating 1,217 test subjects at random to one of these interventions or a combination of interventions. The results showed that the personalised brochures brought about significantly higher rates of abstinence in comparison with the other measures three and twelve months after implementation (see also *Chapter 7.3.5*).

Internet

The Internet is widely used for communicating with smokers today. It contains a large number of sites on the subject of smoking – most of them in English, but also a number in German. In addition to information on smoking, they also contain tips and programmes for stopping smoking. There are chat-rooms for smokers that are also used.

Smokers can be addressed and motivated via the Internet in the same way as via the classical mass media. In addition, the Internet has the advantage that the smoker can actively search for and obtain information and help. The close ties between the provision of information and the provision of personalised support give this medium an optimistic perspective in addressing and supporting smokers. The hit rates are indicative of its widespread acceptance. The fact that smokers actually do use this medium when giving up is proved by the experience of the *Raucher-Chat* (Smoker's Chat-room) run by Germany's Stern magazine. This Internet chat-room was opened in conjunction with the publication of editorial articles in the magazine (cover story about quitting). The comments bear witness to the fact that many participants have actually stopped smoking. During the peak periods (when reference was made to the forum in other mass media), the number of hits was around 10,000 a day (Pötschke-Langer, 2000, personal communication).

It is unlikely that there will be any mass media campaigns of any reasonable size that do not also have an Internet presence. No results were found relating to the use of these offers or their efficacy within the cessation campaigns (e.g. for the *Quitnet* of the Australian campaign).

Warnings on cigarette packs

This paper will not discuss the effectiveness of communication via warnings on cigarette packs. It is recommended that other sources be consulted for further information on this topic, which has been the subject of much discussion.²

Exhibitions

No evaluation studies were found regarding the effectiveness of exhibitions and information stands on the subject of smoking.

Personal communication

Personal communication is the most effective communication measure for smoking cessation. The publication “*Clinical Practice Guideline: Treating Tobacco Use and Dependence*” by the U.S. Department of Health and Human Services (USDHHS) gives a synoptic description of the effectiveness of personal communication measures (Fiori et al., 2000). This publication contains a number of meta-analyses on smoking cessation. According to these sources, the effects of personal communication depend on the duration and frequency of communication.

The role of the telephone

In addition to an address in personal conversation, the telephone plays an important role in personal communication. It can be used both by smokers to make contact (smokers’ telephone hotline, helplines) and also, in the sense of proactive communication, by counselors to make contact with the target persons. Its efficacy is thoroughly documented.

Evaluation of the telephone helpline at the University of California, which was publicised by a mass media campaign run at the same time, showed that it was possible to achieve an abstinence rate of 14.7% among callers (N>100,000) simply by means of telephone support. In contrast, the abstinence rate among the Californian population as a result of the campaign was 7%. It was also shown that helplines make it easier to reach the target population in rural areas. For example, Ossip-Klein et al. (1991; cited after Sparks/Green, 1998) compared the effectiveness of telephone helplines and/or self-help materials in rural areas and discovered that the combination of the two interventions achieved higher rates of abstinence from smoking than the self-help intervention alone (after 18 months: 12.1% vs. 7.6%).

² See, for example, Chapter 5 in the report by the National Center for Chronic Disease Prevention and Health Promotion of the U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, *Reducing Tobacco Use: A Report of the Surgeon General*, 2000 <www.cdc.gov/tobacco/sgr/sgr_2000/chapter5.pdf>

A meta-analytical comparison of 26 studies on proactive telephone counselling (Fiori et al., 2000) showed that abstinence rates in the target group rose from 10.8% to 13.1% as a result of this intervention (odds ratio 1.2).

In a pilot study by Ossip-Klein et al. (1994; cited after Sparks/Green, 1998), an interactive effect could be seen between intervention and gender, implying that older women were reached better by means of proactive telephone contacts, whereas older men reacted more positively to letters in the post.

Mailings

In addition to an address by telephone, smoking cessation is also communicated by means of mailings to the target group. Schmidt et al. (1989; cited after Sparks/Green, 1998) evaluated the effectiveness of direct mailings containing information about weight reduction and smoking cessation programmes in terms of the recruitment of participants. It was found that, under the different conditions in the study design (one mailing vs. two), writing more frequently was more effective for recruitment. Comparison with campaigns supported by radio and television spots yielded no improvement in recruitment figures. The only condition that led to significantly more participants being recruited with additional radio and television items was if participation was free of charge.

An Australian study aimed to send patients both a letter from the attending physician and a self-help manual (*Can Quit*) after discharge from hospital, to motivate them to stop smoking. With respect to the abstinence rates, the results after six and twelve months showed no significant differences between those patients who had received a letter and those who had not. However, it could be demonstrated after six months that more of those patients who had been mailed directly had made attempts to stop smoking than of those who had not received a mailing (Schofield et al., 1999*; see *Chapter 7.2.6*).

3.2 Which messages (contents) promise effective communication with smokers?

The effects of the various types of information and messages, of mass media communication in particular, will be presented in this section.

In a high-profile study, Goldman and Glantz (1998*; see *Chapter 7.3.1*) compared the effectiveness of different contents in mass media campaigns. They compiled the qualitative results of the focus interviews carried out by advertising agencies in developing the anti-smoking campaigns for California, Massachusetts and Michigan. The data were collected in interviews with over 1,500 young people and adults who were asked about a total of 118 campaign designs, some of which had been realised and some of which had not.

The authors distinguished between eight types of messages and contents:

- (1) Manipulation by the tobacco industry (industry manipulation),
- (2) Passive smoking,
- (3) Nicotine is an addictive drug,
- (4) Reasons for, and information on, stopping (cessation),
- (5) Easy access to cigarettes for young people,
- (6) Short-term negative effects,
- (7) Long-term health consequences,
- (8) Emotional rejection (romantic rejection).

Table 2 shows the rating of the effectiveness of the messages. These are subjective ratings by the test subjects of how successful they considered each message to be. The data regarding the effectiveness and ineffectiveness of the individual strategies were determined solely from the statements of the test subjects and not verified by other investigations.

Message/Content	Young people	Adults
Industry manipulation	++	++
Passive smoking	++	++
Nicotine is an addictive drug	+	+
Cessation	?	+
Easy access to cigarettes for young people	--	-
Short-term negative effects	-	--
Long-term health consequences	--	-
Romantic rejection	--	--

++ Very effective, + Effective, ? Uncertain, - Moderately effective, -- Not effective

Table 2: Assumed effectiveness of various mass media messages

The messages designed to reveal manipulation by the tobacco industry aim to de-legitimise the tobacco industry and deglamourise smoking. For instance, these messages depict the sales tactics of the tobacco industry as a predatory business practice. This approach is intended to address adult smokers, who will be able to divert their anger about their own tobacco consumption to the tobacco industry, while also addressing young smokers, who will see themselves as being subject to external control and manipulation.

The messages about passive smoking convey to smokers the fact that their tobacco use may have negative effects on the people around them. They address the sense of justice of both older and younger smokers by letting them know that many people are exposed unintentionally to the dangers of the smoke (e.g. work colleagues, younger siblings and their own children).

The “Industry manipulation” and “Passive smoking” topics were considered to be particularly effective. The topics of “Smoking causes addiction” and “Cessation” can also be effective, particularly when combined with the most successful topics (“Smoking causes addiction and the tobacco industry wants you to be addicted so that it can make profits”). According to this study, pointing out the short-term or long-term negative effects of smoking promises little success, and the effect of the message that smoking and smokers are unattractive is not very convincing either.

The authors conclude that mass media anti-smoking communication needs to fight with no holds barred and find unambiguous words to gain the attention of the population in its competition with tobacco industry advertising.

A qualitative preliminary investigation, which was commissioned by the United Kingdom Health Education Authority and aimed at determining optimum communication strategies for the British campaigns, showed that various informative messages regarding smoking and its consequences may be of relevance for smoking cessation. This study showed that:

- The message about the health risk and the consequences of smoking addresses all those affected,
- The messages about the effects of smoking are relevant to every smoker,
- Smokers notice the comments made about the costs caused by smoking,
- The messages about the poor image of smokers is rejected, while statements about lesser attractiveness are accepted.

The evaluation of the campaigns confirmed these results of the preliminary investigation (Health Development Agency, 2000*).

Positive messages regarding smoking cessation

Positive image of cessation

The British *Break Free* campaign used the various media to focus on cessation and the benefits brought about by stopping tobacco use. It conveyed a positive image of cessation. The intention was to encourage smokers who were already motivated and want to quit to stop their tobacco use. 50% of the target persons who were subsequently surveyed had been encouraged by this intervention to think about cessation and 41% acquired greater confidence in their attempts to stop smoking. 47% of respondents sensed sympathy in the campaign and felt supported by it.

Positive consequences of cessation

The British *Quit for Life* campaign built on positive messages, with TV spots conveying the benefits of being a non-smoker (fitness, health, happiness), while the radio transmissions were intended to offer practical support and encouragement for those smokers willing to give up their habit. 47% of the target persons subsequently surveyed said that the campaign made it seem easier to give up, while 44% were motivated to think about giving up. 49% of respondents felt greater confidence in their attempts to stop smoking. The radio broadcasts, in particular, proved to be good for motivating and supporting smokers in their attempts to stop smoking. Ex-smokers felt confirmed in their decision to stop smoking. However, of the four British campaigns, this one had the weakest effects. Although the messages were perceived as nice, welcome and pleasant, these feedback comments, positive in themselves, were identified as the weak point of the campaign. There was a lack of powerful stimuli to serve as an anchor for recall of the advertisements and to elicit a personal address. Striking key stimuli of this type can be provided via strong, emotional slanting of the messages.

Indications of the effects of different messages can be derived from comparison of the evaluation results of the four British campaigns. Unfortunately, data are only available on the rating of the campaign and not on behavioural changes.

Information on smoking cessation campaigns

Mass media communication can draw attention to smoking cessation campaigns or programmes, e.g. by publicising a smokers' helpline with the slogan "You can get help here", or by advertising a competition. However, the communication itself can also contain a smoking cessation programme, as in the case of smoking cessation on television (broadcast cessation clinic).

Information about competitions

The mass media communication of information about competitions (e.g. *Quit and Win*) can address up to 2% of the target group at the community level – according to a review of 32 studies by Bains et al. (1995; cited after Sparks/Green, 1998). Short-term smoking ab-

stinence is achieved at rates of between 13 and 37%, with these rates declining over time. In the studies examined by Bains et al., the entry figures for national competitions vary between 0.6% of all smokers in Sweden, 1.6% in Finland and 4.5% in Estonia. The cessation rates after six months were 19% in Finland and 23% in Estonia. According to a Swedish study by Tillgren et al. (1993/95; cited after Sparks/Green, 1998), the highest rates of abstinence in a national competition after 12 months were 34% in the group of men aged 35 to 44 years and 22% in the group of 16 to 24 year-old males. For women, the highest abstinence rate of 18% was found in the group of women aged 16 to 24 years.

In Germany, a competition was run for the first time in May 2000, with the title “Rauchfrei im Mai” (No smoking by May). The information material for this competition was sent to 21,500 dispensing chemists in Germany. One effect of this campaign was that the smoker’s helpline at the German Cancer Research Centre (DKFZ, Deutsches Krebsforschungszentrum) in Heidelberg recorded 150 calls daily and a total of 7,000 calls – a figure approaching the capacity limit of this service. A total of 24,900 entries were recorded for this competition (Pötschke-Langer, 2000, personal communication).

3.3 What role is played by the emotional slant of the messages?

An important role is attributed to the triggering of emotions in mass media communication. Various emotions are used in this context, such as humour, empathy, disgust, shame, fear and anger.

Humour

The British *John Cleese* campaign worked with typically British, black humour, by means of which specific messages were conveyed in the television spots, such as “Smoking can kill!”, “Smoking puts your children at risk!”, “Smoking is not the only way to enjoy yourself!”, “Withdrawal symptoms are bad, but they pass!” and “Many people manage to give up smoking every year!”. In the follow-up assessment, this intervention was well received by 80% of respondents. Only 20% said they were fed up with seeing the television spots. 80% of respondents reported finding the humorous approach a refreshing change from the previous “patronising” and “scare mongering” campaigns. Parents of young children felt that the message about the effect of smoking on children was particularly motivating. 29%

reported that they had learned that smoking can harm children, in particular. The spots addressing the difficulties of stopping smoking made the smokers feel understood. 58% said that the spots made cessation appear easier (Health Development Agency, 2000*).

Fear appeals

The Australian intervention is known for its use of fear appeals. The television spots used described the negative consequences of tobacco use in a drastic manner (using pictures, music and narrator voices). Although the individual films presented an identical message in only slightly different pictures, the recall rates for the individual spots varied (e.g. 90% for the *Artery* film, 85% for the *Lung* film and 60% for the *Tumour* film). Viewers repeatedly described the television films with the words “hard hitting”, “gory” and “something smokers will see once and never forget” (Commonwealth Department of Health and Aged Care, 1999/2000*).

3

Appearance/Statements by those affected (testimonials)

Statements by smokers suffering from diseases resulting from their tobacco consumption were employed in the British *Testimonials* campaign. The majority of the target group surveyed following implementation of the campaign felt that they had been addressed by the intervention (72%) and reported increased awareness of the resultant diseases (67%). A total of 61% of the target group said that this campaign motivated them to give up smoking (Health Development Agency, 2000*).

The British *Testimonials* campaign combined information about smoking and its consequences with information on cessation strategies by presenting older smokers in the television spots who were telling younger people about their tobacco-related diseases, and by using radio transmissions to offer help and support by way of reports from smokers and ex-smokers. 72% of the smokers surveyed felt that they were addressed by this combined provision of education and support. 67% were more aware of the health risks. 61% decided to stop smoking sooner rather than later. The supporting radio broadcasts, in particular, were rated positively. 39% of respondents felt that the campaign offered sympathy and support. Only 21% said the campaign was unfair to smokers. At the end of the intervention, up to 55% of the target persons reported that the campaign had made them feel guilty about smoking.

Counter-advertising

The counter-advertising of the *California Tobacco Control Program* aims to trigger anger and rage against the tobacco industry. It has been identified as the most successful strategy (Goldman/Glantz, 1998*).

Reaching target groups

Looking at exposure, campaigns that trigger strong emotions reach significantly more people (over 90% in Australia and Singapore) than those with less drastic messages and portrayals (up to 70%, *Quit for Life* and *Break Free*). Humorously conveyed messages also achieve high figures in terms of awareness (*John Cleese* campaign). However, the effects on attitudes and willingness to stop smoking differ less (see *Table 1* in *Chapter 3.1*).

3.4 Who should communicate the messages?

When communicating smoking cessation messages, care must be taken to ensure that the messages are conveyed by people who are regarded as credible. Within the framework of a campaign, these models either take part in a cessation programme themselves or assume the role of “educator”.

Mass media communication

In the Dutch *Quit Smoking Together* campaign, famous celebrities, who were trying different means of stopping smoking, were presented in television shows. The evaluation (Mudde/de Vries, 1999*) showed that the frequency with which the television broadcasts were seen was positively linked to cessation attempts.

Individuals who are not famous, but still serve as models, are presented in the cessation programmes shown on television (television clinic). Evaluation of a six-week programme in Texas (*Cable Quit*) was able to demonstrate a high level of efficacy for this procedure (abstinence rates of 22%). In addition, there was seen to be no detectable relationship between the degree of liking for a studio model and abstinence (cf. Sparks/Green, 1998).

No literature was found relating to the influence, if any, of the institution implementing a campaign (governmental vs. non-governmental, health authorities vs. charitable organisation).

Mass media campaigns by the tobacco industry, such as “Cool Kids Can Wait”, are viewed highly critically (see in this context Hastings/MacFayden, 2000).

Personal communication

The professional groups working in the health system, such as doctors (e.g. general practitioners, gynaecologists, paediatricians, dentists), midwives, nursing and surgery staff, psychologists and educationalists, are key figures in personal communication of smoking cessation. Meta-analyses investigating the results for various professional groups and their cooperation (Fiori et al., 2000) reveal that doctors play a particularly important role and that cooperation between the professional groups increases the effects.

3

3.5 Which target groups are reached?

Mass media communication is aimed at a target group, generally a large one, within the general population. For example, target groups may be defined as all smokers in a specific age group, specific sub-groups of the population or the entire adult population.

Evaluation of the British mass media campaigns led to the following observations being made with respect to the various target groups:

- Younger smokers are not motivated to stop smoking; for them, this tends more to be a remote goal or a wish. In this case, the mass media should provide strong, clear grounds for cessation.
- Middle-aged smokers are more motivated to stop smoking and are also aware of the reasons in favour of doing so. For this target group, interventions should aim to transform this latent desire into direct action by promoting motivation and self-confidence.
- For older smokers, the main problem consists in the fact that they are aware of the difficulty of cessation and already have failed attempts behind them. Here, interventions should aim to convey to the smokers that they are not alone with this problem and offer them motivation and support.

Mass communication is in a position to reach the entire population. A number of campaigns that used several media in parallel (mass media mix) achieved a degree of awareness (aided recall) of over 90% (e.g. in Australia, Singapore, United Kingdom).

However, mass communication can also be used to reach minority groups or specific sub-groups of the population (Commonwealth Department of Health and Aged Care, 1999/2000*). It must be borne in mind that, in addition to the actual target group, every mass media communication will also reach other target groups to a considerable extent.

The Australian campaign was developed for the target group of adult smokers. However, a survey of young people (aged 14 to 17 years) about the campaign revealed that the pro-

portion of young people who had noticed the campaign was larger than that of adults (96% as compared to 87%), that more young than adult smokers reported newly acquired knowledge regarding the health risks of smoking (49% compared to 23%) and that 67% of the young people but only 50% of the adults were motivated to stop smoking. A total of 68% of young, recent non-smokers felt that the campaign confirmed them in their decision not to smoke.

One large group that is addressed by communication regarding smoking cessation is that of ex-smokers and non-smokers. A desirable side effect achieved among these groups is that their decision not to smoke is strengthened.

3.6 Which settings promise effective communication?

Mass media campaigns are determined far more by their media than by their setting. Personal communication, on the other hand, is offered in specific settings, such as at places of work, or in health care institutions. At the workplace, it is often structural measures that favour not smoking. A study examining the efficacy of workplace-related smoking cessation in various Chicago businesses showed that employees receiving support at work via group sessions, and additionally being rewarded for periods of abstinence (by way of lottery tickets, for instance), achieve significantly higher abstinence rates. These abstinence rate of 30% after 24 months was still far higher than the abstinence rate in the control group (19.5%) (Salina et al., 1994*). Communication of this measure (announcement) played an important role in its success.

Hospitals offer a good opportunity for communicating smoking cessation. A meta-analysis of six studies (Fiori et al., 2000) on the cessation treatment of hospital patients showed that an intervention of this type increases the probability of abstinence. Abstinence rates achieved by the cessation programmes may be up to 23.3%.

Smoking cessation based on personal communication is offered in the surgeries of various specialist doctors (including dental surgeries). Since many smokers are encountered here, a large section of the target group can be reached. The proven success depends on the duration and intensity of communication (Fiori et al., 2000).

3.7

Communication for recruiting participants for smoking cessation programmes

McDonald (1999*) compiled a review of effective communication variables in recruitment for cessation programmes. Based on the communication model devised by McGuire (1984), five different, independent variables are distinguished that can be varied in communication campaigns:

- | | |
|--------------|--|
| (1) Source | Attributes of the “sender” (e.g. credibility) |
| (2) Target | Target behaviour aimed for by the communication (e.g. behavioural vs. attitude change) |
| (3) Message | Manner in which a message is conveyed and organised (e.g. length) |
| (4) Receiver | Extent to which the message is consistent with the attributes of the recipient (e.g. stage of change after Prochaska/DiClemente, 1983) |
| (5) Channel | Form in which the message is conveyed (interpersonal or via mass media) |

An investigation of 33 publications on recruitment campaigns showed that most campaigns are unable to recruit more than 2% of the target persons for a smoking cessation programme. However, a number of interventions were able to achieve recruitment rates of over 10%, suggesting the possibility of increasing effectiveness. More precise analyses showed that the following variables may be of influence in this context:

- Type of communication channel used,
- Type of programme sponsor,
- Type of programme,
- Subdivision of the message according to stage of change.

The type of communication channel used was identified as the sole significant predictor for the rate of recruitment. It was found that the studies using interactive recruitment channels (e.g. telephone, interpersonal communication) were 66.5 times as effective as those that used passive channels (e.g. mass media, direct mailings). Thus, for example, campaigns that employed the telephone for recruitment achieved participation rates of 42.5%, while campaigns that did not use the telephone achieved rates of less than 10%. In addition, the results obtained by McDonald (1999*) suggest that the effectiveness of interpersonal communication can also be increased by the additional use of media and mailings. The frequency of successful recruitment is roughly equal for media use and mailings. Apart from the communication variables, neither the programme costs nor of the use of additional incentives could be proven to have an influence on recruitment rates.



4

DISCUSSION OF THE RESULTS

The effects of smoking cessation communication described in *Chapter 3* will be discussed below. The Chapter starts by discussing which target groups can be reached, what changes (quality) can be achieved and the intensity of the effects achieved (quantity). An analysis follows of how – with which contents and methods – the changes are achieved. This Chapter again focuses on mass media communication.

4.1 Reaching target groups

The extent to which target groups are reached (exposure) is measured via the degree of awareness of a campaign among the population. Up to 90% of the population can be reached via mass media campaigns. A combination of different media increases awareness. Mass media campaigns reach the entire target group of smokers. Specific target groups (defined by age, gender, etc.) can also be reached, depending on the choice of medium and placement of the messages. However, it is never exclusively the target group of smokers that is reached. Non-smokers and ex-smokers are always addressed as well. Furthermore, since the group of smokers is not a minority or a fringe group, but accounts for almost one-third of the total population, mass media communication would appear to be well suited to addressing smokers.

There are only few studies comparing the exposure achieved by different media because it is generally combinations of different mass media that are investigated. The literature is of the unanimous opinion that television has by far the greatest reach. The other mass media (radio, print media) have a smaller range. Specific target groups can be reached by different media, such as advertisements in women's magazines or cinema advertising.

Target group exposure is highest at the start of a mass media campaign. The effects decrease as the campaign continues. For this reason, it is important to utilise this period and bundle forces and measures at the start of a campaign, in particular. In campaigns with a long-term design, appropriate interventions must be used to combat this decline in effectiveness.

4.2

Qualitative and quantitative effects of communication regarding smoking cessation

Increase in knowledge

Mass media campaigns can bring about an increase in knowledge, both in the target group of smokers and among non-smokers and ex-smokers. The extent depends on the initial situation: the lower the level of knowledge prior to a campaign, the greater the increase. This means that particular attention should be paid to conveying items of knowledge of which there is insufficient awareness among the smoking target group. An 80% knowledge level can be achieved in the population during or after a campaign. The increase in knowledge is also stable over time and does not decrease again to the same extent as occurs in the context of awareness of campaigns.

Changes in attitude to smoking

Mass media campaigns can influence the attitude of smokers to their own smoking behaviour. Motivation to stop smoking is increased. 40% to 60% of smokers are encouraged to think about cessation.

Change in smoking behaviour

Concrete behavioural changes that can be achieved by mass media campaigns include taking up offers of support, cessation attempts, numbers of cigarettes smoked and cessation.

Taking up offers of support

There is a clear link between references in the media, i.e. mass media activities, and the demand for offers of support, such as smokers' helplines and self-help measures. Mass media campaigns that refer to support measures of this type thus increase demand for these offers. Since support measures increase the number of cessation attempts and the rate of cessation, the media bring about a reduction in smoking behaviour. This unequivocal sequence supplies proof that, and evidence of how, mass media affect smoking prevalence and thus underlines the importance of mass media communication in the context of support measures for smoking cessation.

4

Reduction in smoking prevalence

The toughest criterion for the success of an intervention is the reduction in smoking prevalence in the population. Evidence of this is hard to furnish, since it is always likely to be difficult to attribute even marked changes in the prevalence rate to one specific cause or intervention. However, the Californian studies give clear indications of the effectiveness of mass media campaigns. Comparison of the epidemiological data in California with those from the other US states permits the conclusion that the changes achieved can be attributed to the interventions carried out only in California. But unfortunately, California differs from the other US states not only with respect to its mass media communication, but also in terms of its legislation, etc. Based on the experience in Australia and the United Kingdom, it may be assumed that mass media campaigns can achieve a reduction of between 1% and 2% in prevalence. The magnitude of a possible reduction will also depend on the starting level in each case. If the prevalence rate is less than 20%, it appears to be very difficult to reduce the rate of smoking further, as can be seen from the experience in California. When the prevalence is as low as this, the aim has to be to maintain the existing level.

Conclusion

It is important to define realistic and achievable goals for mass media campaigns if interventions are to be realised successfully. The following effects would appear to be achievable by mass media communication on the subject of smoking cessation:

- Awareness of a measure can be achieved among a major part of the population, i.e. the subject is put in place.
- An increase in knowledge is achieved if there was previously a knowledge deficit.
- Offers of support for smoking cessation are taken up to a greater extent.
- Non-smokers are stabilised in their attitudes (confidence in abstinence) and behaviour.
- Willingness to stop smoking can be increased.
- The number of cessation attempts can be increased.
- A reduction in tobacco products sold/smoked can be achieved.
- A slight reduction in prevalence rate appears to be possible.

4.3 Contents and methods used successfully in mass communication

If an increase in knowledge is to be achieved, the statements in mass media campaigns must be new to the target group. They need to be constantly updated on the basis of new facts and research results. Concrete content successfully communicated in California involved the subjects of passive smoking and manipulation by the tobacco industry. Increased knowledge of the health risks was achieved in Australia and Singapore by portraying the physiological effects and health-related consequences of smoking. Awareness of offers of support (telephone number of the smokers' helpline) can also be improved.

Mass media campaigns are intended to draw the attention of the population to a subject, such as smoking cessation or not smoking. Here, they compete with advertising campaigns which may have contrary objectives in some cases. If it is assumed that the advertising strategies of the tobacco industry are aimed at making smoking something normal, something that is a matter of course, communication regarding smoking cessation can pursue the aim of denormalising smoking and making it appear as a problem. If a mass media anti-smoking campaign is to be able to counteract tobacco industry advertising, its content must be expressed in clear words and convey unambiguous standpoints. It should be borne in mind as a framework condition that constant presentation of anti-tobacco messages in the media is important. In this way, the normality of tobacco consumption can be questioned (denormalising smoking) and a favourable climate created for smoking cessation. It would be wrong to believe that a climate of this kind will set in without corresponding mass media campaigns as long as the advertising strategy of the tobacco industry portrays smoking as a pleasure and links it to positive associations.

Mass media campaigns are a necessary, but insufficient, part of the communication of smoking cessation. On their own, they are not really capable of influencing behaviour, i.e. they need to be supplemented by personal communication measures and offers of treatment. However, smoking cessation measures without corresponding mass media support have no chance of attracting the attention of a broad public and of influencing public opinion.

Aspects of influencing behaviour

The preliminary studies for the Australian campaign (Commonwealth Department of Health and Aged Care, 1999/2000*) yielded seven aspects of influencing behaviour that allow conclusions to be drawn as regards designing the contents and methods of mass communication. In order to motivate people from developing an intention to realising the desired behaviour, communication should stimulate them into:

- (1) Gaining new insights into the behaviour (in this case: not smoking),
- (2) Considering the importance of the behaviour,
- (3) Considering the urgency of realising the behaviour,
- (4) Considering the personal relevance of the behaviour,
- (5) Gaining confidence in their own ability to realise this behaviour (self-efficacy),
- (6) Reminding themselves or be reminded to exhibit this behaviour,
- (7) Realising that the benefit is greater than the loss resulting from the behaviour.

In concrete terms, the following was derived from this for the Australian campaign:

- The campaign was to describe the damage caused by smoking using new insights that were both informative and disturbing.
- The campaign was to develop conditioned associations between the picture of physical damage and the act of smoking, so that the threatening images would be called to mind when smoking.
- The scientific, abstract knowledge was to be converted into concrete “experience” as a result of confronting the smokers with repulsive images of the consequences of their smoking.

Other contents can, of course, also be derived from the above aspects of influencing behaviour.

Combined approach

Mass media campaigns are particularly effective in terms of reducing smoking behaviour in the population if they are implemented as one component within the framework of a comprehensive programme using various interventions. Media use is particularly effective if it is combined with the introduction of tax increases, restrictions on access to cigarettes, offers of cessation programmes at schools, interventions at the workplace and at the community level, as well as with the provision of social support in cessation efforts.

Conclusion

Advertising campaigns must be devised professionally to allow the messages to compete with the multitude of commercial advertisements fighting for the public’s attention. The fact that the campaigns are in competition with commercial advertising means that the same rules apply. Thus, constant observation of acceptance is required, rapid reaction to changes in taste among the target group, and replacement of old advertisements with new content that will regain attention. These rules are followed in the advertising campaigns for other public health topics, particularly in promoting the use of condoms to prevent HIV infection. However, unlike the AIDS campaigns, advertising measures against tobacco use are in open competition with another product (generally cigarettes), whose manufactur-

ers have major influence in the advertising industry. This means that no advertising space is made available at cheap rates for anti-tobacco campaigns. Mass media measures need to have an appropriate budget on a long-term basis.

4.4 Communication and emotion

As described above, mass media communication regarding smoking cessation has to follow the rules of advertising. If it is to reach the target group, it must win through against competing mass media communication.

To gain attention, the messages have to be capable of triggering emotions in the target group. These emotions may be neither too weak nor too strong if they are to trigger a change, because there is an inverse U-function between the intensity of the stimulus and the emotion triggered, on the one hand, and the targeted behaviour, on the other. Stimuli that are too weak will not trigger any response, while those that are too strong will block any reaction.

The reaction to negative stimuli is generally stronger. Proponents of fear arousal regard triggering fear as an essential motor for change. Humour can both trigger and relieve fear. Positive emotions are considered not to be very effective.

Effect of fear appeals

The BZgA has published a review of current findings in research on fear appeals (Barth/Bengel, 2000). The study qualifies the frequently reiterated point of view that fear appeals or deterrents always elicit counterproductive results. The examination of evaluation studies showed that fear of harm or illness constitutes an essential condition for modifying health and risk behaviour. However, fear is only one conditional factor of health-related behaviour, alongside an individual's possibilities for coping, for example. It has not been possible to clarify empirically the intensity that fear appeals should have if it is to show an effect on a person's behaviour and attitude. Some authors discuss the activation of defensive reactions in the event of excessively intense fear being induced by fear appeals, which might provoke contrary effects. As regards the people who can be addressed by fear arousal, the studies revealed that people from higher social strata and with a higher standard of education are motivated to a lesser extent by fear arousal. A gender-specific effect has been assumed, but has so far been impossible to prove empirically. Similarly, there are no findings to date regarding whether age influences the effectiveness of fear appeals.

4

When using fear appeals, a distinction must be made as to whether it is to be used in the context of prevention or to change existing behaviour. Use for prevention is not regarded as being very promising of success. However, it is a different matter if the intention is to persuade people to change or even stop a stable behaviour that is already established. Here, it is necessary to question the existing behaviour, generate ambivalence and build up motivation for behavioural change. The strategy of aiming to achieve this by means of fear arousal that portrays the negative consequences of the problem behaviour is presented as a successful approach in the literature.

Ethical questions should also be considered alongside the criterion of effectiveness when using fear appeals. If it is mainly members of lower social strata and less educated people who respond to these messages, then a campaign building solely on fear arousal will increase the pressure on this group. If we also know that this group has the greatest problems in stopping smoking, then particularly intensive additional support must be offered here, e.g. in the form of personal communication.

The observations regarding the various campaigns in United Kingdom led to the conclusion that a campaign should contain a broad range of messages, and that threatening and supportive styles could form two contrary components of the same campaign, so as to do justice to the heterogeneity of the target group, among other things. Anti-smoking campaigns on television, radio or in print media must address their public and this can best be achieved by stimulating emotions, for instance by means of humour, threats, sympathy or admiration. In addition, it can be seen that smokers want encouragement and support. Both of these can be generated by letting people know that they are not alone and that their difficulties are recognised and being dealt with by offering help and support and by emphasising the positive aspects of not smoking.

4.5 The effect of mass media campaigns

The theoretical foundations regarding the effect of mass media campaigns are inadequate (cf. Logan/Longo, 1999). The best evidence exists for the effects on knowledge, attitudes and the development of intentions. It is not clear what theoretical background can be assumed for the effect of mass media on concrete behaviour, particularly since there is no linear relationship, and possibly not even a correlation, between attitude change, declarations of intent and behavioural changes. Some of the effects on behaviour can be explained by the use of self-help manuals and smoker's helplines. It has been shown that these elicit behavioural changes.

When analysing the effect of mass media communication on smoking behaviour, only very limited recourse can be taken to knowledge regarding mass media campaigns on other health subjects, such as nutrition or AIDS. What is specific about the subject of smoking is that the target group involved is usually made up of addicted persons, who are physically and mentally dependent on tobacco, perform their smoking behaviour compulsively and are virtually unable to control it. To some extent, influencing an addiction requires the application of other principles of change than when trying to influence health-related behaviour that does not exhibit the characteristics of an addiction. Personal communication acquires a particular importance in this context.

Another aspect of the efficacy of mass media communication is the competition between messages from the tobacco industry and messages relating to not smoking. In contrast to AIDS campaigns, in which there is no competition for the target behaviour of using condoms, smoking cessation communication has to force through this aim against the competing campaigns of the tobacco industry that wants to sell its tobacco products.

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4.6 Possible multipliers for effective communication with smokers

Mass media campaigns are often commissioned by government agencies. Large campaigns are far more seldom run by non-governmental organisations. One of the reasons for this is no doubt the organisational effort and financial expense involved with this form of communication. In the commercial field, it is the pharmaceutical industry that communicates on the subject of smoking cessation. In marketing its nicotine products (nicotine patches, nicotine chewing gum) or other medicinal smoking cessation products, it addresses smokers and attempts to motivate them to use its products and thus to stop smoking. A campaign run in 2000 to sell a new smoking cessation drug makes it clear how influential mass media campaigns can be in terms of the utilisation of smoking cessation. Although we have no figures regarding the evaluation of the market launch of this drug, the impression gained is that the majority of smokers and doctors knew about it within a very short time. In addition to the pharmaceutical industry, the tobacco industry also runs campaigns with a message telling young people not to smoke.

No results were found that allow a comparison of the effectiveness of different multipliers. One criterion worthy of discussion in terms of rating them is the goal pursued by a campaign and, in connection with this, the credibility of the campaign. Governmental and non-governmental agencies primarily seek to reduce health damage to individuals in their smoking cessation efforts. In contrast, commercial companies (pharmaceutical and tobacco industry) are primarily geared to profit. For this reason, the latter – although principally the tobacco industry – are seen as having less credibility than government

institutions. This is why industry tries to work together with government agencies in the field of smoking cessation.

In the field of personal communication, the literature emphasises the professions in the medical and psychosocial sectors as multipliers. No distinction is made in this context as to whether any one profession appears better suited to any one form of smoking cessation. It would no doubt make sense to utilise the multipliers in accordance with their training (e.g. in behaviour modification) and the time available (e.g. short-term interventions by doctors).

CONCLUSIONS



The following conclusions can be drawn on the basis of the results presented and discussed above:

1. Personal communication is the most effective communication measure for smoking cessation

Personal communication achieves a considerable success rate. The personal address of smokers and the offer of support achieve effects that have been well proven (experimentally) in scientific terms. Minimal interventions, like being approached by a doctor, are effective in terms of both cost and time. The success rate of personal communication measures can be increased by intensification. The methods used in personal communication, and the effects achieved, would appear to be independent of cultural factors.

2. Mass media campaigns are an efficient solution for reaching and addressing smokers

The great majority of the population (over 90%) can be reached via mass media campaigns. Even specific, linguistically, culturally and/or geographically distinct groups in the population are addressed. Smokers, ex-smokers and non-smokers are reached to equal degrees.

3. Mass media communication can lead to changes

Mass media communication can bring about an improvement in knowledge and problem awareness in the entire population (among smokers, ex-smokers and non-smokers) and also in specific target groups. Ex-smokers and non-smokers can be stabilised in their intention not to smoke. Attitude and behavioural changes that may ultimately lead to abstinence can be achieved among smokers. The extent of the changes depends on the starting position. For instance, the increase in knowledge is greatest if only little knowledge was previously present.

4. The effects of mass media communication on smoking behaviour are achieved by combination with personal communication

It is not known which mechanisms of action cause changes in smoking behaviour in the wake of a mass media message or campaign. Personal communication, e.g. in the form of personal discussions or smokers' helplines, is an important mediating strategy for successfully completing smoking cessation.

5. Mass media communication must be designed and funded on a long-term basis

The strongest results in improving knowledge and problem awareness are achieved during the initial phase of a campaign. However, the initial success declines unless appropriate counteraction is taken. Permanent support of anti-tobacco messages in the media is important if a climate conducive to smoking cessation is to be created. Concrete recommendations regarding the minimum period required or the intensity of media usage cannot be made on the basis of the literature available.

6. Mass media communication must be realised professionally

Mass media communication competes with other media campaigns and has to be able to assert itself on the market and follow the market rules. For instance, it must be possible to respond flexibly to declining acceptance of the messages or methods of communication by offering something new. Ongoing evaluation and pre-testing are necessary conditions.

7. Mass media communication should use the whole range of all mass media

By using the whole range of mass media, the effect can be expanded and the reach and influence increased. All successful mass media campaigns work with a media mix, with television taking an outstanding position.

8. The content of mass media communication covers a wide range

The content of mass media communication differs from one country to the next. In California, the topics of passive smoking and manipulation by the tobacco industry were those best accepted. Positive results were achieved in Australia with shocking portrayals of the health-related consequences of smoking, and in United Kingdom with humorous representations of various aspects of smoking and with filmed interviews with people suffering from smoking-related diseases.

9. Mass media communication should be geared to cultural conditions

The content of mass media communication must be geared to the cultural conditions of a nation or the target group to a far greater extent than is the case with personal communication. Culture-specific aspects must also be taken into account in the assessment and transfer of methods, content and evaluation results. Continuous evaluation of mass media communication in Germany is necessary since no informative data are available to date.

10. The messages of mass media communication should trigger emotions

Mass media messages should arouse emotions if they are to attract sufficient attention. Messages that trigger emotions are perceived best. Emotions can be evoked by humour, threats, sympathy or admiration, for example.

11. Mass media communication must be integrated in a package of different, mutually complementary measures, especially personal communication measures

In addition to various mass media components, concrete offers of support and advice, geared to action and within reach of the smoker ready to stop, constitute important supplementary measures. Since the effect of mass media is partly achieved by the use of support measures based on personal communication, mass media communication must be embedded in a structure of support measures. Conversely, support measures must be publicised and promoted via mass media communication.

12. Mass media communication increases the effects of structural tobacco control measures introduced at the same time

Structural measures, such as tax increases, statutory regulations, restriction of smoking and smoking bans, are capable of reducing cigarette consumption. Mass media communication coordinated with these measures increases their success. Mass media communication can prepare for, accompany and follow up the structural measures.

13. The Internet offers the opportunity of combining mass media and personal communication

Initial empirical reports reveal the outstanding reach and acceptance of the medium, both for addressing and motivating smokers and also as a support measure in smoking cessation.

6

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**ANNEX – SUMMARY AND DESCRIPTION
OF THE MOST IMPORTANT STUDIES**

The Annex contains summaries of the most important studies considered in this report. First, we present those studies dealing with broadly designed, national smoking cessation campaigns (*Chapter 7.1*). The studies presented next (*Chapter 7.2*) deal with limited campaigns and interventions, and with selected elements of smoking cessation campaigns. Finally (*Chapter 7.3*), there is a more detailed description of a few review papers on specific aspects of communication regarding smoking cessation.

7.1 Studies of national smoking cessation campaigns

The following sections contain summaries and descriptions of studies of the national smoking cessation campaigns carried out in Australia, United Kingdom, the Netherlands and the US state of California. The presentation is divided into a short description of the intervention itself and a description of the evaluation and its results. Where possible, it is based on the following scheme:

Description of the intervention

- Study/paper
- Internet addresses (where available)
- Name/slogan of the campaign
- Country
- Objectives
- Media
- Setting/target group
- Budget/costs
- Communication contents
- Sequence of the intervention

Evaluation of the intervention

- Data on the evaluator
- Objectives/goals of the evaluation
- Design/method
- Results of the evaluation
- Conclusions of the authors

7.1.1 The Australian National Tobacco Campaign

- Study/paper:** Commonwealth Department of Health and Aged Care (2000): *Australia's National Tobacco Campaign*. Evaluation report. Vol. 1+2, Canberra: NTC.
- Internet:** www.quitnow.info.au
www.health.gov.au/pubhlth/publicat/document/metadata/tobccamp.htm

Description of the intervention

- Name/slogan:** *Every cigarette is doing you damage!*
- Country:** Australia
- Objectives:** Heavy smokers, in particular, were to be motivated to stop smoking.
- Media:** Primarily television spots, supported by additional materials (radio, poster advertising, full-page advertisements).
- Target group:** Smokers in the age group from 18 to 40 years
- Costs:** US\$ 7 million were made available by the Department of Health over a two-year period. Additional donations also helped secure implementation.

Communication contents

The television spots describe in a drastic manner (pictures, music, narrator voices) the negative consequences of tobacco consumption. Each film starts by showing a smoker lighting a cigarette. The camera follows the smoke as it is inhaled down the trachea and into the lungs. The three TV spots differ in the organs of the body used to present the damage caused by smoking:

- The first film, entitled *Artery*, features fatty deposits being squeezed by a surgeon's gloved hand from a human aorta.
- The second film, entitled *Lung*, depicts emphysematous damage using time-lapse photography.
- The third film, entitled *Tumour*, shows the development of a tumour in various parts of the human body.
- Ten months later, an additional film, entitled *Brain*, was produced, showing a brain being dissected in a post-mortem examination to reveal the blood clot located within it.

Each spot ends with the statement: *Every cigarette is doing you damage!* and the number of the Quitline telephone service is faded in.

Four of the nine radio advertisements pick up the contents of the television spots and describe them in words (*Artery*, *Lung*, *Tumour*, *See the damage*). The other five broadcasts (*Craving*, *Coffee break*, *Money*, *Recovery rate*, *Call quit first*) offer messages to support ces-

sation efforts, i.e. on handling cravings for a cigarette, avoiding smoking triggers, and the benefits of cessation.

Sequence of the intervention

The first phase of the campaign began in June 1997 with presentation of the *Artery* and *Lung* TV spots over a period of four weeks. A one-week break was followed by introduction of the Tumour spot. After another break in broadcasting, and showing at a lower frequency than at the start of the intervention, all the films were shown together at two-week intervals until November.

The second phase of the campaign ran from December 1997 to December 1998, broadcasting starting in January with the three familiar films (*New Year Campaign*). The *Brain* and *Call for Help* films were then introduced in April, running on their own until mid-1998 and, in the final phase of the campaign, together with the familiar TV spots.

Description of the evaluation

Evaluator: The surveys were commissioned by the Commonwealth Department of Health and Family Services and conducted by the Roy Morgan Research Center.

In-progress investigations (continuous information tracking) by the Ministerial Tobacco Advisory Group, Research and Evaluation Committee were carried out in Melbourne in the first phase of the intervention and extended to Sydney in the second phase.

Goals: Clarification of the influence of the campaign on smoking behaviour.

Design/method: Telephone survey of the population prior to the start of the campaign (N = 6,632); six months later (November 1997), after the first phase of the intervention, a first follow-up (N = 17,572); the random sample used for this was selected from various regions on the basis of a quota plan (75% smokers, 25% non- and ex-smokers).

For the continuous information tracking, smokers in Melbourne (N = 100 weekly) were surveyed in telephone interviews for a period of 27 weeks directly after the start of the campaign about their awareness of the campaign and their reactions to it.

A second follow-up survey (N = 11,153) was carried out in November 1998. The same telephone survey was carried out as in the first follow-up.

In addition, there was a specific survey of young people aged between 13 and 17 years, who were not actually part of the campaign's target group, to record the effect of the intervention on the younger age group.

After the start of the second phase of the intervention, smokers in Melbourne and Sydney were interviewed weekly by telephone over a period of 10 weeks regarding their smoking behaviour.

Results of the evaluation

Preliminary survey and first follow-up

Comparison of the data from the population survey conducted in advance with the data from the first follow-up yielded the following results:

- Spontaneous recall of anti-smoking measures increased from 25% to 46% among smokers and from 17% to 32% among non-smokers.
- Recall of elements of the campaign was found among 80% of smokers and recent quitters.
- Growing awareness was found about the fact that every cigarette is damaging (from 75% to 82%), that arteries are blocked (from 54% to 83%) and that the lungs are attacked (from 67% to 78%).
- Smoking prevalence rates among adults showed a statistically significant reduction of 1.5% (from 23.5% to 22%).

First in-progress analysis

The first continuous information tracking produced the following observations:

- The proportion of respondents aware of the anti-smoking advertising increased from 13% at baseline to a peak of 83% in the fourth week of the intervention. The proportion of aware respondents then dropped to 51% over the last three weeks of the intervention.
- Unprompted recall of the contents of the TV spots was highest for *Artery* in the first weeks (65%), recall of the *Lung* film being about 40%. However, recall figures for *Artery* declined constantly until, in the final weeks, they reached lower figures than those for recall of the *Lung* spot.
- Recognition of film elements was greatest for *Artery* at 90%, followed by the *Lung* spot (85%) and the *Tumour* spot (60%).
- From the baseline level (25%), there was an initial onset effect across about the first four weeks of the campaign in the proportion (35%) of smokers who thought about quitting at least daily. The proportion remained relatively high across the campaign before declining in the last campaign weeks to baseline levels (around 23%).
- The statement “Every cigarette is doing you damage” was continuously agreed with by about 94% of smokers throughout the intervention.
- There were no significant variations in the number of cessation attempts during the intervention.
- There were no significant effects of the influence of the campaign on the environment of the smoker (partner, parents, children).
- There was no clear trend in cigarette consumption during the campaign: consumption appeared to drop slightly in the first weeks of the intervention; at the end of the campaign, however, it returned to the baseline levels.
- A Quitting Index (Quindex) compiled from the collected data to assess cessation intentions and behaviour exhibited a constant upward trend over the duration of the campaign.



Comparison of first and second follow-up surveys

Comparison of the results of the first follow-up survey (November 1997) with the results of the second survey (November 1998) yielded the following results:

- In both follow-ups, 87% of smokers and recent quitters were aware of the campaign.
- In the first and second follow-ups, 23% of smokers and recent quitters reported having learned anything new about the effects of smoking on health.
- The proportion of smokers who felt bad about smoking rose from 32% to 36%.
- With respect to health warnings, no improvement in awareness of health damage was achieved when the damage was also stated on cigarette packets. Knowledge about other damage (e.g. fat deposits in the arteries) was improved.
- Increased utilisation of cessation support was observed.
- In overall terms, a reduction of 1.7% in smokers was recorded among the adult population over the 18 months since the launch of the campaign. Smoking prevalence dropped from 23.5% to 21.8%.

Survey of young people

The survey of young people (aged 14 to 17 years) yielded the following data:

- 96% of the teenagers were aware of the campaign.
- 85% of teenage smokers perceived the contents of the campaign as being personally relevant.
- At 49%, more young smokers than adults (23%) reported having learned something new about the health risks of smoking.
- More young people (67%) than adults (50%) reported having been motivated to stop smoking.
- The majority of young, recent quitters (68%) said the campaign helped them remain tobacco-free. 86% of young non-smokers felt confirmed in their decision not to smoke.
- Eight out of ten teenagers felt that they, as young people, were not being addressed by the campaign.

Second in-progress analysis

The second continuous information tracking yielded the following observations:

- Compared to the baseline level (24%), awareness of the anti-tobacco campaign rose to 59% by the fourth week of the second phase of the intervention and then decreased steadily (42%).
- Recall of an element of the campaign was lower in the second phase of the campaign than in the first (less than 60%).
- The ease of recall of the *Brain* spot was greater than that of *Call for help* (28% vs. 10% in Melbourne; 18% vs. 10% in Sydney).
- The observation that *Artery* caught the attention of smokers in particular in 1997 was replicated in 1998.
- Recognition of the campaign based on descriptions of the films was greater for *Brain* than for *Call for help*. Both spots achieved recall levels of 40% up to the fourth week, but recognition of *Call for help* then dropped while that for the *Brain* film continued to increase.

- The number of calls to the Quitline was lower in 1998 than in 1997, although a specific television spot was broadcast in 1998 promoting the telephone helpline.

Conclusions of the authors

The Australian campaign gained international recognition.

Viewers repeatedly described the television films with the words “hard-hitting”, “gory” and “something smokers will see once and never forget”.

The campaign also gained recognition in the advertising industry in the form of prizes and awards. Thus, it was awarded the prize at the Kinsale International Advertising Festival of Ireland in 1998, and the Australian Writers and Art Director Award in 1999.

The USA (Massachusetts), New Zealand, Canada (British Columbia), Poland and Singapore have already adopted this cessation campaign since its implementation in Australia.

7.1.2 The national tobacco campaigns by the Health Education Authority in United Kingdom between 1992 and 1999

Study/paper: Health Development Agency (Ed.) (2000): *A breath of fresh air – tackling smoking through the media*. London.

McVey, D. / Stapleton, J. (2000): Can anti-smoking television advertising affect smoking behaviour? Controlled trial of the Health Education Authority for England's anti-smoking TV campaign. *Tobacco Control*, 9 (3), 273–282.

Campaigns prior to 1992

In the United Kingdom, the Health Education Authority (and its predecessor the Health Education Council) ran various advertising campaigns during the 1980s, initially without any comprehensive concept, to encourage adult smokers to quit and prevent young people from starting to smoke. When the Health Education Authority was funded (1989), a five-year prevention programme was developed specifically for young people, using such strategies as school-based interventions, television and radio advertising, advertisements in youth magazines and restrictions on the sale of cigarettes. When the publication of a review paper (Reid et al., 1992) on the results of anti-smoking campaigns in various countries showed



that interventions focused solely on teenagers are not very effective because young people extensively gear their behaviour to that of the parent generation, the anti-smoking campaigns in United Kingdom over the next few years were designed for adult smokers.

In 1992, the Department of Health published a White Paper outlining goals for improving the health situation of the population. The following four targets were formulated with respect to smoking behaviour in United Kingdom:

- (1) Reduction of the prevalence rates among men and women aged 16 years and over to 20% by the year 2000 (from 30% in 1990);
- (2) In addition to the overall reduction in prevalence, to motivate one-third of female smokers to stop smoking at the start of their pregnancy by the year 2000;
- (3) Reduction in cigarette consumption by 40% by the year 2000 (from 98 billion cigarettes produced in 1990 to 59 billion);
- (4) Reduction in cigarette consumption in the 11 to 15 age group by 33% by 1994 (from 8% in 1988 to less than 6%).

Mass media campaigns were to be developed to achieve these aims.

A qualitative preliminary study to discover the optimum communication strategies for the new campaign showed that no strategy is effective on its own; however, it was possible to identify a number of messages that are evidently relevant and valid for any campaign:

- The message about the health risk and the consequences of smoking addresses everyone affected,
- Messages about the effects of smoking are relevant to all smokers,
- Messages about how to cope with the problems of cessation are specifically of interest to those smokers motivated to stop,
- The message about the benefits of cessation is a help in stopping smoking,
- Messages about what has to be sacrificed when smoking (e.g. health) address older smokers in particular,
- Smokers take note of references to the costs caused by smoking,
- Messages about the poor image of smokers are rejected, while statements about lesser attractiveness are accepted.

Furthermore, a supportive strategy conveying self-efficacy was recommended for developing the campaign, regardless of the specific message.

***John Cleese* campaign, Part 1 (1992–1994)**

Description of the intervention

Name/slogan: *John Cleese* campaign, The West Yorkshire Smoking and Health (WYSH) Trial

Country:	United Kingdom
Objectives:	<ul style="list-style-type: none"> • To convince smokers that giving up is both possible and worth doing. • To strengthen smokers' feeling that their lives would be improved if they quit. • To support ex-smokers in the determination not to lapse. • To convince parents that giving up would have benefits for their children.
Media:	Six humorous television spots were developed, all presenting actor and comedian John Cleese (of Monty Python fame) as the key figure and including a fade-in of the number of a telephone helpline.
Target group:	Adult smokers and ex-smokers (aged 25 to 44 years) and, in particular, families.

Communication contents

Each television spot contained a specific message: “Smoking can kill!”, “Smoking puts your children at risk!”, “Smoking is not the only way to enjoy yourself!”, “Withdrawal symptoms are bad, but they pass!” and “Many people manage to give up smoking every year!”. Humour was used to convey the messages, for the following reasons:

1. To create an empathic and supportive impression (even with messages that were threatening to smokers), and
2. Because comedian John Cleese appeals to a broad target group with his manner.

Sequence of the intervention

In the period from October 1992 to May 1994, the television spots were broadcast in four independent central and northern television regions of England. Various different conditions were introduced:

- In one region (Granada and areas of Yorkshire), the humorous television spots were broadcast.
- In the second region (West Yorkshire), a local tobacco control network was developed in addition to the television spots.

No intervention was run in central England to serve as a control condition.

Practical and ethical guidelines were applied for allocation to the intervention conditions, i.e. the regions with the highest percentages of smokers were given the effective reduction measures.

The campaign was implemented in two phases within the eighteen-month period, the frequency of the television spots in the regions being varied in the first phase (December 1992 to March 1993), and the spots being broadcast twice as frequently in all regions in the second phase (December 1993 to May 1994). The campaign was additionally implemented – in slightly modified form – in London in 1993/94, the target group of adult smokers being specifically addressed here.



Description of the evaluation

Goals: Investigating the effectiveness of television campaigns in reducing prevalence rates, and the influence of varying intensity of the advertising.

Design/method: In December 1992, prior to the start of the intervention, a representative random sample (N = 5468) from the population of smokers and ex-smokers was selected in each region and questioned in a 30-minute interview with respect to demographic variables, smoking history and attitudes to smoking. Six and eighteen months after the first and second implementation phase, these same volunteers were to be interviewed again. However, 20% of the smokers and 14% of the ex-smokers could not be contacted again after the first interview.

Results of the evaluation

Intervention effects after Phase 1

- There was no evidence that the frequency of the television spots had any effect on the results of the six-month follow-up.
- The first-phase intervention revealed no effects.

The difference between the “television spots” intervention and the figures for the control group, and between the “television spots + network” intervention and the control group was approximately significant with respect to abstinence rates.

Intervention effects after Phase 1 and 2

- After the 18-month follow-up, 9.8% of the smokers reported abstinence.
- 95.7% of the ex-smokers were still abstinent, i.e. 4.3% had suffered a relapse.
- The effect of the “television spots” intervention as compared to the control condition was seen to be more intensive among ex-smokers than among smokers, although this difference did not prove to be significant. In addition, there was no difference between smokers and ex-smokers with respect to the additional intervention measure of the network.

The “television spots” condition increased the number of non-smokers by 53% in comparison with the control condition. No increase in the number was seen as a result of additional measures (network).

- An assessment of the influence of the campaign on the prevalence rate showed that the measures had been able to reduce the prevalence rate by 1.2% to 26.8%.

Identification of characteristics enabling the prediction of changes

In order to eliminate confounding effects that might have arisen from the non-random allocation to interventions, the results from the various regions were adjusted in terms of demographic data and smoking characteristics (pre-intervention) and identified separately

for smokers and ex-smokers. Thirty demographic and historical characteristics were found for smokers that are connected with cessation of tobacco consumption, three of them exhibiting a main effect:

- Older smokers who smoked just a few cigarettes per day and wanted to reduce consumption, were more likely to have stopped smoking after the follow-up.
- Men who worked without instruction were more likely to have stopped smoking.
- The following variables exhibited no effect:
 - Reduction of cigarettes,
 - Desire to stop smoking,
 - Frequent cessation attempts,
 - Abstinence of more than 24 hours/one week,
 - Worries about health-related consequences,
 - A partner who smokes,
 - Age on starting to smoke,
 - Type of cigarette,
 - Switch to cigarettes with a lower nicotine content,
 - Ethnic origin,
 - Intention to stop in later years,
 - Perceived likelihood of being successful in the next cessation attempt,
 - Time since last attempt.
- For ex-smokers, a relationship was seen between the time since stopping smoking and the likelihood of remaining abstinent, i.e. “new” ex-smokers are more likely to relapse. Similarly, people who smoked more and those motivated to abstinence by third parties were more likely to relapse.

***John Cleese* campaign, Part 2 (1994–1995)**

Description of the intervention

- Name/slogan:** *John Cleese* campaign, national campaign (while implementation of the campaign was initially restricted to specific regions of England, it was implemented throughout England from December 1994 to March 1995).
- Country:** United Kingdom
- Objectives:** The overall plan of the campaign included five areas of complementary activities:
- A broad range of communications, including advertising, press and publicity to create a high profile for the campaign and bring about a supportive climate for smokers wanting to stop;



- Support for national and local telephone helplines promoted by the communication;
- Support for local tobacco control alliances to encourage local activities and hence promote national activities;
- Support for health professionals to increase the level of smoking prevention and cessation work.

Media: See above.

Target group: Adult smokers (aged 25 to 44 years), although all aspects of cessation efforts geared to adults, teenagers and pregnant women were to be integrated.

Budget/costs: £ 3,183,000

Results of the evaluation

Qualitative surveys showed that:

- The campaign was received well by smokers. Only 20% of respondents said they were tired of seeing the television spots.
- 80% of those addressed reported that the humorous approach was a refreshing change from the previous “patronising” and “scare mongering” campaigns.
- The selection of different messages appeared to intensify the effect of the campaign, in that they presented smokers with different aspects of giving up.
- 43% reported feelings of guilt.
- Parents of young children found the message about the effect of smoking on children particularly motivating. 29% reported having learned that smoking can specifically harm children.
- The spots that addressed the problems of cessation meant that smokers felt understood. 58% felt that the spots made cessation appear easier.

Following on from the John Cleese campaign, there were plans to devise a new campaign specifically for smokers close to a decision to stop smoking.

Break Free campaign (1995–1996)

Description of the intervention

Name/slogan: *Break Free* Campaign with the slogan: “You can be free!”

Country: United Kingdom

- Objectives:**
- Creation of additional motivation for smokers who already want to quit.
 - Creation of self-confidence among smokers who wish to quit, but do not believe they can.
 - Motivation for ex-smokers to remain abstinent.

Media:	The campaign presented its slogan in television spots and on posters, also addressing specific topics, such as family, young people, energy, sport and pregnancy, in addition to the freedom aspect.
Target group:	Smokers aged between 25 and 44 years who were close to a decision to give up smoking.
Budget/costs:	£ 2,326,000

Communication contents

The television spots addressed cessation and the advantages offered by stopping smoking. The posters geared their statements to the television spots and contained messages like: “You’re stronger than you think!”. The individual measures were designed to offer only motivating and supportive content.

Results of the evaluation

Qualitative surveys showed that:

- Spontaneous recall of the television spots was low.
- 52% of the people who had seen the campaign liked its positive, modern style.
- 62% said that the campaign made it seem easy to stop, so that 50% also felt motivated to stop.
- The respondents had only a very vague idea of what appeals the films contained. Many smokers rated the spots as diffuse and confusing and referred in this context to the modern presentation form (e.g. music, rapid images).
- 38% reported feelings of guilt.
- The television spots missed their intended target of providing motivation and support. 49% said that the campaign motivated them to stop.
- The target group addressed did not differ from other smokers in its assessments.

The rating of the *Break Free* campaign showed that sole presentation of motivating messages for people wanting to stop smoking was pointless. The next campaign was to be developed for the wider target group of all those wanting to give up and all ex-smokers, so that it could also cater specifically to their needs.

Quit for Life campaign (1996–1997)

Description of the intervention

Name/slogan:	<i>Quit for Life</i>
Country:	United Kingdom
Objectives:	<ul style="list-style-type: none"> • Communication of the positive consequences of not smoking • Support and encouragement for smokers wanting to stop



Media:	Television spots and radio broadcasts
Target group:	Smokers who wanted to give up (approximately 70% of all smokers), and smokers who had already stopped (aged 25 to 44 years)
Budget/costs:	£ 2,484,000

Communication contents

The television spots were developed to communicate the benefits of being a non-smoker (e.g. using images to signal ease, freedom and vitality). The radio broadcasts were intended to offer additional practical help and encouragement for smokers wanting to stop. Since the radio is an “intimate” medium, it appeared very well suited to conveying encouraging appeals in the form of tips and hints from ex-smokers.

The aim of using two separate media with different messages was to make the statement of the campaign clearer and easier to understand.

Results of the evaluation

Qualitative surveys showed that:

- In the evaluation, the television spots proved to be too weak to appeal to smokers, although they had been rated positively by smokers in a preliminary study. Rather, it appeared that the images shown advocated the general, health-conscious lifestyle of the period. Younger smokers did not feel addressed by the many images of the family, while older smokers did not feel addressed by the style of the spots.
- 52% of people who had seen the campaign liked its modern style.
- 47% said the campaign made it seem easier to stop smoking.
- Only 29% said they had obtained new information.
- 38% reported feelings of guilt.
- The ex-smokers felt confirmed in their decision to stop smoking.
- 44% were brought to the point of thinking about cessation.
- The radio advertisements proved to be good for motivating and supporting smokers in their cessation attempts. The respondents felt they were realistic and relevant. In contrast to the television spots, the central statement of the radio advertisements was recognised.

Since the campaigns up to 1997 were intended to reach the target group of 25 to 44 year-old smokers, while the proportion of smokers aged between 16 and 24 years had, however, risen above the average level and reached 33%, the following mass media campaign was to be developed specifically for young smokers.

A preliminary survey of the target group on their reasons for smoking, their attitude to smoking and the desire to stop smoking yielded the following findings:

- Young smokers have no strong reasons for stopping smoking,

- Young smokers have a strong belief that smoking is just one of life's many risks and is a risk which they are prepared to accept,
- Young smokers underestimate the addictive nature of nicotine.

A new measure was developed, building on this information and based on the mass media campaign in Australia.

***Testimonials* campaign (1997–1999)**

Description of the intervention

Name/slogan:	<i>Testimonials</i>
Country:	United Kingdom
Objectives:	The aim was that young people should no longer see the health risks as remote, future events, but that they should be given personal relevance ("It could happen to me" instead of "It won't happen to me"). In detail, the aim of the campaign was as follows: <ul style="list-style-type: none"> • To stimulate young smokers to think about their reasons for smoking, • To offer them reasons for giving up smoking.
Media:	Television spots, radio spots and advertisements in women's magazines
Target group:	Young smokers aged between 16 and 24 years, with a specific target of young females, since the percentage of women smokers in this group had risen to a greater extent than the proportion in any other sub-group.
Budget/costs:	1997/98: £ 2,166,000; 1998/99: £ 2,720,000

Sequence of the intervention

The implementation of the campaign can be divided into two phases: the first phase of the campaign took place in 1997–1998 and the second phase, in which only minor modifications were made, ran from 1998 to 1999.

Communication contents

The television spots presented older smokers telling younger people about their tobacco-related diseases. The young smokers were intended, on the one hand, to be able to identify with the young smokers presented, and, on the other hand, they were supposed to realise that they, too, could be suffering from these diseases in a few years.

As in the previous campaigns, the radio broadcasts consisted of reports from smokers and ex-smokers, aimed at offering hints and support for giving up smoking. In addition, the contents of the radio items were intended to contrast with the hard-hitting tone of the television campaign.

The advertisements in women's magazines picked up the message of the television spots.



Results of the evaluation

Qualitative surveys showed that:

- Both smokers wanting to stop smoking and ex-smokers rated the television spots as impressive.
- 72% of respondents felt addressed by the campaign.
- 55% reported feelings of guilt.
- 67% were more aware of the health risks.
- 61% decided to stop smoking sooner rather than later.
- The radio transmissions were rated positively, but had no effect in the group of 16 to 24 year old smokers – particularly not with respect to personal identification.
- The advertising campaign in the women's magazines was found to be the weakest element in the whole campaign. The reason given for this was that the readers of the magazines looked for highly specific content (e.g. dramatic stories) and that the advertisements were thus overlooked.

Results of quantitative analyses of the campaigns in United Kingdom

Quantitative research of the impact of the individual campaigns were carried out regularly in addition to the qualitative investigations.

- Between 1992 and 1994, a cohort survey was carried out specifically designed to measure changes in knowledge, attitudes and behaviour among smokers.
- Between 1994 and 1997, measurements relating to various topics were taken in a cross-sectional design at four points in time. The topics were: changes in smoking prevalence, changes in knowledge, attitude and behaviour, and awareness of the campaigns.
- In the subsequent years, an Omnibus survey was commissioned to measure awareness of, and attitudes to, the campaign.

During the period in question (1992–1999), the number of adult smokers in United Kingdom remained relatively constant. Thus the percentage of smokers was 28% in 1992 and dropped only slightly to 27% in 1998. Among young smokers, there was even an increase in smokers from 33% in 1992 to 36% in 1998.

Recall figures for the campaigns

Two elements of the surveys used as indicators for the campaigns were spontaneous awareness of the campaign and prompted awareness.

The results in these areas were as follows:

Spontaneous awareness:

- There was a steady increase in spontaneous awareness of anti-smoking advertising from 1994 to 1999 (from 33% in 1994 to 66% in 1999).

Prompted awareness:

- 92% of respondents displayed prompted awareness of the *John Cleese* campaign during the three-year regional implementation and the subsequent national implementation. In contrast, the subsequent campaigns achieved recall rates of only 45% to 66% among respondents. In 1996, awareness of the *John Cleese* campaign, at 90%, was still greater than that of the *Break Free* intervention (54%).
- Prompted awareness of the radio advertising rose from 41% of respondents (1997) to 47% (1998/99). A higher level of awareness of the radio intervention was found among the group of 16 to 25 year old smokers (61%) than in the group of over-35s (39%).

Attitudes to the campaigns

Attitudes to the individual campaigns were measured on the basis of agreement with various statements:

In the national survey, the statements “Made giving up seem easier than it is”, “Patronise or talk down to smokers”, “More confidence to give up”, “Offer sympathy and support”, “Made me feel guilty about smoking” and “Are unfair to smokers” were polled for the *John Cleese* and *Break Free* campaigns run up to that time.

- It was shown that both campaigns made it seem easier for the respondents to stop smoking to a similar degree. 58% of respondents ascribed this impression to the *John Cleese* campaign, and 62% to the *Break Free* campaign.
- A patronising style towards smokers was mentioned by 35% for the *John Cleese* campaign and by 28% for the *Break Free* campaign.
- More confidence in their efforts to give up was conveyed to 35% of respondents by the *John Cleese* campaign and to 42% by the *Break Free* campaign.
- Sympathy and support were conveyed by the *John Cleese* campaign for 41% of respondents and by the *Break Free* campaign for 47%.
- The *John Cleese* campaign elicited feelings of guilt in 43%, while this was the case in only 38% for the *Break Free* campaign.
- Only 22% saw unfair treatment of smokers in the *John Cleese* campaign and 19% in the *Break Free* campaign.

The subsequent Omnibus survey specifically polled agreement with the statements “Encouraged me to think about giving up”, “More confidence to give up”, “Offer sympathy and support”, “Made me feel guilty about smoking” and “Are unfair to smokers” for the *Quit for Life* campaign and the phases of the *Testimonials* intervention:

- Encouragement to stop smoking was ascribed to the *Quit for Life* campaign by 44% and to the *Testimonials* intervention by 57% to 60%.
- More confidence in their efforts to give up was conveyed to 49% of respondents by the *Quit for Life* campaign and to 41% by the *Testimonials* intervention.
- The *Quit for Life* campaign conveyed sympathy and support for 44% of respondents and the *Testimonials* intervention for only 39%.
- The *Quit for Life* campaign caused feelings of guilt in 38%, while this effect was greater for the *Testimonials* intervention, at 49% and 55%.

- Only 23% felt that the *Quit for Life* campaign treated smokers unfairly, with figures of 20% and 21% for the *Testimonials* intervention.

Conclusions of the authors from the media campaigns in United Kingdom

Observations regarding the target groups

- Younger smokers are not motivated to stop smoking; this tends rather to be a remote objective or a desire.
⇒ Here, the mass media should offer strong, clear reasons for cessation.
- Middle-aged smokers have stronger motivation to stop smoking and are also aware of the reasons in favour of cessation.
⇒ For this target group, interventions should aim at transforming this latent desire into direct action by promoting motivation and self-confidence.
- In older smokers, the main problem lies in the fact that they are aware of the difficulty of giving up and already have unsuccessful attempts behind them.
⇒ Here, interventions should aim to convey to the smokers that they are not alone with this problem and to offer them motivation and support.

Observations regarding the medium

- Different media can be effectively used in parallel, e.g. in order to present various perspectives.
- The use of different media can ensure more comprehensive communication of the messages of a campaign.

Observations regarding content and strategy

- A campaign should contain a wide range of messages, and it is possible for both threatening and supportive styles to make up to contrasting elements of the same campaign.
- Anti-smoking campaigns on television, radio or in the print media must address their audience and this can best be achieved by stimulating emotions, e.g. by using humour, threats, sympathy and admiration.
- It can be seen that smokers want encouragement and support. This can be generated by bringing the positive aspects of not smoking to the fore and letting people know that they are not alone, that their problems are recognised and that help and support is available.
- A great variety of messages and strategies must be used in order to cater to the heterogeneity of the group of smokers.

7.1.3 The Dutch national mass media campaign for reducing smoking prevalence

Study/paper: Mudde, A. N. / de Vries, H. (1999): The reach and effectiveness of a national mass-media-led smoking cessation campaign in the Netherlands. *American Journal of Public Health*, 89 (3), 346–350.

Description of the intervention

Name/slogan: *Quit Smoking Together* campaign
Country: The Netherlands
Objectives: Reduction of prevalence rates to 20% by the year 2000 (from 35% in 1995)
Media: Series of television shows, a television cessation clinic, smoker's telephone helplines, local group programmes and a comprehensive publicity campaign consisting of posters, advertisements and self-help manuals.
Target group: Smokers aged 15 years and older
Budget/costs: The costs of developing and realising the campaign amounted to US\$ 2.2 million, raised by donations to the Dutch Smoking and Health Foundation, by the Ministry of Public Health, the Prevention Foundation, the Dutch Cancer Association, the Heart Foundation and the Asthma Foundation. The broadcasting time for TV and radio was made available by the broadcasting station.

Communication contents

The content of the television shows involved the presentation of well-known celebrities who were using different methods to stop smoking. Real-life examples of people were presented daily in the television clinic.

Sequence of the intervention

This campaign was run from December 1990 to April 1991 following a pilot study¹ by Nijmegen University in the Netherlands.

Description of the evaluation

Evaluator: This campaign was evaluated by A. N. Mudde PhD and H. de Vries PhD of the Department of Health Education and Promotion of Maastricht University (Netherlands).
Goals: Investigation of the reach, effectiveness and cost-effectiveness of the mass-media campaign carried out in the Netherlands in 1990/1991.

¹ Rijt, G. A. J. et al. (1990): *Samen stoppen, een regionaal stoppen met roken experiment. Eindverslag van de evaluatie van een regionale pilotactie*. Nijmegen: Katholieke Universiteit Nijmegen.



Design/method: A random sample of smokers (N = 1,338) was surveyed before and after the intervention in a computer-aided telephone interview and in a ten-month follow-up.

A control group of smokers was created (N = 508) in order to be able to monitor the influence on behavioural changes (cessation attempts, abstinence) of the pre-test interview, this group taking part only in the post-test survey and the follow-up. This was intended to eliminate the possibility of impaired validity as a result of effects of testing.

The interviews contained questions regarding demographic variables and smoking behaviour: 1. Cigarette consumption, 2. Tobacco used, 3. Degree of dependence (defined as daily consumption: <25, 16–24 per day), 4. Cessation attempts, 5. Abstinence, 6. Prolonged abstinence (during post-test and/or follow-up).

The general effect of the campaign (recall and recognition of the campaign and well as elements of the campaign, as well as requests for information materials) was also recorded.

Results of the evaluation

- Smokers surveyed who had taken part in the pre-test interview were able to remember the campaign significantly more frequently extent than respondents without the pre-test, suggesting increased attention and sensitisation resulting from the preliminary survey.
- Most of the smokers surveyed (88%) in the control group (post-test only) were able to remember the campaign. 45% were able to give the name or other details of the campaign.
- The number of cessation attempts increased in both survey groups up to the follow-up. Thus, after the intervention, 29% of the experimental group and 18% of the control group reported cessation attempts. After the follow-up, the proportion of test subjects who had attempted to give up smoking had risen to 30% and 27%, respectively. However, the effectiveness of the cessation attempts was not affected.
- After the campaign, significantly more of those smokers who had taken part in the preliminary survey were abstinent than of those who had not (6% vs. 4%). This difference could also be seen in the follow-up survey (10% vs. 8%). These increasing abstinence rates are not associated with increased active participation in the group programmes or greater numbers of calls to the telephone helplines.
- Analysis of the relationship between intervention and behavioural change showed that the frequency with which the television programmes were seen correlated positively with cessation attempts between the pre-test and post-test interviews.
- In addition, both cessation attempts and abstinence increased between post-test and follow-up in line with the frequency with which the respondents had watched the television clinic.
- The length of abstinence showed a relationship to recall of the campaign and to seeing the television clinic insofar as people who remained abstinent for longer were able to recall more elements of the campaign and reported seeing the television clinic more often.

Conclusions of the authors

This study shows that intervention with a multi-faceted, mass-media-led smoking cessation campaign can stimulate cessation attempts and increase abstinence rates. The observation that the abstinence rates were not associated with more active involvement (e.g. in group programmes) suggests that the success of the campaign can be attributed to the use of the mass media.

7.1.4 The California Tobacco Control Program

- Study/paper:** Pierce, J. P. / Gilpin, E. A. / Emery, S. L. / White, M. M. / Rosbrook, B. / Berry, C. et al. (1998): Has the California Tobacco Control Program reduced smoking? *JAMA*, 280 (10), 893-899.
- Internet:** <http://ssdc.ucsd.edu/tobacco>
www.dhs.ca.gov/tobacco/Index.htm

Description of the intervention

- Name/slogan:** *California Tobacco Control Program*
- Country:** California (USA)
- Objectives:** Reduction in smoking prevalence rates in the US state of California.
- Media:** Mass media (television, radio, display boards and print media) were used as one measure to convey contents and messages in this comprehensive programme.
- Target group:** All smokers in the US state of California
- Budget/costs:** Financing of the interventions commenced during the 1989 fiscal year and was partly funded from profits resulting from an increase in tobacco taxation. The costs of the media campaign amounted to approximately. US\$ 24 million per annum (US\$ 0.75 per capita).

Sequence of the intervention

The California Tobacco Control Program was made up of many individual interventions and is therefore also described as a “shotgun” approach. It was implemented over a period of seven years (1989–1996).

The individual measures included an increase in tobacco taxation (US\$ 0.25 per packet), running a media campaign, setting up local health agencies for technical support and for supervising compliance with the anti-smoking laws, offering community-based programmes and expanding prevention programmes in schools.



Communication contents

The mass media were used both to convey information, e.g. about the dangers of passive smoking, and to explain the manipulative advertising strategies of the tobacco industry.

Description of the evaluation

- Evaluator:** The intervention was carried out jointly by researchers from various institutions of the University of California (San Diego):
- J. P. Pierce, E. A. Giplin, S. L. Emery, M. M. White and B. Rosbrook from the Cancer Prevention and Control Program of the Cancer Center
 - C. Berry from the Department of Family and Preventive Medicine
- Goals:** The effectiveness of the comprehensive programme was to be recorded by investigating the trends in smoking behaviour before, during and after implementation. Both cigarette consumption and the prevalence rates in California were compared with the figures from other states in the USA.
- Design/method:** Sales figures from the cigarette industry were used to work out per-capita cigarette consumption between 1983 and 1997.
- The prevalence rates for adult smokers were obtained from various surveys of the population, carried out both nationally and in California [National Health Interview Surveys (1978–1994), California Tobacco Surveys (1990–1996), Current Population Surveys (1992–1996), California Behavioral Risk Factor Survey (1991–1997)].
- The analysis compared the trends in smoking behaviour for the period before and after the intervention, the intervention being divided into two implementation phases to improve overall clarity (early: 1989–1993; late: 1994–1996).

Results of the evaluation

- The per-capita consumption of cigarettes in California dropped more quickly in the early intervention phase than in the last months of implementation (from 9.7 packets per person in the first few months to 6.5 packets towards the end of the intervention).
- The reduction in cigarette consumption in California was significantly greater than in other US states at every measurement point (early intervention: $p < 0.001$; late intervention: $p < 0.01$).
- At the start of the intervention, the prevalence rate in California dropped significantly more rapidly than in the other states (–1.06% per year in California; –0.57% per year in other states; $p < 0.001$). In the late intervention phase, the reduction did not differ significantly from zero either in California or in the other states.
- Towards the end of the campaign, the prevalence rate was 18% in California and 22.4% in the other states.

Conclusions of the authors

The strong effect observed at the start of the intervention did not hold its ground. Possible reasons that have been discussed for this are reduced options for financing the pro-

gramme, increasing advertising campaigns by the tobacco industry, industrial price calculations, and also political activities.

Comparison of the constant, albeit slow decrease in per-capita consumption in California with the stagnation in prevalence rates in the state at the end of the intervention suggests that Californian smokers were at least motivated to reduce their tobacco consumption by the intervention.

Similar programmes were run in other US states (Massachusetts, 1993; Arizona, 1995; Oregon, 1996).

7.2 Studies of individual campaigns and campaign elements

7.2.1 Information campaign on the introduction of a smoking ban in Switzerland

Study/paper: Etter, J. F. / Ronchi, A. / Perneger, T. V. (1999): Short-term impact of a university-based smoke-free campaign. *Journal of Epidemiological Community Health*, 53, 710–715.

Description of the intervention

Name/slogan: Smoke-free university information campaign at Geneva University

Country: Switzerland

Objectives: Up to the time of the campaign, smoking was allowed everywhere except in classrooms and lecture theatres, and in a limited number of no-smoking areas. The campaign was intended to provide information about the introduction of the smoking ban at the university and the setting-up of restricted smoking areas, and to point out possible sources of support for smoking cessation.

Media: The students were informed of the introduction of smoking bans by means of 1,000 posters, 10,000 flyers and in various newspaper articles headed "For a smoke-free university". In addition, 12,000 ball-point pens, 3,500 lighters and 1,000 bookmarks were distributed. Hundreds of self-help manuals were also given out in the buildings in which the intervention was carried out.

Target group: Smokers (students) in the university sector

Communication contents

This is an example of a mass media intervention combined with structural measures. It is an information campaign in the context of the “Smoke-free university” programme, accompanying the introduction of a smoking ban within the university buildings of Geneva University. Smoking remained permitted only in restricted areas and smoking cessation advice was provided.

The Smoke-free university programme

The programme had three goals:

- (1) Reduction of passive smoking within the university,
- (2) Support for smokers while giving up,
- (3) Development of intervention methods that are also suitable for other local schools and workplaces.

The programme was made up of three components:

- (1) New regulations asking smokers to smoke only in the designated areas,
- (2) An advisory service for giving up smoking,
- (3) An information campaign.

The smoking cessation advisory centre is affiliated to the university health service and offers brochures which also include addresses of smoker counselling centres outside the university.

The new regulations came into force in four faculties of Geneva University one month after the start of the information campaign, the no smoking zones/area being increased from 41% to 96%.

Description of the evaluation

Evaluator: External organisation

Goals: –

Design/method: Survey four months before and four months after implementation of the programme: the postal baseline survey took place three to four months prior to the start of the campaign. The follow-up survey was carried out seven months later (June/July 1996).

The intervention data were collected on the basis of questionnaires and various observations.

The sample comprised programme participants (N = 833), i.e. these individuals were in the buildings in which the intervention was taking place, at least once a week from February to June 1996.

Students visiting these buildings less than once a week during this period were allocated to the control group (N = 1,023).

At the time, there were 12,500 students and 4,500 academic staff at the university. The intervention group included 25.1% smokers and the control group 27.3% smokers.

Results of the evaluation

Acceptance of the intervention

In the baseline survey, the majority of the intervention group (61%) and the majority of the control group (64%) agreed with the statement “Smoking should be prohibited everywhere in the university except in restricted smoking areas”. Only 29% of the intervention group and 26% of the control group agreed with the statement that smoking should be banned in all university buildings.

Effect with respect to passive smoking

After a prospective estimate, both groups reported less nuisance from passive smoking and less annoyance about it in the follow-up survey than in the baseline survey. Both groups reported that there was less conflict between smokers and non-smokers at the university than at the start of the study. The improvement in the intervention group was significantly greater than in the control group at the time of the follow-up.

Effect on smoking

The proportion of smokers remained unchanged in both groups. Consideration of the participants who were smokers both at the start and the end of the study reveals a slight trend in that the smokers in the intervention group tend less to smoke in the university buildings, while the smokers in the control group tend more to smoke in the university. The proportion of smokers attempting to give up during the four months doubled in the intervention group and remained unchanged in the control group.

Some smokers reported taking part in a smoking cessation programme, although no change was seen in their smoking behaviour between the baseline and follow-up surveys.

The number of smokers smoking in prohibited areas of the university buildings doubled in the intervention group, while the control group remained unchanged.

Smoking cessation advisory centre

Only eight people used this service during the campaign. None of these people took part in a smoking cessation programme.

Opinions and knowledge about the programme

Only the 833 participants in the intervention were surveyed on this point. The participants made more positive (N = 269) than negative (N = 68) open comments about the programme. Only half of the participants were aware that the aim of the programme was for smoking to take place only in designated areas, with a ban on smoking anywhere else in the university. Less than half the participants rated the smoking areas as adequate and only half of these reported compliance with the designated smoking areas by smokers.



Direct observation

The percentage of smokers in the smoking areas of the cafeteria in the intervention buildings rose from 40% to 48% after implementation of the new regulations. The percentage of smokers in the non-smoking areas of the cafeteria dropped from 16% to 3%.

Discussion

Results of the programme

Among the most positive results of this programme were, on the one hand, the improved coexistence of smokers and non-smokers, and, on the other, an increase in the proportion of smokers who wanted to try to stop smoking.

The non-smoking area of the cafeteria was respected to a greater extent after the intervention. This result might, however, be explained by the fact that the cafeteria staff were more motivated, as a result of the existence of the programme, to approach smokers and draw their attention to the non-smoking area.

Programmes aimed at changing smoking behaviour must be intensive and multifactorial, incorporate employees and apply social marketing strategies.

Criticisms of the programme

In future, the communication material should be tested in a preliminary test and social marketing strategies should be utilised. The programme would have been more effective if it had been implemented directly by the university and not by an external organisation.

Conclusions of the authors

A smoking ban in the university – with the exception of limited areas – is accepted and reduces passive smoking. It has no effect on smoking behaviour or attitudes to smoking.

7.2.2 Community-based smoking cessation in the Netherlands

Study/paper: Mudde, A. N. / de Vries, H. / Dolders, M. G. T. (1995): Evaluation of a Dutch Community-Based Smoking Cessation Intervention. *Preventive Medicine*, 24 (1), 61–70.

Description of the intervention

- Name/slogan:** *Quit Line*
- Country:** The Netherlands
- Objectives:** Reduction of the smoker rate
- Media:** Three short articles and interviews with participants were published in the local paper in the context of implementing a smoking cessation programme consisting of several components and aimed at a broad public. In addition, two interviews were held on the radio with the organising committee. Calls for group participants were also put out in advice brochures and broadcast on the local TV news.
- Posters and flyers were sent to institutions and facilities, such as community centres, sports clubs, pharmacies, etc. The attention of smokers was drawn to the local “Quit Line” in the local press and in doctors’ surgeries.
- Target group:** Smokers (not specified)
- Budget/costs:** –

Background

Only limited numbers of smoking cessation interventions were implemented in the Netherlands until 1990. The usefulness and effectiveness of smoking cessation programmes aimed at a broad public had not been examined.

Communication contents

The telephone counsellors gave advice to applicants in considering whether to think about self-help or group treatment or telephone advice.

Sequence of the intervention

In autumn 1989, the research team carried out a public intervention in the town in which the intervention was to be run.

In January 1990, three health organisations declared their willingness to take part in the responsible local committee:

- The Municipal Health Services (MHS), who pursue the aim of primary prevention among the whole population,



- The Consultancy for Alcohol and other Drugs (CAD), which offers individual counselling on alcohol or drug problems for the entire population, and
- The Community Association for Home Care (CAHC), which offers health education groups for specific risk groups.

The committee was responsible for developing and implementing the intervention in collaboration with the research team.

The dissemination strategy consisted of local media and posters, as well as the inclusion of doctors who were to draw the attention of smokers to the Quit Line and motivate them to call the number. The Quit Line was staffed by trained counsellors providing advice to smokers in choosing between the various possibilities: a free self-help manual or a three-week group programme for US\$ 15, in which the self-help manual was used as a model. The group programme was run by trained staff from the MHS, the CAD and the CAHC. Telephone advice was offered as an option to all applicants.

A brief protocol and a half-hour training session were developed so that the doctors could advise and counsel their patients better.

Description of the evaluation

Goals: The aim of this study was to analyse the results of a multimedia smoking cessation programme aimed at a broad public.

Design/method: A computer-aided telephone interview was held with the random samples for the baseline survey (October 1989); further interviews were held in the middle of the study (June 1990) and at the end of the study (December 1990).

One Dutch town was selected at random to be the place in which the intervention was to be carried out and a control town with no intervention was also selected at random. Some of the smokers (N = 547 and N = 546) were interviewed three times at intervals of about seven months. The participants using the self-help manual only (N = 84) and the group participants (N = 83) were interviewed before the treatment and six weeks after the treatment.

Results of the evaluation

Completeness of implementation

The intervention began in March 1990 with press attention, distribution of the posters and self-help manuals, installation of the Quit Line, the start of the group programmes and instruction of the practical counsellors. Two-thirds of the intervention were carried out during the second phase of the study. Since the local media were not prepared to cooperate on

a regular basis, reporting was purely random. Posters and flyers were sent to institutions and facilities to draw attention to this smoking cessation programme.

No local smoking cessation activities were carried out during the study in the control town.

A smoking ban was imposed in public buildings from December 1989 to April 1990 within the framework of an intensive national campaign.

Cessation attempts and abstinence

In the first eight months of the study, 33% in the intervention town and 35% in the control town attempted to give up smoking. Of the 33% in the intervention town, one-third attempted this using the self-help manual, while the other two-thirds took part in the group programme. In the intervention town, 16% were successful in their cessation attempts, 39% of whom achieved this using the self-help manual and 28% by participating in the group sessions. However, 28% in the control town were successful in their attempt to stop smoking. After eight months, 5% of smokers in the intervention town and 10% in the control town were still abstinent.

The second phase of the study resulted in a first attempt to give up in 12% of the test subjects in the intervention town and 13% in the control town. 28% of these people were successful in the intervention town, as compared to 13% in the control town. After a second attempt, 7% of 17% in the intervention town achieved success in stopping smoking, while the figure in the control town was 11% of 15%. After 14 months, 7% in the intervention town and 9% in the control town were abstaining from smoking.

The Quit Line recorded 417 calls. 71% of these had the manual sent to them and 28% took part in the group.

Conclusions of the authors

No significant effects on the quit rate were found after 14 months (7% in the intervention town and 9% in the control town). Various system-related errors were identified. On the one hand, methodological problems may be present, and, on the other, mistakes may occur in the intervention and in its implementation. The process of a community-based smoking cessation programme and its evaluation is highly complex.



7.2.3 Evaluation of a telephone helpline in the context of a mass media campaign in the United Kingdom

Study/paper: Owen, L. (2000). Impact of a telephone helpline for smokers who called during a mass media campaign. *Tobacco Control*, 9 (2), 148–154.

Description of the intervention

The intervention involved a telephone helpline service for smoking cessation in the United Kingdom, supported by a mass media campaign by the Health Education Authority.

Description of the evaluation

Goals: Evaluation of the impact of a telephone helpline on callers who use the service during a mass media campaign. The aim was to ascertain whether and how the smoking behaviour of the callers had changed after two months and one year.

Design/method: The study comprised three stages. The first stage involved an analysis of the caller profiles on the basis of log sheets completed by the counsellors. The second and third stages involved telephone interviews by the counsellors, carried out two months and one year after the initial call. The sample included 154 men and 367 women aged between 16 and 45 years.

Results of the evaluation

Caller profiles

Comparatively more women than men called from the 25 to 44 year-old age group. These women were mostly housewives with children aged under 16 years, and very heavy smokers.

If the baseline survey is compared with the one-year follow-up, the following differences can be seen: women aged 35 years or older and smoking between 10 and 19 cigarettes per day are over-represented in the study after one year.

Change in smoking status

Of the smokers in the baseline survey, 23% reported in the first follow-up conversation (after two months) that they had stopped smoking; after one year (second follow-up conversation), 22% of the original smokers reported that they had stopped smoking (see also *Table 1*).

In the first follow-up, 35% – as compared to 29% asked after a year – said that they had reduced their cigarette consumption in the past two months.

	After 2 months			After 1 year		
	%	95% confidence interval	n	%	95% confidence interval	n
Smokers (at 1st call)			664			521
Stopped smoking	23	19.8–25.6	156	22	18.4–25.6	114
Switch to lower-tar brand of cigarettes	6	4.2–7.8	38	>1		1
Consumption reduced	35	31.4–38.6	235	29	25.1–32.9	151
Consumption identical	30	26.5–33.5	202	39	34.8–43.2	201
Consumption increased	5	3.3–6.7	33	10	7.4–12.6	54
Ex-smokers (at 1st call)			241			209
Not smoking	57	50.7–63.3	138	41	34.3–47.7	86
Smoking again	43	36.7–49.3	103	59	52.3–65.7	123

Table 1: Change in smoking status among callers to the telephone helpline after two months and one year

Of the ex-smokers at the time of the baseline survey, 57% reported, after two months, that they were still not smoking; the figure after a year was still 41%.

Of those who had started smoking again during the year, 28% were smoking less than they had been at the start of the study.

The following must be borne in mind when assessing the impact of the helpline:

1. Those who did not take part in the one-year follow-up were probably still smoking, and
2. 20% of those who said that they had not smoked for a year would probably fail biochemical validation.

Of those who refused to take part in the one-year follow-up, 61% were smokers and 28% ex-smokers at the time of the baseline survey.



7.2.4 Utilisation and effects of smokers' telephone helplines in California

Study/paper: Zhu, S. H. / Anderson, C. M. / Johnson, C. E. / Tedeschi, G. / Roseler, A. (2000): A centralised telephone service for tobacco cessation: The California experience. *Tobacco Control*, 9 (Suppl. II), ii48–ii55.

Description of the intervention

Name/slogan: *California Smokers' Helpline*

Country: California, USA

Objectives: The overall aim of the media-supported anti-tobacco campaign in California is to de-normalise cigarette smoking and the use of tobacco in society.

The aim of the telephone helpline is to support smokers in giving up smoking.

Media: The Smokers' Helpline that was the subject of the evaluation is part of a comprehensive anti-tobacco campaign being supported by the media, the health authorities, the local smoking cessation programme and the school system (see also *Chapter 7.1.4*).

Target group: Smokers in the whole of the US state of California.

Communication contents

The California Smoker's Helpline exists since August 1992. It offers callers a free smoking cessation service, including counselling, a self-help manual on giving up and information about local counselling centres, as well as on smoking cessation questions. Different free telephone numbers were offered for English, Spanish, Vietnamese, Korean and Chinese speakers so as to increase the programme's accessibility. There is also a helpline for smokers' relatives and for people using chewing tobacco and snuff.

The programme is supported throughout the state by media campaigns, health service providers, local smoking cessation programmes and the state school system. Advertisements in various languages are also used to encourage smokers to call the telephone helpline.

The state-wide helpline was implemented between August 1992 and December 1993, using an awareness campaign that was the largest of its kind to date. The campaign not only influences the public perception of tobacco use, but also motivates smokers to give up.

Sequence of the intervention

The helpline organisation is located at the Cancer Center of the University of California in San Diego. For better structuring, the programme is divided into three, interrelated parts: admission, counselling and evaluation.

At the first call, the counsellor first asks the caller briefly about his or her smoking behaviour, about quitting attempts and about his or her attitude to giving up. The decision regarding admission is made on this basis. Most callers are smokers themselves or want information about the programme for their relatives. Smokers who are prepared to stop smoking within one week can choose between individual telephone counselling and a self-help manual. Smokers who are not prepared to do this are encouraged to take part in the next stage of the programme. Those people who choose counselling can take part in seven sessions over two months, always conducted by the same counsellor.

Description of the evaluation

Evaluator: The evaluation was carried out by the Office on Smoking and Health of the US Centers for Disease Control and Prevention and the California Department of Health Services. Shu-Hong Zhu, Ph. D, is Associate Professor in the Department of Family and Preventive Medicine at the University of California, San Diego, and the Principle Investigator for the California Smokers' Helpline.

Goals: To establish how many people make use of the helpline.

Design/method: The study covers the period from the introduction of the helpline in 1992 up to December 1999. A number of callers admitted to the programme after initial questioning by a counsellor were selected for the evaluation.

Results of the evaluation

The telephone helpline has been in existence since 1992 and helped over 100,000 smokers and other tobacco users during the period of the study. It is the largest resource in the comprehensive smoking cessation programme in California. The most important source of information for callers was the media (59.8%), followed by health service providers (19.7%).

During the period of the study, 72% of 16,720 callers reported having become aware of the helpline by the media campaign.

About one-third of callers belonged to an ethnic minority and 17% were 24 years old or less. If these groups are compared with that of Californian smokers, the callers are more severely nicotine-dependent and tend to be more willing to live with other smokers, had only recently been willing to give up smoking and were also now more likely to be willing to try again to quit.

The callers who attempted to stop smoking using the self-help manual reached a figure of 14.7%. This success was also found in a second study. This result is comparable to the results of a meta-analysis on self-help programmes (Vivesvaran/Schmidt, 1992). Further-



more, it is higher than the abstinence rate (7%) of those in California who tried to stop smoking without assistance.

Consideration of the results of the telephone helpline indicates that it doubles the rate of success in comparison to that for those working only with the self-help manuals. It was possible to prove here that telephone helplines are the most effective form of support for people who want to give up smoking.

Conclusions of the authors

A centralised telephone helpline can provide an accessible and effective service for all smokers and should be included in every major, comprehensive smoking cessation programme.

7.2.5 Mass media-supported smoking cessation at the workplace

- Study/paper:** Salina, D. / Jason, L. A. / Hedeker, D. et al. (1994): A follow-up of a media-based, worksite smoking cessation program. *American Journal of Community Psychology*, 22 (2), 257–271.
- Internet:** http://www.lungusa.org/pub/seven/seven_intro.html (Cessation programme of the American Lung Association “Smoke-free in 7 steps”)

Description of the intervention

- Country:** Chicago, Illinois, USA
- Objectives:** Smoking staff in selected companies in Chicago were to be persuaded to reduce or stop smoking.
- Media:** All participants in the intervention were first given the self-help manual from the American Lung Association (*Freedom from Smoking in 20 Days*) and asked to watch a television programme broadcast twice daily over a period of three weeks following the news on a local station in Chicago (WLS-TV).
Some test subjects were also given counselling in group sessions and incentives in the form of lottery prizes.
- Target group:** Smoking employees in various companies in Chicago

Communication contents

The television broadcast accompanied ten volunteers in their use and implementation of the self-help manual, the presenter of the programme being intended to act simultaneously as motivator and instructor for the viewers. In the group sessions, the individual situations and subjects from the broadcast television episodes were discussed further to give praise and encouragement and to learn about problem-related cessation strategies.

Sequence of the intervention

All the subjects were initially given the self-help manual and asked to watch the television programmes coordinated to the manual contents for a period of 20 days. Group sessions were held twice a week over this three-week period. After this initial phase, they were reduced to just once a month for twelve months.

Any participant in the group session who succeeded in remaining abstinent from one session to the next was given a lottery ticket to the value of US\$ 50. Every participant achieving short-term abstinence was also allowed to name five people among his or her friends and family who were also given tickets, so as also to strengthen social support.

Description of the evaluation

- Evaluator:** The experimentally constructed evaluation study was carried out by a research group made up of members from different universities (Northwestern University, DePaul University, University of Illinois at Chicago and American College of Health Care Executives).
- Goals:** Various components of a smoking cessation programme at the workplace (social support, education in television broadcasts, financial incentives) were to be compared in terms of effectiveness.
- Design/method:** The staff of 38 companies in Chicago were allocated to an experimental condition (N = 159) and a control condition (N = 232) on a random basis.
- The subjects in both groups were given the self-help manual and asked to watch the television broadcasts.
- Only the participants in the experimental group were additionally given intensive counselling in group sessions, as well as financial incentives in the form of lottery tickets.
- The pre-test data were recorded using a questionnaire prior to the start of the intervention and the post-test data immediately after the first intervention phase, as well as 6, 12 and 24 months after implementation.

Results of the evaluation

Results after the first intervention phase:

- Significant differences were found in the abstinence rates, i.e. 42% of the experimental group and 15% of the control group had given up smoking.



- The subjects in the experimental group had greater recall of the contents of the television broadcasts than the subjects in the control group (66% vs. 50%).

Results after 6 months:

- After six months, 29% of the experimental group and 20% of the control group were abstinent.

Results after twelve months:

- One year after the intervention, 26% of the experimental group and 16% of the control group were abstinent.

Results after 24 months:

- After two years, 30% of the experimental group and 19.5% of smokers from the control group were abstinent.

Conclusions of the authors

Setting-up self-help groups and offering monthly lottery incentives support the effectiveness of media-backed smoking cessation programmes.

The monthly group meetings appear to counteract the frequently observed drop in abstinence rates over time, since beneficial group processes (e.g. group identity) are activated in the meetings. In this way, the group supports the individual in his or her efforts to quit.

7.2.6 Smoking cessation communicated by personal letters

Study/paper: Schofield, P. E. / Hill, D. J. / Jonston, C. I. / Streeton, J. A. (1999): The effectiveness of a directly mailed smoking cessation intervention to Australian discharged hospital patients. *Preventive Medicine*, 29 (6), 527–534.

Description of the intervention

Country: Australia

Media: Personally addressed letter with an invitation to take part in a smoking cessation programme and a self-help manual.

Patients were directly mailed after being discharged from hospital and asked whether they wanted to take part in a smoking cessation

programme. The *Can Quit* self-help manual was included in the same mailing. The letter was sent individually to each patient who could be considered. (Previous studies have shown that smoking cessation is more effective if it is personally addressed.)

Target group: Smoking hospital patients after discharge from hospital

Communication contents

The letter, signed by the attending physician and a medical counsellor, stressed the health damage associated with years of smoking and emphasised the fact that the patient should give up smoking. The 31-page self-help manual sent with the letter also contained the advice and encouragement to give up smoking. It was written by health education specialists and is based on the staged model. It aims to motivate people to stop smoking by describing the health-related consequences of smoking and the advantages of cessation. In the final section, it offers support in giving up and provides hints on dealing with relapses and mistakes.

Sequence of the intervention

Implementation was undertaken by a doctor and took place in a three-week cycle. Discharged patients who smoked were located and written to during the first two weeks.

Description of the evaluation

Evaluator: The study was carried out in collaboration with the Metropolitan Hospital in Melbourne.

Goals: The aim was to check the effectiveness of an intervention in which discharged patients were addressed personally.

Design/method: The patients were identified as smokers on admission. They were allocated at random by computer to control (N = 2,059) or experimental conditions (N = 2,099). Two weeks after being discharged, the smokers in the intervention group were sent a personal letter from their medical advisor (doctor), in which they were called upon to stop smoking with the aid of a self-help manual. The patients were questioned about their smoking habits after 6 and 12 months. Patients who had stopped smoking over twelve months were examined to obtain biochemical validation.



Results of the evaluation

Stopping smoking

People from the intervention group (17%) were more likely to have stopped smoking after six months than those from the control group (15%). However, no significant difference can be seen between the groups. These results are similar after twelve months. 19% of the

intervention group and 17% of the control group had stopped smoking. Again, no significant differences can be seen here.

Unsuccessful attempts to stop smoking

On questioning after six months, 48% of the control group reported having tried once to stop smoking after being discharged from hospital. 54% of the intervention group reported an unsuccessful attempt at cessation. Members of the intervention group undertook attempts to stop smoking more frequently than those of the control group. This difference was no longer seen after twelve months. After this period, 56% of the control group and 59% of the intervention group reported unsuccessful “attempts to give up”.

Predictors for cessation after twelve months

Patients who tended to be more prepared to stop smoking were

- More likely to be male,
- Over 50 years old,
- Roman Catholic or members of the Anglican church,
- Emergency cases when admitted to hospital, and
- A medical condition had been diagnosed in which smoking played a major part.

Conclusions of the authors

This study permits the conclusion that patients called upon to stop smoking as a result of their diagnosis are more likely to be willing to quit if instructed by an advisor and given a self-help manual. The intervention was effective in patients exposed to an increased health risk as a result of smoking, e.g. in cases of pregnancy or cardiovascular problems.

7.3 Studies of specific aspects of communication regarding smoking cessation

7.3.1 Review of the effectiveness of various anti-smoking messages

Study/paper: Goldman, L. K. / Glantz, S. A. (1998). Evaluation of antismoking advertising campaigns. *JAMA*, 279 (10), 772–777.

Description of the study

Authors: L. K. Goldman and S. A. Glantz of the University of California, Institute for Health Policy Studies, Department of Medicine.

Goals: This paper summarises the qualitative market research studies conducted for developing mass media anti-smoking campaigns. The aim is to compare the effectiveness of different contents and advertising strategies in mass media campaigns.

Design/method

The data drawn upon for the comparison are derived from focus interviews by advertising agencies that developed the anti-smoking campaigns for California, Massachusetts and Michigan.

The interviews involved were held with more than 1,500 children and adults, who were asked about a total of 118 campaign designs, some of which had been realised and some of which had not. The advertising strategies were categorised according to the messages used for prevention and as motivation for cessation:

1. Manipulation by the tobacco industry (industry manipulation)

The tobacco industry portrays smoking as glamorous and smokers as attractive and appealing. The anti-smoking strategy aims to de-legitimise the tobacco industry and de-glamorise smoking by exposing the industry's sales tactics as predatory business practices. This addresses adult smokers, who can divert their anger about their own tobacco consumption to the tobacco industry, as well as young smokers, who see themselves as being subject to external control and manipulation.

2. Passive smoking

Another strategy conveys to smokers that their tobacco consumption may have negative consequences for the people around them (e.g. children).

3. Nicotine is an addictive drug

This message attempts to make smokers and potential smokers aware that nicotine has

the potential to cause dependence and that the tobacco industry uses nicotine to tie customers.

4. Reasons for, and information on, stopping (cessation)

This strategy attempts to persuade current smokers to stop smoking by offering reasons such as health, money and family.

5. Easy access to cigarettes for young people (youth access)

This content shows that young people have very easy access to cigarettes (e.g. vending machines, shops, parents, siblings), so as to motivate adults, in particular, to restrict these access routes.

6. Short-term negative effects

In this approach, the aim is to refute the portrayals by the tobacco industry (e.g. “Smoking is attractive”) by describing the direct health-related and cosmetic consequences of smoking.

7. Long-term health consequences

This strategy pursues the portrayal of long-term health effects, such as lung cancer.

8. Emotional rejection (romantic rejection)

This strategy attempts to convince smokers that they are undesirable if they smoke. They are made aware that the majority of the population does not smoke and perceives smoking as unacceptable.

Results of the evaluation

Tabular overview of the results:

Message	Young people	Adults
Industry manipulation	Very effective	Very effective
Passive smoking	Very effective	Very effective
Nicotine is an addictive drug	Effective	Effective
Cessation	Uncertain	Effective
Easy access to cigarettes for young people	Not effective	Moderately effective
Short-term negative effects	Moderately effective	Not effective
Long-term health consequences	Not effective	Moderately effective
Romantic rejection	Not effective	Not effective

Note: The data regarding the effectiveness and ineffectiveness of the individual strategies were determined solely from the statements of the test subjects and not verified by other investigations.

Explanations:

1. Manipulation by the tobacco industry (industry manipulation)

This message is effective for both young and older smokers for different reasons: adults who recognise, and are frustrated by, the negative social and health-related conse-

quences of their tobacco consumption are helped by this campaign strategy in that they can divert their anger about their behaviour to the tobacco industry. In young smokers, this campaign content elicits fear of being subject to external control and not making autonomous decisions.

2. Passive smoking

The portrayal of the risks arising from passive smoking addresses the sense of justice in old and young smokers by conveying the message that many people are exposed unintentionally to the dangers of the smoke (e.g. at work, younger siblings and their own children).

3. Nicotine is an addictive drug

Adults must be convinced that nicotine is potentially addictive. Young people do not want to let themselves be manipulated by the tobacco industry, by being induced to smoke as a result of nicotine dependence.

4. Reasons for, and information on, stopping (cessation)

A Californian campaign (1991), in the course of which calls to telephone helplines increased sharply, is an example of the use of this content.

5. Easy access to cigarettes for young people (youth access)

Both young people and adults were surprised by information about the ease of access to cigarettes. However, some of the respondents saw vending machine sales as the chief problem and not the problem of smoking among young people.

6. Short-term negative effects

Evidence of the effectiveness of these messages varies. Young people often do not feel addressed when the consequences of smoking are presented.

7. Long-term health consequences

This strategy is not very effective – particularly for young people – for two reasons: most smokers already know about the consequences of their tobacco consumption and they are convinced of their own “invulnerability”.

8. Emotional rejection (romantic rejection)

This strategy is ineffective for both young people and adults. Adults can refute from their own experience the idea that they will be rejected by their environment because of their tobacco use. In young people, it could be seen that they overlook a person’s smoking behaviour if this person has a positive impact on them. Smoking is rated negatively only if the smoker is unattractive.



Conclusions of the authors

The authors conclude that the topics “Industry manipulation” and “Passive smoking” are the most successful for reaching large sections of the population. The topics “Addiction” and “Cessation information” may also be effective, particularly in combination with the most successful topics.

If it is to be able to keep pace with tobacco industry advertising, communication regarding smoking cessation must be geared to tobacco advertising, must fight with no holds barred and must use clear words. The publicity must attract the attention of the population. In this context, it is in competition with other advertising trying to gain the attention of the customer.

7.3.2 Review of effective communication variables in recruitment for cessation programmes

Study/paper: McDonald, P. W. (1999): Population-based recruitment for quit-smoking programs: An analytic review of communication variables. *Preventive Medicine*, 28 (6), 545–557.

Description of the study

Objectives

This analytical review was drawn up to reveal communication variables which might contribute to increasing participation in cessation programmes. The communication model devised by McGuire (1984) is cited as a basis for this, according to which there are five different independent variables that can be varied in communication campaigns:

1. *Source* (attributes of the “sender”, e.g. credibility),
2. *Target* (target behaviour aimed for by the communication, e.g. behavioural vs. attitude change),
3. *Message* (manner in which a message is conveyed and organised, e.g. length),
4. *Receiver* (extent to which the message is consistent with the attributes of the recipient, e.g. stage of change after Prochaska and DiClemente, 1983),
5. *Channel* (form in which the message is conveyed: interpersonal or via mass media).

Method

The study covered 33 publications describing a total of 40 recruitment campaigns. The campaigns examined originated from various countries (30 from the USA, four from

Canada, two from Finland, one each from Australia, Sweden and the Netherlands) and were categorised according to the five communication variables after McGuire (1984):

- *Source*

Programme sponsors were categorised as health care providers (e.g. doctors), researchers or non-governmental organisations (e.g. cancer associations).

- *Target*

In the case of this variable, distinctions were made between various types of programme, the programme costs and the use of incentives. Group programmes, self-help manuals, competitions and other forms were determined as types of programme. Both programme incentives and programme costs were recorded solely with respect to their existence or non-existence.

- *Message*

The message variable was operationalised by way of the campaign length.

- *Receiver*

Whether the campaigns examined took into account the stage of change of a person in their address was recorded with either a “yes” or a “no”.

- *Channel*

For describing the channels, a distinction was made between mass media, mailings, telephone contacts, interpersonal contacts (e.g. with a doctor), interactive group presentations and combined media use.

The recruitment effects were operationalised by determining the proportion of all target persons addressed that registered for a cessation programme.

Results of the study

Most of the campaigns were unable to recruit more than 2% of the target persons for a smoking cessation programme. However, some interventions were able to achieve recruitment rates of over 10%, suggesting the possibility of increasing effectiveness.

Logistic regression was used to investigate the relationship between recruitment rates and predictor variables. It became apparent that the following variables may be of influence:

- Type of communication channel used,
- Type of programme sponsor,
- Type of programme,
- Subdivision of the message according to stage of change.

Further analyses showed that the only significant predictor for the recruitment rate was the type of communication channel used. Campaigns using interactive recruitment channels (e.g. telephone, interpersonal communication) were seen to be 66.5 times more effective than those using passive channels (e.g. mass media, direct mailings). Thus, for example,



campaigns employing the telephone for recruitment achieved participation rates of 42.5%, while campaigns not using the telephone achieved rates of less than 10%.

The following points were also noted:

- The effectiveness of interpersonal communication can be increased by the additional use of media and mailings.
- The frequency of successful recruitment is approximately equal for media use and mailings.
- Neither the costs of the programme nor incentives have any influence on recruitment rates.

Conclusions of the authors

This review shows that both scientists and practitioners in the field of smoking cessation should devote more attention to the recruitment method. The use of interpersonal communication channels would appear to be highly effective in this context for addressing target persons for smoking cessation programmes.

7.3.3 Review of the cost-benefit ratio of anti-smoking campaigns for young people in the USA and Canada

Study/paper: Pechmann, C. / Reibling, E. T. (2000): Anti-smoking advertising campaigns targeting youth: Case studies from USA and Canada. *Tobacco Control*, 9 (Suppl. II), ii18–ii31.

Description of the study

Objectives

Seven different intervention examples were to be used as a basis for explaining why certain campaigns are more cost-effective than others. The variables of relevance to the messages – “content”, “consistency” and “clarity” – were studied, in particular, together with the variables “age of the speaker” and “portrayal of smoking behaviour”, which are decisive for the implementation of the intervention. Earlier studies had shown that these variables have a strong influence on the effectiveness of anti-smoking campaigns for young people. The results of this analysis were intended to serve as guidance for planning effective youth campaigns.

Method

A total of 167 TV campaign films were studied, from the US states of Vermont, California, Massachusetts, Florida, Minnesota and Arizona, and from Canada, all of which had been broadcast in 1997 and 1998.

Published papers and reports on prevalence rates among young people in the intervention regions as compared to the control regions (no intervention) were collected and summarised in order to be able to interpret the individual campaign effects. To supplement this, data were collected from N = 1,128 school pupils (12 to 13 years old and 15 to 16 years old) with respect to the variables being investigated, by showing them the films and then getting them to take part in a survey. The costs of the campaigns were ascertained both from representatives in the states involved and from publications.

The collected data regarding each intervention were then ranked and compared.

The campaign variables studied

Message content

Seven different content categories were distinguished for the messages:

- Long-term effects of smoking (e.g. lung cancer),
- Short-term effects of smoking (e.g. tooth discoloration),
- Exposure of tobacco industry marketing strategies,
- Exposure of deceptive portrayals of the lethal product,
- Risks of passive smoking,
- Smokers as negative models,
- Refusal skills.

Previous studies had shown that young people can be persuaded, in particular, by the information regarding the risks of passive smoking and the exposure of deceptive portrayals. Furthermore, young people appear to be susceptible to influence by the social norm (attractive model with refusal skills).

Message consistency (logical consistency)

A campaign can be designed to pursue a single message or to address a variety of subjects.

Message clarity

Anti-smoking messages can be highly complex, which may result in lack of understanding among young recipients and thus in no effects being achieved.

Age of the speaker

Recipients of persuasive messages are known to be influenced to a greater extent if they can relate to, and feel like, the person making the appeal. For this reason, young speakers, with



whom the recipients can identify, are chosen for anti-smoking campaigns for young people.

Portrayal of smoking behaviour

It is assumed that the frequent portrayal of people smoking in an anti-smoking campaign causes contrary effects, i.e. smoking is seen as normal and accepted.

Description of the campaigns

Vermont region

Media: A school programme was carried out in addition to the television campaign in two communities in Vermont.

Communication contents: The positive consequences of not smoking were stressed in particular, models with refusal skills presented, the immediate social and health-related consequences of smoking portrayed and the marketing strategies of the tobacco industry explained.

The use of these contents meant that the campaign conveyed a total of 79% messages that had been shown to be effective among young people in previous studies.

Target group: Young smokers

Costs: US\$ 0.32 per capita

Effects: The intervention reduced the prevalence rate among young smokers significantly as compared to a control group (school programme only) (12.8% vs. 19.8%; $p < 0.05$). These effects could still be demonstrated even two years after the campaign (16% vs. 24%; $p < 0.05$).

California region

Communication contents: The campaign used messages about passive smoking, in particular, and attacked the tobacco industry with respect to its advertising and sales strategies.

The use of these contents meant that the campaign conveyed a total of 58% messages that had been shown to be effective among young people in previous studies.

Target group: Young smokers

Costs: US\$ 0.46 per capita

Effects: Low smoking rates were achieved in California at the start of the intervention, whereas an increase in tobacco use by young people was recorded at a national level. There are fewer indications of the efficacy of the campaign in the later phases of the intervention since, although smoking rates in California remained low, the national prevalence rates also decreased.

Massachusetts region

Communication contents: The primary message in this intervention was explanation of the health-related consequences of smoking. Information was also given about pas-

sive smoking and the cosmetic consequences, along with reports by people affected by smoking.

This meant that the campaign conveyed a total of 53% messages that had been shown to be effective among young people in previous studies.

Target group: Young smokers

Costs: US\$ 2.16 per capita

Effects: Initially, the campaign caused a significant reduction in prevalence rates. The effects of the last implementation phases remain unclear.

Florida region

Communication contents: Using the slogan “Their brand is lies. Our brand is truth.”, the campaign aimed to activate young people against the tobacco industry in order to punish the latter for its deceptions and immorality.

Target group: Young smokers

Costs: US\$ 2.16 per capita

Effects: The campaign achieved a significant reduction in prevalence rates among 12 to 13 year-olds, while the effects among 14 to 15-year-olds were less pronounced.

Few results are available for this campaign because it was only carried out after 1998.

Minnesota region

Communication contents: The central content of the campaign was the portrayal of the short-term consequences of smoking (social and cosmetic consequences). Hence, the campaign contained 30% messages effective for young people.

Target group: Young smokers

Costs: US\$ 0.51 per capita

Effects: The intervention proved ineffective in terms of any significant reduction in prevalence rates (reduction of 2.4% compared to the control region, $p > 0.30$).

Canada region

Communication contents: The campaign emphasised the positive consequences of freedom from smoking. The long-term negative consequences of smoking were also shown and the risks arising from passive smoking were presented. 51% of the content presented contained messages that had proved to be effective among young people in previous studies.

Target group: Young smokers

Costs: US\$ 0.51 per capita

Effects: The intervention elicited no significant reduction in prevalence rates. On the contrary, the rates actually increased by 1% per year in the course of implementation.

Arizona region

Communication contents: The central content of the campaign was information on the negative consequences of smoking (e.g. smoking makes you unattractive!). Only 25% of the content consisted of effective elements.



Target group: Young smokers

Costs: US\$ 2.35 per capita

Effects: It is not certain whether the campaign was able to reduce prevalence rates among young people, since no comparison data were found.

Results of the study

The results of the study have been compiled in the Table below.

Region	Ranking*	Cost (per capita)	Effective-ness**	Effective content items***	Young speakers
Vermont	1	US\$ 0.32	Significant	79%	70%
California	2	US\$ 0.46	Moderate	58%	50%
Massachusetts	3	US\$ 2.16	Moderate	53%	44%
Florida	3	US\$ 2.16	Moderate	Unclear	Unclear
Minnesota	4	US\$ 0.51	None	30%	42%
Canada	5	US\$ 0.47	None	51%	68%
Arizona	Unclear	US\$ 2.35	None	25%	50%

* Ranking: 1 = Very cost-effective, 5 = Not cost-effective
** Effectiveness is rated in terms of a reduction in prevalence rates
*** The efficacy of the content categories was determined in a previous study

Cost-benefit ratio of the campaigns studied

- The campaign carried out in Vermont proved to be more cost-effective than the campaigns in the other states, achieving a significant reduction in prevalence rates among young people at low per capita costs (US\$ 0.32).
- The campaigns in California, Massachusetts and Florida exhibited slightly lower cost-effectiveness, since the results were inconsistent over time and/or across the age groups.
- The interventions in Minnesota, Canada and Arizona proved to be ineffective in reducing prevalence rates.

Predictors of the cost-benefit ratio

- All the variables described above demonstrated an influence on cost-effectiveness.
- The campaigns with a good cost-benefit ratio contained a larger percentage of messages that had also proved effective in other studies for smoking cessation in young smokers.
- Cost-effective campaigns exhibited greater consistency in terms of content, stressing a single effective message.
- Effective campaigns avoided unclear messages and used more young speakers.
- The frequency with which people were shown smoking had no influence on the cost-benefit ratio.

Conclusions of the authors

This campaign comparison shows that smoking cessation interventions addressing young people must meet certain conditions: for instance, the messages should be conveyed by speakers who are not significantly older than the recipients. In addition, some contents (passive smoking, smokers as a negative model, refusal skills, deceptive portrayals by the tobacco industry) appear to be particularly effective. The campaign as a whole should appear thematically homogeneous to the recipient, i.e. it should focus on a single thematic area.

Since the cessation campaign in Vermont possesses these attributes and is distinctive for its positive cost-benefit ratio, it may be selected as a model for future interventions.

7.3.4 Effects of a mass media campaign in California on reasons for cessation

Study/paper: Popham, W. J. / Potter, L. D. / Bal, D. G. / Johnson, M. D. / Duerr, J. M. / Quinn, V. (1993): Do anti-smoking media campaigns help smokers quit? *Public Health Reports*, 108 (4), 510-513.
University of California at San Diego / California Department for Health Services (1990): *Tobacco use in California 1990: a preliminary report documenting the decline of tobacco use*. Sacramento: California Department of Health Services.

Description of the intervention

Name/slogan: *California Tobacco Control Program* (here, specifically the mass media campaign of 1990/91)

Country: California (USA)

Objectives: The comprehensive Tobacco Control Program, which was implemented in California between 1989 and 1996 and contained various additional measures apart from implementation of the media campaign (e.g. school programmes, increase in tobacco taxation, etc.), aimed to decrease smoking prevalence rates (cf. also *Chapter 7.1.4* in this context).

Media: The campaign used television, radio, display boards and print media to convey and disseminate contents and messages.
The messages disseminated via the media focused, for example, on the risks of passive smoking and the impairment of social desirability as a result of smoking.

Target group: All smokers in the US state of California.

Budget/costs: The costs of the campaign amounted to US\$ 28.6 million, which were offset, among other things, by an increase in tobacco taxation of 25 cents per packet.



Description of the evaluation

- Evaluator:** The evaluation was commissioned by the California Department of Health Services and carried out by a research group (see authors). The authors are from IOX Assessment Associates and the Chronic Disease Control Branch of the Department of Health Services.
- Goals:** The aim was to check the effectiveness of the Californian media campaign between 1990 and 1991. Other evaluation studies were carried out independently of this at various times, aimed at investigating the overall effectiveness of the Californian interventions (cf., for example, *Chapter 7.1.4*).
- Design/method:** Adult smokers were questioned in brief telephone interviews at four different times (before and after the intervention). Only smokers were questioned in the first three surveys, while the fourth survey, conducted one year after the intervention, also interviewed ex-smokers who had stopped smoking during the intervention phase. These abstinent smokers (N = 417) were asked, among other things, whether the media campaign had influenced their decision to give up, this question being formulated once in open form and once in direct form. In its open form, the question asked: *"What specific event prompted you to quit?"* and in its direct form: *"Since April of last year, the California Department of Health Services has been sponsoring an anti-smoking advertising campaign on television, radio, and billboards. Do you recall seeing or hearing any of this advertising?"*.

Results of the evaluation

The results show the following:

- All the ex-smokers interviewed could state up to three events or experiences that had motivated them to abstinence: 38.2% gave health as the reason; 17.7% replied that they had simply made the decision; 10.8% gave a request from relatives and friends as the reason for their abstinence.
- 6.7% (N = 28) of the respondents answered the open question about the reasons for their abstinence by saying that they had been influenced by advertisements and items on the radio or television.
- In response to the direct question about the media campaign, 69.1% (N = 288) of the ex-smokers said that they had been aware of the campaign and 34.3% (N = 143) that this had had an influence on their decision to stop smoking.

Conclusions of the authors

Although causal conclusions should be drawn only with the utmost caution from this study, the results of the evaluation would appear to prove that the Californian anti-smoking campaign between 1990 and 1991 motivated a considerable proportion of smokers to stop smoking.

If the percentage results of this evaluation are referred to the total number of citizens of California who gave up smoking during the intervention (estimated by a study by the University of California), it can be assumed that 33,000 former smokers state the campaign as an important trigger for their abstinence in response to open questions. An extrapolated total of 173,000 ex-smokers could respond to a direct question by saying that the campaign had influenced their decision to stop smoking.

7.3.5 Communication via print media – personalised address vs. generally formulated messages and other measures

Study/paper: Skinner, C. / Campbell, M. K. / Rimer, B. K. / Curry, S. / Prochaska, J. O. (1999): How effective is tailored print communication? *Annals of Behavioral Medicine*, 21 (4), 290–298.

Goals: Is individually tailored communication superior to generally formulated messages?

Possibilities for assessing efficacy

The following can be determined in order to measure the effectiveness of communication tailored to the recipient: reactions to the material, changes in attitude or conviction, changes in behavioural intentions, behavioural changes, changes in the pathological process, morbidity or mortality rates, increase in knowledge and awareness.

Review of previous evaluation studies

The results of studies from 1986 to 1988 as given by Skinner et al. will be presented below, each of these studies comparing tailored communication with a different form of intervention. The studies differ in whether they compared the customised print media messages with conventional, non-customised print media or compared the former type of intervention with other intervention strategies.

Personalised communication via print media vs. non-tailored communication

Brinberg and Axelson (1990) surveyed 133 college students about their dietary behaviour and divided them at random into three groups. The first group was given a non-tailored nutrition brochure. The second group was given a brochure specifically tailored to each individual with specific dietary recommendations. The last group acted as a control group



and received no intervention. The two experimental groups also attended a lecture by a nutritional advisor. The results showed that significantly more people receiving the tailored brochure were able to remember nutritional recommendations than those who had been given a non-tailored brochure ($p < 0.01$).

Campbell et al. (1994) compared the effect of doctors' letters tailored to the patient with respect to a more healthy diet with that of non-tailored letters and found that the patients receiving a personalised letter had better recall of the recommendations (73% vs. 33%; $p < 0.001$).

Strecher et al. (1994) carried out two studies to assess the efficacy of tailored communication in smoking cessation. In the first study, they compared the effect of a newspaper report by a doctor, addressed and geared to a specific patient group, with the effect of a non-specific report by the doctor. In the second study, the recipients of a tailored communication were compared with a control group. No main effects could be found in either study after six months. However, a significant intervention effect was seen among light smokers in both studies. In the first study, 31% of the personally addressed light smokers stopped smoking, as compared to 7% of those not personally addressed. In the second study, the abstinence rate was 19% in the experimental group as compared to 7% in the control group.

Conclusion

The studies show that there is greater recall of tailored messages than of conventional content, and that the former are more likely to be read and/or perceived. In addition, the studies provide evidence of the fact that tailored messages have a greater influence on behavioural change than non-tailored messages.

Personalised communication via print media vs. other intervention measures

Curry, Wagner and Grothaus (1991) compared the effect of simple self-help brochures, personalised brochures and financial incentives by randomly allocating 1,217 subjects to one of these interventions or to combined interventions. The results showed that the personalised brochures elicited significantly higher abstinence rates than the other measures three and twelve months after implementation.

Prochaska, DiClemente, Velicer and Rossi (1993) evaluated four cessation strategies in 756 smokers who were recruited via newspaper advertisements and allocated at random to an intervention measure. The first group was given three self-help manuals from the American Lung Association. The second group was given three self-help manuals, distributed according to the state of change of the individual concerned in each case. The third group received three tailored feedbacks in addition to the status-related manual. The fourth group received the same treatment as the third group and was also given three sessions of tele-

phone counselling. After six months, one year and eighteen months, the second group exhibited higher abstinence rates than the first group. After 18 months, the combined intervention with the status-related manual and the tailored feedback proved to be the most effective.

Conclusion

The studies show that tailored communication can be an important supplement to other intervention measures. Contradictory results suggest that recipients of personalised messages neglect generally-worded content. For this reason, when planning interventions, it should be borne in mind that personalised content should not match general content, but should offer different kinds of information so as to arouse the attention of the recipient.



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ISBN 3-933191-80-7

ISSN 1432-3214