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## Attitudes and behaviours in smoking cessation among general practitioners in Finland 2001

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### Summary

**Objectives:** To investigate whether smoking by general practitioners (GPs) and gender influence smoking cessation advice.

**Methods:** A self-administered questionnaire, originally developed by the WHO and modified according to the Finnish health care system was sent by mail to physicians who were members of the Finnish Medical Association (FMA). Participants were restricted to those who were living in Finland and were younger than 65 years. Numbers of participants was 3057 and the response rate 69%.

**Results:** Smoking male GPs gave less smoking cessation advice only to patients with a stomach ulcer or patients using oral contraceptive pills compared with their non-smoking colleagues. Male GPs gave less smoking cessation advice to pregnant patients or patients using contraceptive pills than female GPs. Female smoking GPs less likely advised patients who were pregnant or who were using oral contraceptive pills to stop smoking than non-smoking female GPs ( $p < 0.001$ ). The percentage of GPs who have never distributed smoking cessation information was lower in men (41%) than in women (45%;  $p$ -value: 0.052).

**Conclusion:** Minor differences in anti-smoking advice to patients between smoking and non-smoking general practitioners were found. The little involvement of GPs in health promotion activities regarding tobacco control is of concern.

**Keywords:** General practitioners – Smoking counselling – Attitudes – Health promotion.

General practitioners (GPs) play an important role in reducing smoking prevalence among the population. However, smoking counselling seems to be affected by their knowledge, skills and attitudes regarding smoking cessation (Doran

et al. 1998). Furthermore, physicians' own smoking has been proposed to restrict them from advising their patients to quit smoking (Chapman 1995). In addition, physicians' smoking behaviour has showed to influence the smoking behaviour of their patients (Van Reek & Adriaanse 1991; Adriaanse & van Reek 1989). Even though smoking advice from a GP significantly increases quit rates among patients who smoke, smoking is not discussed during most routine consultations with smokers. A study conducted in Finland in the early 1990s showed an inverse relationship between smoking status of physicians and anti-smoking advice (Jormanainen et al. 1993). The question remains whether increased awareness of tobacco related diseases have affected life-style counselling among GPs in Finland in the past 10 years.

Daily smoking prevalence among general practitioners in Finland decreased between 1990 and 1995 (Jormanainen et al. 1997a; Myllykangas et al. 1991). However, it is not clear whether this decreasing trend has continued thereafter. Further, the low smoking prevalence of female GPs in Finland may indicate them to practice smoking counselling more often than men.

The aim of this study was to investigate whether smoking by GPs has an influence on smoking cessation advice in their clinical work. Furthermore, we wanted to assess whether there is a gender difference in smoking counselling among GPs. Additionally, we wanted to find out the self-estimated skills and knowledge of GPs in smoking cessation as well as their involvement in anti-smoking activities.

### Material and methods

A cross-sectional survey was carried out among physicians in Finland in March 2001. A systematic random sample was taken from the registry of the Finnish Medical Association (FMA) restricted to physicians who were living in Finland and

were younger than 65 years. The FMA registry covers basic data from well over 95% of the Finnish physicians. Compared to earlier surveys among physicians in Finland (Jormanainen et al. 1997b; Myllykangas et al. 1991), an additional random sample of 535 GPs was added to the general sample in order to increase their number in the analyses. The overall sample size was 3 057 and the response rate 69%. The total numbers of GPs in the sample was 1 035 and the response rate 68.3%. Thus, a total of 707 GPs were included in the study representing 19% of all GPs in Finland (N = 3 600). Age and gender distributions among responders were similar to those in the FMA registry population.

A self-administered questionnaire, originally developed by the WHO (1998) and modified according to the Finnish health care system and special needs was used (Jormanainen et al. 1997b). Compared to the previous two surveys additional questions regarding knowledge, skills and attitudes in smoking cessation were added in 2001. A reminder with an accompanying questionnaire was sent by mail to non-responders four to six weeks after the initial questionnaire.

Data analyses were carried out by using SPSS. Associations between variables, mainly prevalence proportions, were tested by the chi-square test and the chi-square test for trends. The results are expressed with numbers and relative frequencies (%). Differences in proportions are expressed with the according confidence interval.

## Results

Table 1 shows the prevalence of smoking among Finnish male and female GPs in 2001. The proportions of daily smokers were 5% and 3% among males and females, respectively. Occasional smoking was three times more common among males (15%) than among females (5%).

A total of 84 to 96% of GPs reported they had given anti-smoking advice to most patients (>70%) with cardiovascular or lung diseases (Tab. 2). There was a statistical difference between male and female GPs in giving anti-smoking advice to pregnant patients and patients using oral contraceptive pills. Only 65% of males reported having advised their oral contraceptive users to stop smoking, compared to 75% of the females ( $p = 0.001$ ). Further, a similar and statistically significant difference between the genders was observed in advising pregnant patients to stop smoking (82% vs. 95%;  $p < 0.001$ ). Compared with their non-smoking colleagues, smoking male GPs gave less smoking cessation advice to patients with a stomach ulcer or patients using oral contraceptive pills. Still, GP's own smoking status did not affect smoking cessation advice to patients suffering from other diseases such as cardiovascular or respiratory. Smoking female GPs less likely

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**Table 1** Smoking prevalence among male and female general practitioners (GPs) in Finland 2001

Smoking prevalence	Males		Females	
	% (N)	SEP <sup>1</sup> (%)	% (N)	SEP (%)
Daily smoking	5 (14)	1	3 (14)	1
Occasional smoking	15 (41)	2	5 (21)	1
Non-smoking	80 (225)	2	92 (382)	2

<sup>1</sup> Standard error of proportion

**Table 2** Percentages of male and female GPs who give smoking cessation advice to more than 70% of the patients in that particular disease group, Finland 2001

Patient group	Males (n = 281)	Females (n = 401)	p-value
	%	%	
Cardiovascular disease	84	87	0.403
Lung disease	93	96	0.213
Other lung disease	89	92	0.347
Gastric ulcer	32*	38	0.300
Pregnancy	82	95*	<0.001
Use of contraceptive pill	65*	75*	0.001
Mouth or gingival problems	64	68	0.489
Chronic back pain	14	11	0.583
Sleeping disorders	15	24	0.003

\* Significant difference in smoking cessation advice between non-smokers, occasional and daily smokers

^ Question: "How many percentages of the patients of following disease groups receive smoking cessation advice:" Answer: "<30%, 30–70%, >70%" (data presented on ">70%" only)

advised patients who were pregnant or who were using oral contraceptive pills to stop smoking than non-smoking female GPs ( $p < 0.001$ ). No differences were observed among female GPs in regard to patients of other disease groups.

A total of 96% of non-smoking male GPs reported they always give anti-smoking advice to patients with tobacco-related diseases. The corresponding proportions of daily and occasional smoking GPs were 71% and 83% (Tab. 3). No difference was found between smoking and non-smoking female general practitioners when advising patients to stop smoking. In average, 12% of male and 14% of female general practitioners reported always to give anti-smoking advice to smoking patients who do not have symptoms of tobacco-related illnesses and do not bring themselves up the subject of smoking.

Having sufficient skills and knowledge in smoking cessation were reported by 57% female and 66% male non-smoking GPs, whereas the corresponding numbers among smokers were 74% and 76% (Tab. 4). In addition, 84% of the males

Table 3. Proportions of patient groups to whom GPs report to give always<sup>1</sup> advice to stop smoking\*, Finland 2001

Patient groups	Total	Daily smokers	Occasional smokers	Non-smokers	p-value
	% (N)	%	%	%	%
<b>Males</b>					
Patients with tobacco related disease	96 (259)	71 (10)	83 (34)	96 (215)	<0.001
Patients who themselves bring up the subject of smoking	82 (230)	79 (11)	83 (34)	82 (185)	0.186
Patients who smoke but do not have symptoms of tobacco related illness and do not themselves bring up the subject of smoking	12 (32)	7 (24)	17 (1)	11 (7)	0.181
<b>Females</b>					
Patients with tobacco related disease	96 (395)	93 (13)	91 (19)	97 (263)	0.306
Patients who themselves bring up the subject of smoking	86 (355)	86 (12)	81 (17)	87 (326)	<0.001
Patients who smoke but do not have symptoms of tobacco related illness and do not themselves bring up the subject of smoking	14 (58)	14 (2)	10 (2)	14 (54)	0.178

\* Question: "Do you advise patients in the following cases not to smoke?". Answer: "never, sometimes, always" (data presented on "always" only)

<sup>1</sup> Always = at every consultation

Table 4 Self-reported knowledge and skills (SK) in smoking cessation among male and female GPs in Finland 2001

	Males		Females	
	Daily or occasional smokers (n = 55)	Non-smokers (n = 223)	Daily or occasional smokers (n = 35)	Non-smokers (n = 379)
SK	%	%	%	%
Sufficient	76	66	74	57 <sup>1</sup>
Don't know	15	23	9	24 <sup>2</sup>
Insufficient	9	11	17	19

<sup>1</sup> Statistical significant difference between smokers and non-smokers, 95% confidence interval: 2%–33%, p-value<0.05

<sup>2</sup> Statistical significant difference between smokers and non-smokers, 95% confidence interval: 6%–26%, p-value<0.05

and 87% of the females were in favour of the opinion that health care personnel should receive special training in how to support patients who would like to stop smoking (Tab. not shown).

Table 5 presents the proportions of GPs who have never carried out any of our selected health promotion activities in their health care centre. Almost every second GP never distributed any written material about smoking cessation to patients. Female GPs were less active in those health promotion activities than males. The proportion of female GPs having never talked about problems related to smoking at schools or at health promotion events was 73%, whereas significantly less males (59%; p<0.001) responded accordingly. Only 12% of the

Table 5 Percentages of male and female GPs in Finland who have never carried out any of the health promotion activities listed below in their health care centre, Finland 2001

	Male (n = 283)	Female (n = 418)	p-value*
	%	%	
Never distributed written material about smoking cessation	41 <sup>1</sup>	45	0.052
Never put a poster regarding smoking cessation in the waiting room	47	57	0.036
Never talked about health problems related to smoking at schools or health promotion events	59	73	0.001

\* For difference between men and women

<sup>1</sup> Statistical significant difference between daily smokers and non-smokers as well as between daily smokers and occasional smokers (p-value <0.05)

males and 7% of the females reported that health promotion regarding smoking cessation is sufficient in their health care district. No difference in that attitude was observed between smoking and non-smoking general practitioners.

## Discussion

Finnish physicians smoke less than physicians in other European countries and less than the Finnish population in general (Josseran et al. 2000; Polyzos et al. 1995; La Vecchia et al. 2000; Christensen 1993; Vartiainen et al. 1998). In previ-

ous studies, physicians' smoking behaviour has influenced positively the smoking behaviour of the patients (van Reek & Adriaanse 1991; Adriaanse & van Reek 1989). Given the physician role as exemplars for the general population, a low smoking prevalence among GPs in Finland offers good basic conditions for smoking cessation even though smoking did not decrease any further after 1995.

It is of concern that only 12 to 14% of Finnish GPs advised smokers with a non-smoking related disease to quit smoking. This was almost three times less than among Australian GPs (35%) (Dickinson et al. 1989). However, the reported proportion of those who gave anti-smoking advice in Finland increased to over 80% when the patients brought up the subject of smoking themselves. Our results agree with previous findings indicating that general practitioners were more likely to advise smokers who perceived their problems to be smoking-related (Coleman & Wilson 1999; Coleman et al. 2000). An earlier study found that physicians were most likely to intervene in smoking habits of young patients, those with reversible disease, those who were receptive to intervention and those who have made previous quit attempts (Goldberg et al. 1993). There are contradictory results in regard to whether physicians are aware that their choice of words with patients can affect patients' decisions (Christensen 1993; Freeman & Sweeney 2001). Despite these findings, physicians may believe that their advice is more effective when linked to patients' presenting problems (Dickinson et al. 1989). Perhaps physicians try to avoid negative response from patients leading to restrictions in discussions in situations where patients are presented with smoking-related problems (Coleman et al. 2000). This attitude to respond to the evidence of disease that is caused by smoking more than to the habit itself which is a clear handicap in the prevention of smoking-related disease (Dickinson et al. 1989).

The recommendation to advise routinely all smokers to quit has been questioned due to a possible damage of the physician-patient relationship (Butler et al. 1998). However, patients have been shown to be concerned about their lifestyle and most would welcome relevant counselling by health personnel (Wallace et al. 1987). Overall, the prevalence of counselling all identified smokers to quit is in most countries still below 50% (Coleman & Wilson 1996; Ellerbeck et al. 2001; Heywood et al. 1996) and therefore, it is difficult to predict or to measure, how implementation of those recommendations would affect the physician-patient relationship. We still believe that benefits gained by counselling all smokers would overbalance possible harms of the physician-patient relationship.

Several studies have reported that smoking status and attitude towards smoking influences the enthusiasm of physicians to give anti-smoking advice to their patients (Christensen 1993;

Kawakami et al. 1997). Non-smoking physicians are more likely to advise patients to stop smoking (86%) than physicians who smoke (70%) (Kawakami et al. 1997). However, our findings showed a significant difference between smoking status and smoking cessation advice only in male GPs advising patients with tobacco-related disease. There was no statistically significant difference in anti-smoking advice between smoking and non-smoking general practitioners regarding the other patient groups described above. Besides, no difference was found between female non-smoking and smoking GPs in giving smoking cessation advice in Finland. On the other hand, the low prevalence of smoking among female physicians could have affected our results.

We were somewhat surprised to find such a high prevalence of smoking physicians to report having sufficient skills and knowledge regarding smoking cessation. Physicians do not receive any specific training in lifestyle counselling or preventive medicine in Finland. Thus, we were wondering whether non-smoking physicians admit easier their uncertainty regarding lifestyle counselling or whether they perceive a lack of training as a bigger problem than smoking physicians. Further, smoking GPs may overestimate their skills and tend to down play the importance of smoking cessation.

Receiving health promotion advice from either a GP or a practitioner nurse was the most commonly preferred option expressed (Egglestone et al. 1995). Unfortunately, an Australian study showed that nearly half of the smokers had been given inappropriate advice or no advice at all by their physicians (Mullins et al. 1999). There is no reason to believe that Finnish patients receive better advice from their GPs, given the fact that lifestyle counselling is not been taught in Finland. As earlier suggested, GPs should be introduced to the newest recommended smoking cessation programs (Hentze & Osler 1996; McAvoy et al. 1999).

Finnish GPs showed very little involvement in health promotion activities since more than 60% of the GPs had never taken part in health promotion activities outside their offices. Furthermore, every fourth out of 10 GPs had never distributed any written material about smoking cessation. However, positive attitudes to prevention and to training in health promotion are likely associated with a higher GP involvement in these activities (Calnan & Williams 1993).

Naturally, our study had some limitations. Assessing smoking prevalence by questionnaire may not reflect the real smoking prevalence. Different clinical measurements would have validated our questionnaire regarding accuracy of smoking prevalence. The smoking prevalence among males in 2001 seemed to be underestimated as shown in our previous report (Barengo et al. 2004). However, female physicians tend to report their smoking behaviour more accurately than males,

and thus, their responses likely reflect more precisely their smoking prevalence. Nevertheless, the response rate in our study was rather high, and thus, our findings are less likely to be biased by participation.

In conclusion, the decrease in prevalence of smoking among Finnish GPs has stopped after 1995. With one exception, there were no differences in anti-smoking advice to patients between smoking and non-smoking general practitioners. Women seemed to advice patients to stop smoking more often when confronted with a gynaecological problem compared to men.

Based on our results, we recommend that male GPs should be encouraged more in giving anti-smoking counselling especially to pregnant patients and patients using oral contraceptive pills. Furthermore, GPs should be trained in giving anti-smoking advice to all patients who smoke even if they do not have symptoms of tobacco-related illness and do not themselves bring up the subject of smoking. In addition, the little involvement of GPs in health promotion activities is of concern and the underlying reasons for it should be identified.

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## Zusammenfassung

### Einstellungen und Verhalten bezüglich Aufhören von Rauchen bei Allgemeinärzten in Finnland 2001

**Fragestellung:** Untersuchen, ob der Raucherstatus und das Geschlecht der Allgemeinärzte einen Einfluss auf die Rauchstopp-Beratung haben.

**Methoden:** Ein selbstauszufüllender Fragebogen, ursprünglich durch die WHO entwickelt und dem finnischen Gesundheitssystem angepasst, wurde per Post an Ärzte verschickt, die Mitglieder der Finnischen Medizinischen Vereinigung (FMA) sind. Es konnten nur Ärzte teilnehmen, die in Finnland leben und jünger als 65 Jahre waren. Die Anzahl Ärzte betrug 3057 und die Antwortrate 69%.

**Resultate:** Rauchende männliche Allgemeinpraktiker verglichen mit ihren nicht-rauchenden Kollegen gaben nur den Patienten mit Magengeschwüren oder denjenigen, die orale Verhütungsmittel nahmen, weniger Rauchstopp-Beratungen. Männliche Allgemeinärzte gaben schwangeren Patientinnen oder Patientinnen, die die „Pille“ nehmen, weniger Rauchstopp-Beratungen als weibliche Allgemeinärzte. Weibliche rauchende Allgemeinpraktiker rieten schwangeren Frauen oder Patientinnen, die die „Pille“ nehmen, weniger oft, mit dem Rauchen aufzuhören ( $p < 0,001$ ). Der Prozentsatz Allgemeinärzte, die nie Rauchstopp-Informationen verteilten, war bei den Männern (41%) tiefer als bei den Frauen (45%;  $p$ -Wert 0,052).

**Schlussfolgerung:** Zwischen rauchenden und nicht-rauchenden Ärzten wurden kleine Unterschiede bei den Rauchstopp-Beratungen gefunden. Die geringe Beteiligung der Allgemeinärzte an Gesundheitsförderungsmassnahmen bezüglich Tabakprävention ist ein Anliegen.

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## Résumé

### Cessation tabagique: attitudes et comportements des médecins généralistes en Finlande en 2001

**Objectifs :** Investiguer l'influence du tabagisme et du sexe des médecins généralistes sur les conseils prodigués aux patients en matière de cessation tabagique.

**Méthodes :** Un questionnaire auto administré – développé à l'origine par l'OMS et modifié selon les critères du système de santé finlandais – a été envoyé à 3600 médecins. Les participants étaient membres de l'Association des Médicales Finlandaise, habitaient exclusivement en Finlande et étaient âgés de moins de 65 ans. Le taux de réponse s'est élevé à 69% ( $n = 3057$ ).

**Résultats :** Comparés à leurs collègues non-fumeurs, les généralistes qui fumaient n'ont moins fourni de conseils de cessation tabagique qu'aux patients souffrant d'un ulcère gastrique ou utilisant une contraception orale. Les généralistes de sexe masculin ont prodigué moins de conseils à leurs patientes enceintes ou utilisant une contraception orale que leurs collègues de sexe féminin. Les généralistes de sexe féminin étaient moins enclines à encourager leurs patientes enceintes ou sous contraception orale à cesser de fumer que leurs collègues non-fumeuses ( $p < 0,001$ ). Le pourcentage de généralistes n'ayant jamais distribué d'information sur la cessation tabagique était plus bas chez les hommes (41%) que chez les femmes (45%;  $p$ -value: 0,052).

**Conclusions :** Des différences mineures ont pu être identifiées entre les pratiques des médecins généralistes fumeurs et non-fumeurs en matière de conseils prodigués aux patients sur la cessation tabagique. Il est inquiétant de constater le peu d'investissement des généralistes dans les pratiques de promotion de la santé concernant le tabac.

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