Age and Ageing 2000; **29:** 264–266

SHORT REPORT

Do patient age and medical condition influence medical advice to stop smoking?

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Abstract

Objective: to determine whether the age and medical condition of a patient influences hospital-based doctors' decision making when advising patients to stop smoking cigarettes.
Methods: we presented 142 doctors from four grades (consultant, registrar, senior house officer and house officer) and four specialities (medicine, surgery, psychiatry and anaesthetics), based in a Dublin teaching hospital, with 20 clinical vignettes. Each vignette described a patient from one of five age groups with one of four levels of health. The vignettes were randomly mixed. We asked doctors to say whether they would advise the patient in each case to quit smoking.
Results: hospital-based doctors are significantly less likely to advise patients aged over 65 years than younger patients of the hazards of cigarette smoking, irrespective of the person's physical or mental health ($P < 0.001$).
Conclusion: the advice given to patients about their cigarette smoking habits by hospital doctors is strongly influenced not only by the patient's health, but also by the patient's chronological age.

Keywords: *age, elderly, smoking*

Introduction

Twenty years ago, the benefits of stopping cigarette smoking were not clearly established for people in later life [1, 2]. Since then, increasing evidence has shown that health is improved and mortality reduced among those who quit smoking—even after the age of 65 [3–7].

Despite this, most anti-smoking campaigns are aimed at younger people. We noted a reluctance among hospital doctors to offer advice to older adults on the dangers of smoking. By using clinical vignettes describing cigarette smokers of various ages with different medical histories, we gauged the attitudes of hospital-based doctors to patients' cigarette smoking habits.

Subjects and methods

We obtained data from 142 hospital doctors at St James's Hospital, a teaching hospital in Dublin. We recruited all doctors from four specialities (medicine, surgery, anaesthetics and psychiatry) and asked them to complete the questionnaire. Most doctors were from internal medicine (68; 48%), followed by surgery (40; 28%), psychiatry (20; 14%) and anaesthetics (14; 10%). Four grades of doctors participated: house officers (24; 17%), senior house officers (39; 28%), registrars (46; 32%) and consultants (33; 23%). Twenty-three doctors (16%) were current cigarette smokers; 87 (61%) were men.

Questionnaire

The questionnaire comprised 20 clinical vignettes, each describing a smoker with one of four clinical scenarios: (i) no medical problems, (ii) two risk factors for coronary heart disease (family history and hypertension), (iii) a chronic psychiatric illness (chronic schizophrenia) or (iv) terminal cancer (inoperable malignant melanoma or lung cancer).

Within each scenario, five age groups were described: young (26–45 years), middle-aged (46–65

years), younger elderly (66–75 years), mid-elderly (76–85 years) and older elderly (over 85 years).

In each case we asked the doctors whether or not they would advise the patient to stop cigarette smoking. All 142 doctors completed the 20 clinical vignettes.

Statistical analysis

In analysing these data, we adjusted the model to take into account the fact that each doctor responded to each scenario presented. Therefore, not all observations were independent—there may have been a tendency for within-doctor correlation. Hence, standard logistic regression is inappropriate and a generalized estimation equation to multiple logistic regression is required [8]. We ran the analysis using the 'xtgee' procedure in Stata (v5, 1998) with a binomial family, logit link and an exchangeable correlation structure.

Results

After adjusting for position, specialty and sex, we found that doctors were significantly less likely to advise patients over 65 years to quit cigarette smoking ($P < 0.001$; odds ratio: 0.11, 95% confidence interval: 0.09–0.14).

Preliminary analysis excluded the doctor characteristics, and the main determinants were patient age and medical condition (Figure 1).

Patients with risk factors for coronary heart disease had the highest probability of being offered advice about their cigarette smoking habits (probability = 0.85) irrespective of age, compared with those who had no medical problems (probability = 0.67), psychiatric illness (probability = 0.50) and terminal cancer (probability = 0.37).

Irrespective of the state of health of the patient, the probability of receiving advice about cigarette smoking was directly related to their age. Over 75% of patients aged 65 years or younger would be offered advice. This compared with 64% of those aged between 66 and 75, 42% of those aged between 76 and 85 and only 30% of those who were older than 85.

On subsequent analysis of the doctors' characteristics, we found that women doctors had a higher probability of offering advice to patients about their cigarette smoking habits (probability = 0.65) than men

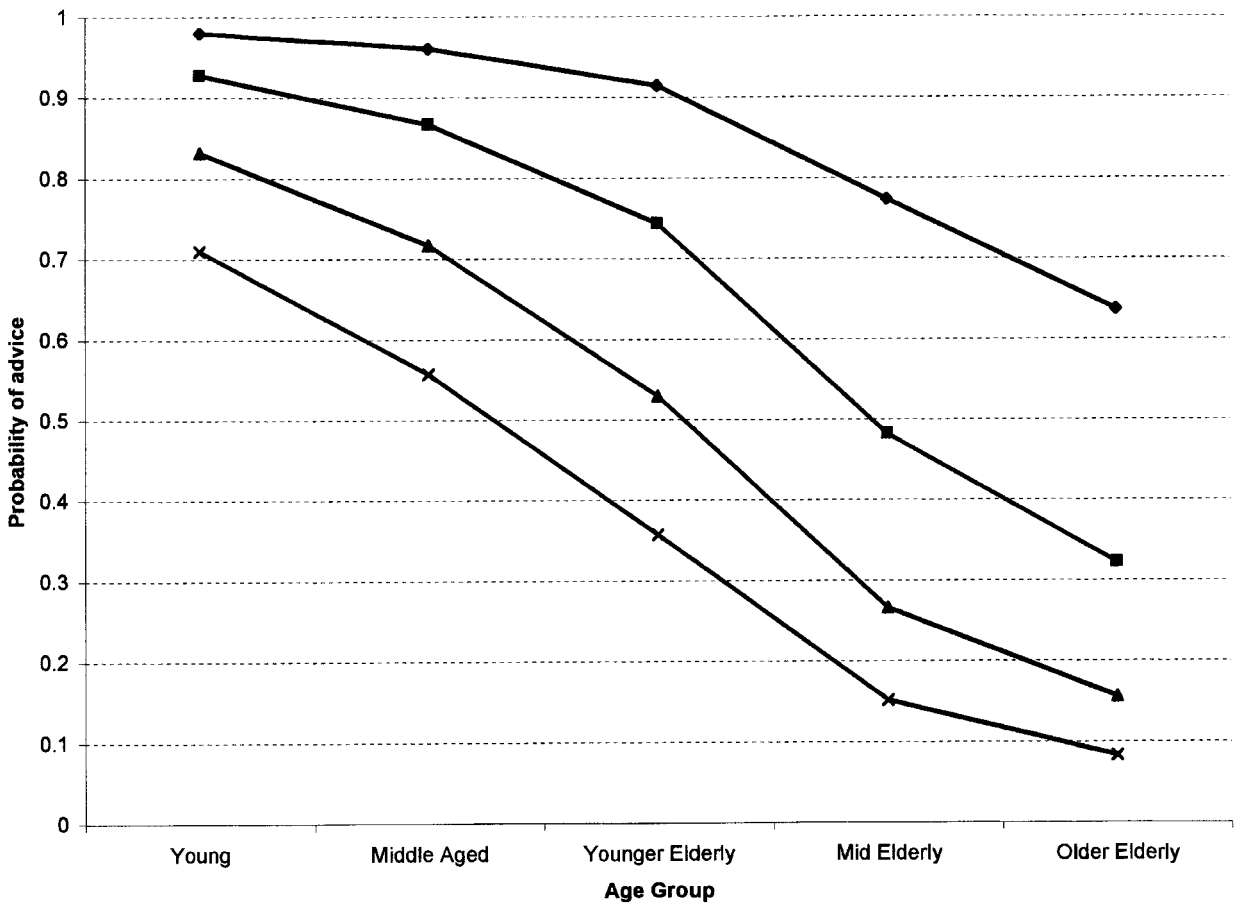

Figure 1. Probability of receiving advice about cessation of cigarette smoking as a function of patient age and medical condition: ◆, risk factors for coronary heart disease; ■, no medical problems; ▲, psychiatric illness; ×, terminal cancer.

(0.57)—values calculated after controlling for clinical scenario and patient age group.

Discussion

We have shown that hospital-based doctors carefully consider a patient's medical well-being before giving advice on smoking, thereby deciding which patients with which disease groups are most likely to benefit from advice to quit. However, older patients are much less likely than younger patients to receive advice on the hazards of cigarette smoking, irrespective of their physical or mental health.

Although fit elderly patients with no medical problems were more likely to be advised to quit smoking than age-matched patients with terminal cancer, their chronological age meant that they were less likely than younger patients to receive advice to quit in all categories. The design of our study did not allow us to determine the reasons why hospital doctors gave different advice to people of different ages.

It may be argued that by surviving into old age, elderly people who have been lifelong smokers are less susceptible to the detrimental effects of cigarettes than younger people for whom this cannot be predicted. However cigarette smokers who quit, even after 60 years of age, have better pulmonary function than those who continue to smoke [5]. Smoking cessation up to the age of 74 years reduces the progression of lung function loss and provides immediate improvement in lung function [6].

The risk of death as a result of coronary heart disease is higher in current smokers aged between 65 and 75 years than in non- or ex-smokers [4]. Cigarette smokers in this age group may reduce their incidence of coronary heart disease and thereby increase their longevity by abstaining from cigarettes [3]. Data from the Framingham Heart Study have shown that people over 65 share the same risk factors for coronary heart disease as younger populations, and interventions aimed at reducing risk factors in elderly individuals, including cigarette smoking, might lower the risk of coronary heart disease in this population [7].

The British Geriatrics Society has emphasized that health education and health promotion strategies, including advice on cigarette smoking cessation, apply as much to elderly as to young people [9].

Although stopping cigarette smoking in those aged over 65 years is advantageous to health, the benefits for individuals aged over 75 years are less clear. This lack of evidence may be reflected in the reluctance of doctors to advise elderly people to quit cigarette smoking. Until this evidence is available, and as older adults are more likely to respond favourably to health education programmes [10, 11], doctors should advise all cigarette smokers of the potential hazards of continuing to smoke and the benefits of smoking cessation, regardless of age.

Key points

- Hospital doctors are less likely to advise older patients to quit cigarette smoking compared with younger patients, irrespective of their state of health.
- More research is needed to ascertain the benefits of smoking cessation in subjects over 75.

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Received 24 January 1999; accepted in revised form 24 June 1999