Is smoking status routinely recorded when patients register with a new GP?

Lisa Szatkowski\textsuperscript{a,}\textsuperscript{*}, Sarah Lewis\textsuperscript{b}, Ann McNeill\textsuperscript{b} and Tim Coleman\textsuperscript{a}

\textsuperscript{a}Division of Primary Care, \textsuperscript{b}Division of Epidemiology and Public Health and UK Centre for Tobacco Control Studies, University of Nottingham, Nottingham, UK.

*Correspondence to Lisa Szatkowski, Clinical Sciences Building, Nottingham City Hospital, Nottingham NG5 1PB, UK; E-mail: mxlcs@nottingham.ac.uk

Received 25 November 2009; Revised 15 May 2010; Accepted 3 June 2010.

Background. The process of registering new patients in primary care provides an ideal opportunity to assess their smoking status systematically and record this in electronic medical records; this identification then allows smokers to be targeted with effective cessation interventions.

Objective. To use a dataset of electronic primary care medical records to assess the extent to which primary care patients’ smoking status is recorded in their electronic records at the time of their registering with a new GP.

Methods. Patients who registered with a general practice contributing data to The Health Improvement Network (THIN) database each year between 1990 and 2006 were identified, and their electronic medical records examined to identify the date on which their smoking status was first recorded.

Results. In total, 74.2\% of adults registering with a new GP in 1990 failed to have their smoking status recorded in their electronic medical records within 90 days of registration, improving to 26.7\% of adults registering in 2006.

Conclusions. That over one-quarter of adults registering with a THIN practice in 2006 did not have their smoking status recorded at registration represents substantial missed opportunities for identifying smokers and also, potentially, for offering them support to quit.

Keywords. Computer systems, family practice, medical records, smoking.

Introduction

Quitting smoking is arguably the single most important lifestyle change a smoker can make to improve their health and GPs are well-placed to encourage and support smokers to make this change, having at their disposal a range of interventions proven to increase the likelihood of successful cessation.\textsuperscript{1} On average, adults in Great Britain see a GP five times per year,\textsuperscript{2} with each consultation representing an opportunity to assess a patient’s smoking behaviour and, if appropriate, advise and support them to quit. The World Health Organization has called for smoking cessation to be integrated into primary health care worldwide, and although the UK has a particularly well-developed primary care network and tobacco control movement, such a strategy is appropriate in countries with any type of widely available health care services.\textsuperscript{3}

GPs are more likely to deliver cessation interventions where a systematic approach is taken to identifying smokers and documenting this in their medical records.\textsuperscript{4} Current UK guidelines recommend that general practices establish monitoring systems to ensure that all health care professionals have access to information on the current smoking status of their patients,\textsuperscript{5} and a voluntary pay-for-performance scheme implemented in 2004, and taken up by almost all practices,\textsuperscript{6} rewards GPs for regularly updating their records of patients’ smoking status.\textsuperscript{7} For example, in the 2006/07 financial year, practices were required to ensure that they had recorded the smoking status of patients aged \(\geq 15\) years at least once in the previous 27 months, with the exception of never-smokers whose status had only to be recorded once since registration with the practice. The maximum payment was available to practices who met this requirement for at least 90\% of eligible patients. In a 2002 survey of 336 GPs in England, 98\% reported routinely recording patients’ smoking status, either on the practice computer system or in the patient’s paper notes,\textsuperscript{8} when they first register. However, no studies have inspected medical records to validate this figure nor have assessed the impact of the Quality and Outcomes Framework (QOF) on data recording habits. Therefore, this study
uses a dataset of electronic primary care medical records [The Health Improvement Network (THIN)] to assess the extent to which primary care patients’ smoking status is recorded in their electronic medical records at the time of their registering with a new GP.

Methods

THIN contains the electronic medical records of over 6 million patients from 415 practices throughout the UK and is broadly representative of the UK population in terms of patient demographic characteristics. The dataset includes information on symptoms, diagnoses, treatments and lifestyle indicators, such as smoking status, recorded on practice computers using Read codes; previous studies have shown that consultation rates and levels of recording of clinical information are comparable to national data sources. For each year between 1990 and 2006, we extracted demographic details of all adults (aged ≥16 years) who registered with a practice in that year and who remained registered with the practice 1 year later. The number of practices contributing data to THIN has increased over the time period studied, and some practices have also withdrawn from data collection so the number of practices included each year varies. For each new patient, we identified the date on which their smoking status was first recorded in their electronic medical record and calculated the difference, in days, between the date they registered and this first recorded smoking entry. We used the proportion of patients having their smoking status recorded within 90 days of registration as a proxy for smoking status being recorded at patient registration. We believed that this period allowed sufficient time for any smoking data written on paper during registration appointments to be entered onto practice computers. Also, the QOF only includes patients who have been registered with a practice for at least 90 days; consequently, it is likely that most practices will try hard to record all QOF relevant information, such as patients’ smoking status, prior to this time period elapsing. All analyses were carried out using Stata version 11.0 (Stata Corp., College Station, TX).

Results

The number of new patients registering with practices increased from 56,595 patients across 103 practices in 1990 to 155,359 patients across 399 practices in 2006. On average, 52.8% of new patients each year were female, with an average age of 39 years (interquartile range 26–48). Figure 1 shows that the proportion of new patients annually who have their smoking status recorded within 90 days of registration has steadily increased since 1990. In 2006, 73.3% of new patients (71.4% men and 75.0% women) had their smoking status recorded within 90 days of registering, with 44% of these entries being recorded on the day of registration. However, the notes of 16.6% patients (19.4% men and 14.1% women) still lacked a recording of smoking status by the first anniversary of their registration. As expected, these figures represent a considerable improvement since 1990, when just 25.8% of patients had their smoking status recorded in their electronic medical records at registration, and 63.1% of patients lacked a recording of smoking status 1 year after registration. In all years, there was considerable variation between practices in the recording of recently registered patients’ smoking status; for example, in 2006, while one practice recorded the smoking status of all its new patients, the worst performer did so in just 7.8% of cases (interquartile range: 62.5%–88.2%).

Discussion

A new patient questionnaire or health check provides an ideal opportunity for general practices to assess and document a patient’s smoking status, both to aid the clinical management of that patient and, since 2004, to meet the requirements of the QOF. However, this study suggests that many practices are failing to seize this opportunity and indeed are falling short of the 90% threshold for receiving the maximum available financial reward for recording patients’ smoking status. In the early years of this analysis, it is, of course, possible that many practices used paper records alongside more recently introduced computerized clinical information systems, and patients’ smoking status may not have been as comprehensively documented in electronic records as in later years. It is also possible that the recording habits of the general practices contributing data to THIN are not representative of all UK practices, and further work is warranted to investigate the reasons for the considerable variation in data.
recording between the practices contributing to THIN. That one-quarter of new patients registering with a THIN practice in 2006 did not have their smoking status recorded when they registered with their practice must be seen as a missed opportunity; maximizing the use of such opportunities would increase identification of smokers in primary care consultations, which has been shown to increase the likelihood of smokers being targeted with support to help them to quit.4

Acknowledgements

TC, SL and AM are members of The UK Centre for Tobacco Control Studies, a UK Clinical Research Collaboration Public Health Research: Centre of Excellence. Funding from British Heart Foundation, Cancer Research UK, Economic and Social Research Council, Medical Research Council and the National Institute for Health Research, under the auspices of the UK Clinical Research Collaboration, is gratefully acknowledged. The authors acknowledge the support of Yue Huang in preparing the THIN data.

Declaration

Funding: Cancer Research UK (A9166 to LS). Ethical approval: Leicestershire, Northamptonshire and Rutland Research Ethics Committee (08/H0406/165).
Conflict of interest: In the last 5 years, TC has been paid for consultancy work by Johnson and Johnson and Pierre Fabre Laboratories (manufacturers of nicotine replacement therapy). However, this manuscript has not been discussed with any third parties.

References