Clinician advice to quit smoking among seniors ☆

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ABSTRACT

Objective. Little smoking research in the past 20 years includes persons 50 and older; herein we describe patterns of clinician cessation advice to US seniors, including variation by Medicare beneficiary characteristics.

Method. In 2012–4, we analyzed 2010 Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey data from Medicare beneficiaries over age 64 ($n = 346,674$). We estimated smoking rates and the proportion of smokers whose clinicians encouraged cessation.

Results. 12% of male and 8% of female respondents aged 65 and older smoke. The rate decreases with age (14% of 65–69, 3% of 85 +) and education (12–15% with no high school degree, 5–6% with BA +). Rates are highest among American Indian/Alaskan Native (16%), multiracial (14%), and African–American (13%) seniors, and in the Southeast (14%). Only 51% of smokers say they receive cessation advice "always" or "usually" at doctor visits, with advice more often given to the young, those in low-smoking regions, Asians, and women. For all results cited $p < 0.05$.

Conclusions. Smoking cessation advice to seniors is variable. Providers may focus on groups or areas in which smoking is less common or when they are most comfortable giving advice. More consistent interventions are needed, including cessation advice from clinicians.

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Introduction

Quitting smoking at any age reduces morbidity and mortality associated with smoking (Allen, 2009; National Cancer Institute, 1997; Taylor et al., 2002). Seniors' smoking contributes substantially to mortality and morbidity (e.g., dementia and macular degeneration) and aggravates existing chronic conditions (Burns, 2000; Cong et al., 2008; Ni Dhubhghaill et al., 2010; Reitz et al., 2007; Rusanen et al., 2011). Cessation for older smokers is associated with greatly reduced risk of myocardial infarction and cerebrovascular accidents, and has other short-term benefits (e.g., improved lung function, decreased incidence of pneumonia) as well as longer-term benefits (e.g., lower risk of oral and respiratory system cancers). An important public health goal, then, is to assist older smokers with quitting.

While some have found that smokers over 50 are as motivated to quit as younger smokers (Hall et al., 2008), others have found that smokers over 65 are slightly less motivated to quit (Centers for Disease Control and Prevention, 2011). In addition, some older smokers may be less able to proactively seek smoking cessation treatment or may resist quitting because they think that it is "too late" for them to quit (Glasgow et al., 2001), so outreach to older smokers to improve their access to effective smoking cessation treatments is important. Given seniors' high healthcare utilization (Schiller et al., 2012), physician office visits present a significant opportunity to provide cessation advice to older smokers. Brief cessation interventions by physicians or other health care providers can effectively help older smokers quit (Morgan et al., 1996; Vetter and Ford, 1990). However, most providers do not offer smoking cessation treatments (Centers for Disease Control and Prevention, 2007), especially for older smokers (Allen, 2009) and those suffering from a smoking-related disease like lung cancer (Wassenaar et al., 2007). Barriers to physician adherence to clinical practice guidelines include lack of awareness and familiarity with

guidelines, poor self-efficacy, belief that recommendation will not lead to desired outcome, little office support, limited counseling skills, and inability to overcome the inertia of previous practice; patient barriers include lack of motivation or interest in quitting (Cabana et al., 1999; McIlvain et al., 2002; Weaver et al., 2012). Research with providers serving low-income and minority patients identified five barriers: insufficient time, patient unreadiness to change, inadequate patient resources, inadequate provider resources and inadequate cessation physician training/clinical skills (Balls et al., 2010; Blumenthal, 2007).

More research on the national prevalence of provider cessation advice is needed. Past research has used convenience samples of smokers already enrolled in smoking cessation trials (Ossip-Klein et al., 2000), or has focused on older smokers with concurrent medical conditions or hospitalizations (Brown et al., 2004; Houston et al., 2005) or clinical trials testing smoking cessation interventions outside of physician offices (Hall et al., 2009).

In this study we examine the prevalence of smoking and predictors of clinician smoking cessation advice in a nationally representative sample of US adults age 65 and older. Because individual differences in demographic variables such as gender, age, and race/ethnicity can predict differences in treatment availability, accessibility, and efficacy, (Jarvis et al., 2013; Trinidad et al., 2011) we examine these variables as moderators.

Methods

These analyses focus on a nationally representative sample of Medicare beneficiaries age 65 and older living in the 50 states and Washington, DC. We describe patterns of current smoking and assess whether smokers were advised to quit during medical visits. We used data from the 2010 Medicare Consumer Assessments of Healthcare Providers and Systems (MCAHPS) survey (overall response rate 60%), sponsored by the Centers for Medicare & Medicaid Services (CMS). The smoking question was, 'Do you now smoke cigarettes or use tobacco every day, some days, or not at all?' Those replying 'Every day' or 'Some days' were classified as "current smokers," then asked, 'In the last 6 months, how often were you advised to quit smoking or using tobacco by a doctor or other health provider?', with response options 'Never' (1), 'Sometimes' (2), 'Usually (3)', 'Always' (4), and 'I had no visits in the last 6 months'.

We use "smoker" in this paper to indicate tobacco user more broadly (including those smoking cigarettes or using smokeless tobacco, cigars, etc.). Among smokers, responses regarding cessation advice were linearly rescaled to a 0–100 possible range. Smokers with no medical visits in the past 6 months were excluded from the cessation advice analyses.

We estimated the prevalence of smoking by beneficiary characteristics (gender, age, education, race/ethnicity, census division, dually eligible for Medicare/Medicaid, survey proxy status, and having a personal physician). Among current smokers with a recent medical visit, we estimated the mean of the cessation advice item by the beneficiary characteristics listed above, as well as by confidence in the ability to identify need for medical care, health characteristics (self-reported general and mental health, history of six specific chronic conditions) and smoking intensity (daily versus less often than daily). We estimated the association between the cessation advice scale and each predictor using simple linear regression and used multivariate regression to assess all simultaneously, including interactions of gender with age and race/ethnicity in a second multivariate model. To illustrate the relationship between smoking status and cessation advice, we plotted the mean of the advised-to-quit index against the percentage of current smokers (a) by census division, and (b) for men and women of different racial/ethnic groups. A sensitivity analysis included interactions of beneficiary characteristics with the daily smoking indicator to test whether predictors of cessation advice differed for those who smoked daily versus less frequently.

All analyses were weighted to represent the Medicare population age 65 and older within each county and plan using loglinear poststratification weights estimated by iterative proportional fitting (Deming and Stephan, 1940; Purcell and Kish, 1980) to match weighted plan-level distributions of gender, age, race/ethnicity, Medicaid, low income supplement status, Special Needs Plan status, Part D enrollment, and zip-code level distributions of income, education, and race/ethnicity. Analyses were completed in 2014.

Results

Data from 346,674 senior Medicare beneficiaries are used for the analyses, of whom 9.6% are current smokers (and 6.3% daily smokers). The plan-level intraclass correlation (ICC) coefficient for the cessation advice item is 0.12, which is considered evidence of high reliability (Lyratzopoulos et al., 2011).

Patterns of smoking prevalence

Table 1 presents smoking rates by beneficiary and coverage characteristics. Men are more likely to smoke (12.3%) than women (7.7%). Smoking decreases with age (from 14.4% among 65–69 year olds to 3.4% in those 85 +) and educational attainment (12.0%–14.6% of those not completing high school; 5.1%–6.3% of those with a four-year college degree). Rates are highest among American Indians (15.9%), multiracial (14.3%) and African–American (13.3%) seniors, intermediate for non-Hispanic White (9.5%) seniors, and lowest for Asian/Pacific Islander (API, 5.1%) and Hispanic (7.8%) seniors. Rates are highest in the East South Central census division (13.5%) and lowest in New England and the Pacific (7.6–7.7%). Low-income seniors eligible for Medicaid smoke more often (15.1% versus 8.9%). The small proportion of seniors without a personal physician had a higher smoking rate (17.4%) than those with a personal physician (9.2%). Tests of association between current smoking status and each characteristic mentioned in this paragraph were statistically significant ($p < 0.001$).

Cessation advice among smokers

Of current smokers, 33% were given cessation advice "always" at medical visits, 18% usually, 23% sometimes, and 26% never, resulting in an overall mean of 52.3 on the 0–100 cessation advice scale. Eight percent of smokers had no medical visits in the past 6 months.

Table 2 presents unadjusted means of the 0–100 advised-to-quit scale by socio-demographic, coverage and health characteristics. Women ($+4.3$ vs. men, $p < 0.001$), younger seniors ($+15.5$ age 65–69 vs. age 85 and older, $p < 0.001$), API ($+9.2$ vs. non-Hispanic White, $p < 0.01$), those living in New England and the Middle Atlantic ($+15.1$ and $+11.4$ vs. the East South Central division, respectively, both $p < 0.001$), and individuals with a personal physician ($+21.0$ vs. those without a personal physician, $p < 0.001$) received more cessation advice. Smokers in worse health were advised to quit more often across several measures of health ($p < 0.001$ for each), including self-rated general health ($+21.4$ for poor vs. excellent health) and history of chronic conditions: COPD ($+19.9$), angina ($+10.6$), heart attack ($+10.1$), stroke ($+6.9$), diabetes ($+6.8$), and cancer ($+3.4$). Daily smokers received more cessation advice than less frequent smokers ($+8.2$, $p < 0.001$).

Table 2 also presents results from simple and multivariate linear regressions of the advised-to-quit item. After adjusting for all other beneficiary and coverage characteristics, differences associated with gender, age, region, having a personal physician, and smoking frequency remain significant and are similar in size to the differences in the unadjusted means. Adjusted differences by race/ethnicity remain statistically significant: $+14.3$ API, $+7.5$ African American, and $+6.7$ Hispanic compared to non-Hispanic Whites. Self-reported general health also remained statistically significant ($+12.9$ for poor vs. excellent health). The associations with history of chronic conditions were attenuated but remained statistically significant: COPD ($+16.3$), heart attack ($+5.3$), angina ($+5.0$), diabetes ($+3.7$), stroke ($+2.8$), and cancer ($+2.3$). All noted differences were significant at $p < .05$.

The female by age interaction (Table 2, column 5) is positive and statistically significant ($p = 0.027$), indicating that the decrease in cessation advice with age is greater for men than women. The gender by race/ethnicity interaction is not statistically significant.