



Tobacco dependence treatment teaching by medical school clerkship preceptors: Survey responses from more than 1000 US medical students[☆]

Alan C. Geller^{a,*}, Roshelle B. Hayes^b, Frank Leone^c, Linda C. Churchill^b, Katherine Leung^b, George Reed^b, Denise Jolicoeur^b, Catherine Okuliar^d, Michael Adams^d, David M. Murray^{f,1}, Qin Liu^b, Jonathan Waugh^e, Sean David^g, Judith K. Ockene^b

^a Department of Social and Behavioral Sciences, Harvard School of Public Health, USA

^b Division of Preventive and Behavioral Medicine, University of Massachusetts Medical School, Worcester, MA, USA

^c Department of Medicine, University of Pennsylvania, USA

^d Georgetown University, USA

^e University of Alabama at Birmingham, USA

^f Division of Epidemiology, Statistics, and Prevention Research Eunice, Kennedy Shriver National Institute of Child Health and Human Development, National Institutes of Health, USA

^g Stanford University School of Medicine, USA

ARTICLE INFO

Available online 25 April 2013

Keywords:
Medical schools
Education
Smoking

ABSTRACT

Objective. To determine factors associated with tobacco cessation counseling in medical school clerkships.
Methods. Third-year medical students at 10 medical schools across the United States completed a 100-item survey, measuring the frequency with which they experienced their preceptors providing clinical teaching components: clear instruction, feedback, modeling behavior, setting clear objectives, and responding to questions about tobacco dependence counseling as well as frequency of use of tobacco prompts and office systems. Our primary dependent measure was student self-reported skill level for items of tobacco dependence treatment (e.g. “5As”).

Results. Surveys were completed by 1213 students. For both family medicine and internal medicine clerkships, modeling and providing clear instruction on ways to provide tobacco counseling were reported most commonly. In contrast, providing feedback and clear objectives for tobacco dependence treatment lagged behind. Overall, students who reported preceptors' provision of optimal clinical teaching components and office system prompts in both family medicine and internal medicine clerkships had higher self-reported skill ($P < 0.001$) than students with no exposure or exposure during only one of the clerkships.

Conclusions. Future educational interventions intended to help students adopt effective tobacco dependence treatment techniques should be engineered to facilitate these critical precepting components.

© 2013 Elsevier Inc. All rights reserved.

Introduction

Provision of tobacco dependence treatment at each medical visit for patients who smoke, including brief counseling using the 5As (Ask, Advise, Assess, Assist, Arrange), and provision of pharmacologic aids and follow-up, are advocated by numerous organizations. These include the Centers for Disease Control and Prevention (Best Practices for Comprehensive Tobacco Control Programs), the United States Public Health Service, and the American Association for Cancer Research (AACR, 2012; CDC, 2007; Fiore et al., 2004). Optimally, tobacco dependence

counseling competencies should be taught and reinforced in the pre-clinical and clinical years of medical school (Geller et al., 2008) to help ensure that physicians develop the attitudes, knowledge, and skills needed to treat patients who use tobacco. Given this, the Subcommittee on Cessation of the Interagency Committee on Smoking and Health's National Action Plan for Tobacco Cessation called for medical schools to develop, implement, and evaluate curricula for tobacco dependence treatment (Fiore et al., 2004).

Medical school clerkship preceptors in primary care are well positioned to help medical students develop tobacco dependence treatment skills. Consistent observation, provision of feedback, and modeling by preceptors reinforce pre-clinical instruction (Aspegren and Lønberg-Madsen, 2005). Growing evidence indicates that the quality of teaching during clinical clerkships is an important predictor of medical students' learning outcomes (Hamdy et al., 2006). Students exposed to good teachers score higher on clerkship examinations, and National Board of Medical Examiners Step 2 examinations, and perform better overall

[☆] A grant from the National Cancer Institute R01 CA136888-04 provided funding for this study.

* Corresponding author at: Harvard School of Public Health, Kresge Building Room 718, 677 Huntington Avenue, Boston, MA 02115, USA. Fax: +1 617 432 1648.

E-mail address: ageller@hsph.harvard.edu (A.C. Geller).

¹ Dr. Murray's research on this paper was conducted prior to his start at the National Institutes of Health.

in clerkships (Kies et al., 2010). Studies of clinical teaching have demonstrated that feedback is an important aspect of students' learning (Cantillon and Sargeant, 2008). Observations of community-based faculty, however, revealed that feedback to students was provided in only 25% of encounters (Torre et al., 2005).

Given the relationship between clinical teaching and student skill level, we hypothesized that participation in clinical teaching for tobacco dependence treatment during internal medicine and family medicine clerkships compared to participation in only one clerkship or in neither clerkship would be associated with greater self-reported student skill scores. Therefore, we assessed students' reports of preceptors' clinical teaching and their exposure to office systems to determine whether these factors were associated with higher reported skill scores. These data provide an estimate of tobacco dependence preceptor teaching activity as reported by students, and provide insights into new initiatives that may enhance clinical precepting.

Methods

Participating schools

The randomized controlled trial (RCT) for Smoking Cessation in 10 Medical Schools (called the MSQuit study), funded by the National Cancer Institute, is designed to compare two different educational approaches to teach medical students how to provide tobacco dependence treatment (i.e. counseling and pharmacotherapy treatment). Participating medical schools are: Creighton University School of Medicine, Georgetown University School of Medicine, Louisiana State University Health Science Center-Shreveport, University of Alabama-Birmingham, University of Iowa Carver College of Medicine, University of Kentucky College of Medicine, University of Louisville School of Medicine, University of Minnesota Medical School, University of Pennsylvania, and Stanford University School of Medicine. Three of the ten schools participated in an earlier study of tobacco dependence treatment training in medical schools; the other 7 were recruited through networks with colleagues. Schools were both private ($n = 3$) and public ($n = 7$), geographically diverse and located in inner-city areas as well as outlying areas. Five of the schools are in states with higher than national average rates of tobacco use. The site investigators are faculty in Departments of Medicine or Family Medicine ($n = 7$) or in the Offices of the Dean or Curriculum Development ($n = 3$). The Institutional Review Boards at each university approved or exempted the data collection protocol. Third year students completed the survey between November 2009 and May 2010 in the classroom, online, or a combination of both. The overall response rate was 82.1%, however the response rate varied by whether the survey was administered in the classroom (92.6%), online (79.5%), or both (one school, 49%). The survey took 13 to 15 min to complete.

Measures

The self-administered survey included more than 100 questions built on content and format used in previous research (Geller et al., 2008). Questions were pilot tested for ease of understanding with third-year medical students from the University of Massachusetts Medical School and the results helped refine the survey used in this study.

Measures of student personal characteristics included demographics: age, gender, class year, career preference; and clerkships completed: family medicine or internal medicine or both. Measures of components of *clinical teaching* included student's level of agreement (1 = strongly agree, 2 = agree, 3 = disagree, 4 = strongly disagree) on how often their preceptors did the following during their clerkships: a) provided clear instruction on ways to deliver tobacco dependence counseling to patients; b) provided feedback on tobacco dependence counseling; c) modeled ways to provide tobacco dependence counseling; d) outlined clear objectives for tobacco dependence counseling such as the number of smokers with whom one should interact; and e) responded to questions about tobacco dependence counseling in the final review with students. Also included are questions to assess *office systems*: the presence of a place in the preceptor's record that reminded staff to advise patients to quit smoking; and whether there were educational materials for patients about smoking cessation prominently displayed in the preceptor's office. In order to account for those students who had not yet attended either family medicine or internal medicine clerkships, or students who did not agree with any of the 7 items, we developed scoring

using the following scoring rubric. Separate family medicine and internal medicine clinical preceptor scores were created by summing the number of agree or strongly agree responses to each of the 7 items. To differentiate between those students who did not agree with any of the items and those who had not yet completed the clerkship, the number one was added to the total score and students who did not have the clerkship were assigned a total score of zero. The scores for family medicine and internal medicine preceptors ranged from zero to 8.

Outcome variables

The primary dependent measure was student self-reported skill level for 6 items of tobacco dependence treatment: a) asking about smoking at every visit, b) advising smokers to quit, c) assessing smokers' willingness to quit, d) assisting smokers to develop a quit plan, e) arranging follow-up contact regarding smoking cessation, and f) discussing pharmacotherapy options and use. Scores were reported on a four-point scale ranging from not at all skilled to very skilled. These responses were assigned a score of 0 = not at all skilled, 1 = somewhat skilled, 2 = moderately skilled, and 3 = very skilled. Skill scores were totaled, and ranged from a low of 0 for not at all skilled to a high of 18 for reporting very skilled for all 6 items. Students also were asked the number of opportunities that they had to implement tobacco dependence counseling with their patients, ranging from no patients to more than 25 patients.

Statistical analysis

The proportion of respondents stating that they strongly disagreed, disagreed, agreed, and strongly agreed was estimated for each of the five clinical teaching items and the two office system items. Rates of responses were compared between clerkships (family medicine versus Internal medicine) using multinomial logistic regression adjusting for age and gender and using robust variance estimators to adjust for multiple answers from the same students for students completing both clerkships.

The association between student skill score and family medicine preceptor score and internal medicine preceptor score was estimated and tested using mixed model linear regression with school as a random effect to account for positive intraclass correlation in the data. Preliminary analysis indicated that the unadjusted ICC for the outcome variable was 0.04 [95% CI 0.01–0.11]. Graphical examination of the association using lowess curves (Cleveland, 1993) indicated that a linear association was appropriate. Models were again adjusted for gender and age. The interaction of the two preceptor scores was estimated and tested.

All statistical analyses were done using Stata 12 (StataCorp LP, College Station, TX).

Results

Surveys were completed by 1213 third-year students at 10 schools of whom 1148 had complete data on gender and clerkship. Slightly more than half of the students were male and the mean age was 26 years. At the time of survey administration, the percentage of students reporting completion of: the internal medicine only (25%); family medicine only (13%); both clerkships (41%); and neither was 21%. Self-reported skills of moderate to very skilled for tobacco dependence treatment were highest for asking about smoking (75%) and lowest for arranging follow-up contact (30%) (Table 1). Sixty-six percent of students reported advising at least 10 patients to quit smoking and 57% had assessed willingness to quit smoking with at least 10 patients.

Clinical teaching—family medicine vs. internal medicine clerkships

For each component of clinical teaching, students reported higher levels of agreement for family medicine preceptors compared to internal medicine preceptors (Table 2; $P < 0.001$). During family medicine clerkships, modeling (69% strongly agree or agree) and providing clear instruction on ways to provide counseling (62%) were the most commonly reported forms of teaching. In contrast, providing feedback (30%) and clear objectives for tobacco dependence treatment

Download English Version:

<https://daneshyari.com/en/article/6047880>

Download Persian Version:

<https://daneshyari.com/article/6047880>

[Daneshyari.com](https://daneshyari.com)