

# Osteopathic Medical Student Administered Smoking Cessation Counseling is an Effective Tool

Barbara Capozzi<sup>1,2</sup>, Ariel Chez<sup>1</sup>, Taissia Carpenter<sup>1</sup>, Laura Hubert<sup>1</sup>, Lissa Hewan-Lowe<sup>1</sup>, Asli Ozcan<sup>1</sup>, Sonu Sahni<sup>1,3,4</sup>

<sup>1</sup>Department of Primary Care, Touro College of Osteopathic Medicine, New York, NY 10027, <sup>2</sup>Department of Clinical Education, New York Institute of Technology College of Osteopathic Medicine, Old Westbury, NY 11568, <sup>3</sup>Department of Pulmonary, Critical Care and Sleep Medicine, Northwell Health, New Hyde Park, NY 11040, <sup>4</sup>Center for Heart and Lung Research, Feinstein Institute for Medical Research, Manhasset, NY 11030, USA

## Abstract

**Background:** Physician counseling on the risks of tobacco smoking and the benefits of cessation has been shown to be an effective method of increasing the rate of smoking cessation. Using the “Help Your Patients Quit Smoking: A Coaching Guide” also referred to as the “7A’s of Smoking Cessation” guideline from the New York City Department of Health and Mental Hygiene is thought to be effective to convey the importance of smoking cessation. **Aim:** To study the efficacy of the “7A’s of Smoking Cessation” guideline counseling conducted by osteopathic medical students. **Materials and Methods:** Osteopathic medical students were trained to counsel smokers for 3–10 min based on New York City Department of Health’s “7A’s of Smoking Cessation” guidelines by a licensed physician. Students then counseled health fair participants who were cigarette smokers for 3–10 min. Postcounseling, participants were administered an 4 question survey to evaluate the effect counseling had on their desire to quit smoking. Survey data were collected and analyzed. Institutional Review Board approval was obtained for this study. **Results:** A total of 13 anonymous health fair participants who were also smokers were administered both counseling sessions and surveys. 11/13 (84.6%) participants stated that the session motivated them to quit smoking. 9/13 (69.2%) participants responded that they were now motivated to discuss smoking cessation with their doctor after being counseled. Of these participants 12/13 (92.3%) had previously attempted to quit smoking without success. **Conclusion:** Participants reported an increased willingness to stop smoking after being counseled by osteopathic medical students. Participants also reported an increased motivation to discuss smoking cessation with their physician. These findings indicate that smoking cessation counseling administered by osteopathic medical students effectively in encouraging smokers to consider reduction or cessation of tobacco use.

**Keywords:** Cigarette use, clinical education, healthcare counseling, osteopathic medical school curriculum, smoking cessation

**Address for correspondence:** Dr. Barbara Capozzi, New York Institute of Technology College of Osteopathic Medicine, Department of Clinical Education, Old Westbury, NY 11568, USA. E-mail: bcapozzi@nyit.edu

## Introduction

Smoking of tobacco remains the leading cause of preventable disease and death in the United States resulting in approximately a half million premature deaths annually.<sup>[1]</sup> It has been shown that brief

physician counseling on the risks of tobacco smoking and the benefits of cessation is an effective method of increasing the rate of smoking cessation in patient

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populations.<sup>[2-4]</sup> Use of the “Help Your Patients Quit Smoking: A Coaching Guide” also referred to as the “7A’s of Smoking Cessation” guideline from the New York City Department of Health and Mental Hygiene (NYCDoH) is thought to be effective to convey the importance of smoking cessation.<sup>[5]</sup> As medical and other healthcare professional students interact with patients during clinical rotations they may be an untapped resource in delivering the message of smoking cessation. We studied the efficacy of the “7A’s of Smoking Cessation” guideline counseling conducted by osteopathic medical students.

### Materials and Methods

Osteopathic medical students were trained by a licensed osteopathic physician on how to counsel smokers for 3–10 min on smoking cessation based on the NYCDoH “7A’s of Smoking Cessation” guidelines. Students then practiced counseling with an instructor until familiarity with smoking cessation guidelines was achieved. Patients were selected from a community health fair that took place on the campus of the Touro College of Osteopathic Medicine, Harlem Campus. During the community health fair, attendees were randomly asked if they were smokers and permission was obtained to ask further questions about smoking. Students then counseled health fair participants who were cigarette smokers for 3–10 min based on NYCDoH guidelines. After the counseling session, participants were administered a 4 question survey to evaluate the effect that the counseling had on their desire to quit smoking. The questions asked were as follows: “Did this session motivate you to think about quitting smoking?” “Did this experience motivate you to see a doctor about more help with stopping smoking?” “Have you ever discussed this with your doctor?” and “Have you ever tried to quit smoking before?” Survey data were collected and tabulated. Data were then analyzed. Institutional Review Board approval was obtained for this study (HSIRB #1618).

### Results

Students were effectively able to administer smoking cessation advice. They were able to reiterate questions and advice as outlined by the NYCDoH guidelines. A total of 13 anonymous health fair participants who were also smokers were administered both counseling sessions and surveys. 11/13 (84.6%) participants stated that the session motivated them to quit smoking. 9/13 (69.2%) participants responded that they were now motivated to discuss smoking cessation with their doctor after being counseled. Of these participants, 12/13 (92.3%) had previously attempted to quit smoking

**Table 1: Smoking cessation survey questions and results**

Survey question	Percentage that replied yes
Did this session motivate you to think about quitting smoking?	11/13 (84.6)
Did this experience motivate you to see a doctor about more help with stopping smoking?	9/13 (69.2)
Have you ever discussed this with your doctor?	8/13 (61.5)
Have you ever tried to quit smoking before?	12/13 (92.3)

without success. Results have been summarized in Table 1.

### Discussion

This is the first study to the best of our knowledge that demonstrates smoking cessation counseling effectiveness of osteopathic medical students. In this pilot study, we explored the effect of tobacco cessation counseling based on the “7A’s of Smoking Cessation” NYCDoH conducted by osteopathic medical students changed the attitude of smokers regarding quitting smoking.<sup>[5]</sup> This study showed that 3–10 min of smoking cessation counseling greatly increased a patient’s motivation to quit smoking and furthermore increases their willingness to seek advice from their doctors. In the community health fair setting study participants were willing to answer questions asked by medical students. After a 3–10 min session participants indicated that participants were more open to smoking cessation postcounseling as well. Participants showed an increased willingness to stop smoking after being counseled by osteopathic medical students on the benefits of smoking cessation. Participants also reported an increased motivation to discuss smoking cessation with their physician.

This study is important in the fact that it shows that medical students are able to help address the issue of smoking cessation. As it is known that approximately one fifth of all deaths in the United States are attributed to tobacco use this study should reinforce the teaching of smoking cessation curricula in osteopathic medical schools.<sup>[6]</sup>

### Smoking cessation curriculum

Smoking cessation education, although in recent years has increased, is still at low levels. In a 2004 survey study on 19 osteopathic medical schools by Montalto *et al.* only 17 responded, 64.7% of which reported <3 h of training in tobacco dependence treatment techniques during all 4 years of medical school education. Sixty percent of reporting schools did not require clinical training in smoking cessation techniques. Thirty-six percent of reporting school required clinical training in

an artificial setting without patients. More surprisingly none of the reporting schools required clinical training with live patients.<sup>[7]</sup> This phenomenon is not limited to our borders. In a 2003 study of medical schools in the United Kingdom by Roddy *et al.* it was found that there was no mention of smoking or smoking cessation in the published curriculum material of 42% of surveyed medical schools. Training in clinical aspects of smoking cessation was particularly neglected, with 60% of medical school seniors reporting that they graduated unable to deliver smoking cessation interventions in accordance with national guidelines.<sup>[8]</sup> A follow-up study on tobacco dependence curricula by Griffith *et al.* showed that as compared with Montalto *et al.* study a significant increase was noted in the percentage of schools covering tobacco dependence as well as reported hours of tobacco dependence instruction were also significantly higher in 2010 compared with those in 1998.<sup>[7]</sup>

### Smoking cessation curriculum implementation

There have been many attempts to deliver smoking cessation education to health profession students. Until date, there has been no particular method of delivering smoking cessation curricula which has been found to be better than other. In a study by Roche *et al.*, a randomized controlled trial was conducted to examine the relative effectiveness of four different educational programs in teaching smoking cessation skills to 5<sup>th</sup> year Australian medical students.<sup>[9]</sup> The four methods were a traditional didactic lecture mode (control group), audio feedback through the use of audiotape role plays, role plays with peer feedback and video feedback. Students' smoking cessation intervention skills were assessed before training and at the end of the term via videotaped interviews with simulated patients. It was found that the medical students demonstrated significantly improved skills in smoking intervention despite the method of smoking cessation teaching. There was no overall differences in smoking intervention skills between the three experimental training methods.<sup>[9]</sup>

Some of the cited barriers to smoking cessation education are a lack of course time, lack of access to materials and experts, and relevance of the smoking cessation materials. To address this Pederson *et al.* conducted a study where a smoking cessation and prevention curriculum was made available online.<sup>[10]</sup> The study found that in medical schools pre- and post-exposure to web-based curricula showed improvements in smoking cessation knowledge. There were also statistically significant improvements in all categories of self-rated ability to perform six counseling skills. The web-based curriculum also successfully improved the students' self-rated counseling skills.<sup>[10]</sup>

This study used a clinical instructor-centered approach where a clinical instructor educated a small group of students for a short period, 3–10 min. Students did receive supplemental material to assist in smoking cessation counseling. Our results show that a nominal amount of time is required to convey the message of quitting the use of tobacco.

### Conclusion

Our study findings indicate that smoking cessation counseling administered by osteopathic medical students was an effective way to encourage smokers to consider reduction or cessation of tobacco use. Our study also showed that nominal time is needed to give osteopathic medical students the tools necessary to convey the message of smoking cessation. Due to a small sample size of study participants further larger studies are needed to confirm the results of this study.

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### Conflicts of interest

There are no conflicts of interest.

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