Providing Tobacco Dependence Treatment and Counseling Prior to Medical School: Associations with Self-reported Tobacco Counseling Skills, Intentions and Perceived Effectiveness Of Treatment

Rui S. Xiao, MPH¹, Rashelle B. Hayes, PhD², Linda C. Churchill, MS², Denise Jolicoeur, MPH, CHES²
Alan Geller, RN, MPH³, Judith K. Ockene, PhD, MEd, MA²

¹Clinical and Population Health Research PhD Program, University of Massachusetts Medical School, Worcester, MA;
²Division of Preventive and Behavioral Medicine, Department of Medicine, University of Massachusetts Medical School, Worcester, MA;
³Department of Society, Human Development and Health, Harvard School of Public Health, MA

Objective
To examine the association between having tobacco dependence treatment experience prior to medical school and 1) intentions to treat smokers, 2) self-reported counseling skills, and 3) perceived effectiveness of tobacco dependence treatment among first-year medical students.

Methods
Participants were first-year students from 10 U.S. medical schools participating in the MSQuit (Medical Students helping patients QUIT tobacco) study (RCT for smoking cessation in 10 Medical Schools, NCI R01 136888 (Ockene, PI))

In the baseline survey, students were defined as having any prior tobacco dependence treatment experience if they endorsed any prior 5A counseling behavior (e.g. Ask, Advise, Assess, Assist, or Arrange).

Students indicated their level of agreement on their intention to treat and counsel smokers, their current skill level to complete each 5A, and perceived effectiveness of tobacco dependence-related treatment.

T-tests, Chi-square tests and linear regression model were used for analysis. Medical school was included in the regression model as cluster effect.

Results
118 student were excluded because of missing data on potential confounders.
Of 1269 eligible first-year medical students, 53% were male, 75% non-Hispanic white and 5% non-Hispanic black, with mean age of 23 years (SD: 2 years). 89% were non-smokers and 56% had a close family member who smoked.

685 students had any prior tobacco dependence treatment experiences.

Prior tobacco dependence treatment experiences

<table>
<thead>
<tr>
<th>Prior experiences</th>
<th>Mean (SD)</th>
<th>Beta Coefficient (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any experience</td>
<td>4.8 (0.6)</td>
<td>0.08 (-0.03, 0.2)</td>
</tr>
</tbody>
</table>

Tobacco counseling intentions and skills in relation to tobacco dependence treatment experiences prior to medical school

<table>
<thead>
<tr>
<th></th>
<th>Score Range</th>
<th>Any tobacco dependence treatment experience M (SD)</th>
<th>No tobacco dependence treatment experience M (SD)</th>
<th>Beta Coefficient (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intentions</td>
<td>0-5</td>
<td>4.8 (0.6)</td>
<td>4.7 (0.8)</td>
<td>0.08 (-0.03, 0.2)</td>
</tr>
<tr>
<td>Skills</td>
<td>0-5</td>
<td>1.6 (1.5)</td>
<td>1.1 (1.3)</td>
<td>0.6 (0.4, 0.7)</td>
</tr>
</tbody>
</table>

Conclusion
A substantial number of medical students have had at least some tobacco counseling experience prior to medical school. Early training experiences may be beneficial in helping students enhance their tobacco counseling skills and perceptions about treatment.

Perceived effectiveness of tobacco dependence-related treatment in relation to any tobacco dependence treatment experience prior to medical school