Primary Care Provider Education to Address Barriers and Reduce Disparities in Lung Cancer Screening and Smoking Cessation Treatment: A Pilot Trial
Randi M. Williams1, *Laaney Smith1, Julia Whealan1, Jack Childs2, Katharine Glassmeyer2, Andrea K. Shepherd, DNP, FNP-C3, Allison Windels, MD,4 Maria Geronimo, MSN5, Vicky Pandik, MD5, Joan Breeze, NP5, Namita Puran, NP6, George Luta, PhD7, Eric Anderson, MD8, Lucile Adams-Campbell, PhD2 & Kathryn L. Taylor, PhD1
1Georgetown University Medical Center, 2Georgetown University, 3Baylor University, 4MedStar Georgetown University Hospital, 5Anne Arundel Medical Center, 6MedStar Shah Medical Group, 7Medstar Washington Hospital Center

*Presenting author

Introduction

• Primary care provider-initiated discussions about LCS are low overall, and African Americans and other racial and ethnic minority individuals are less likely than Whites to have these discussions.1
• Racial and ethnic disparities also exist in receiving advice to quit smoking from their providers.2
• Effective methods are needed to improve provider knowledge about LCS, tobacco-related disparities, and to provide resources to achieve equity in LCS rates.

Objectives

1. Understand patient and provider level barriers to tobacco treatment and LCS.
2. Develop a course to (1) educate PCPs about these barriers and (2) provide resources for providers to address these barriers with their patients.
3. Report the feasibility and impact of integrating a self-directed 30-minute Lung Cancer Health Disparities course with the LuCa National Training Network Lung Cancer Screening course (LuCa)3 on providers’ knowledge of LCS and its associated health disparities.

Methods

Phase I: Qualitative interviews
• Completed qualitative interviews with PCPs (N=9) and African American patients eligible for LCS (N=8; 4 screened, 4 unscreened) to assess barriers to LCS and tobacco cessation.

Phase II: Designing the course
• Common barriers were used as framework for the development of a 30-minute e-learning provider education course.
• The Health Disparities (HD) course covered the following topics: 1) disparities in the burden of lung cancer; 2) disparities in smoking patterns and utilization of evidence-based smoking cessation treatments; 3) patient barriers to LCS; and 4) resources for providers to address common LCS barriers (e.g., patient reminders to support scheduling the scan, offering transportation options).
• Experts in health disparities (N=6) and LCS (N=9) provided detailed critiques of the course content and presentation.

Phase III: The quasi-experimental study
• Eligible primary care providers from MedStar Health were recruited to complete a pre-test to assess providers’ knowledge and attitudes about LCS and associated health disparities.
• Providers (N=91) were assigned to complete the LuCa only course or the LuCa + HD course.
• Providers completed a post-test to assess the impact of the intervention on knowledge and attitudes.

Table 1. Characteristics by Study Arm

<table>
<thead>
<tr>
<th>Provider Characteristics</th>
<th>LuCa (N=49)</th>
<th>LuCa + HD (N=42)</th>
<th>Total (N=91)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, Mean (SD)</td>
<td>35.5 (6.5)</td>
<td>31.7 (6.3)</td>
<td>33.7 (6.3)</td>
</tr>
<tr>
<td>Gender, Male (%)</td>
<td>24 (49.0)</td>
<td>21 (50.0)</td>
<td>45 (49.5)</td>
</tr>
<tr>
<td>Race, White (%)</td>
<td>25 (50.0)</td>
<td>22 (52.4)</td>
<td>47 (56.6)</td>
</tr>
<tr>
<td>Years since completing medical education, Mean (SD)</td>
<td>8.7 (6.4)</td>
<td>6.3 (5.7)</td>
<td>6.6 (6.2)</td>
</tr>
</tbody>
</table>

Results

• Majority of the providers (N=91) were residents (60.4%) and specialized in internal medicine (63.7%). Baseline knowledge and attitudes did not differ between groups (p>0.05).

Discussion

• Although the post-test mean knowledge scores were not significantly different, the results suggest that the LuCa + HD course may increase a provider’s knowledge about LCS-related disparities.
• Both arms indicated the amount of information provided was ‘just right’ (87.5% LuCa only; 82.9% LuCa + HD) suggesting that even the longer intervention (1.5 hours) may be a feasible education tool among busy PCPs.
• Limitations of this study include a small sample size and provider participation was confined to one health system.
• As a next step, we intend to evaluate the course in a randomized trial to look at the impact of the course on providers’ lung screening referrals and whether referrals differ by race.

Conclusions

• Preliminary evidence shows the two e-learning courses can be easily disseminated and are effective in increasing providers’ knowledge on LCS, smoking cessation, and related disparities impacting patients.

Scan the QR code to access the course
It is best viewed on a computer

Acknowledgements

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References

3. LuCa National Training Network. Lung Cancer and the Primary Care Provider. Online course offered via NMM. EditHub, Lexington, KY

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