Society of Behavioral Medicine supports implementation of high quality lung cancer screening in high-risk populations

Karriem S. Watson, DHSc, M.S., MPH,^{1,2,3} Amanda C. Blok, Ph.D., MSN, PHCNS-BC,⁴ Joanna Buscemi, Ph.D.,^{1,2} Yamile Molina, Ph.D., M.S., MPH,^{1,2,3,5} Marian Fitzgibbon, Ph.D.,^{1,2} Melissa A. Simon, M.D., MPH,^{6,7} Lance Williams, Ph.D.,⁸ Kameron Matthews, M.D., J.D.,^{1,2,3} Jamie L. Studts, Ph.D.,⁹ Sarah E. Lillie, Ph.D.,¹⁰ Jamie S. Ostroff, Ph.D.,¹¹ Lisa Carter-Harris, Ph.D., APRN, ANP-C,¹² Robert A. Winn, M.D.^{1,2,3}

¹University of Illinois Cancer Center, Chicago, IL, USA

²University of Illinois at Chicago, Chicago, IL, USA

³University of Illinois Hospital & Health Sciences System Mile Square Health Center, Chicago, IL, USA

⁴University of Massachusetts Medical School, Worcester, MA, USA

⁵Fred Hutchinson Cancer Research Center, Seattle, WA, USA

⁶Northwestern University Feinberg School of Medicine, Chicago, IL, USA

⁷Robert H. Lurie Comprehensive Cancer Center, Chicago, IL, USA

⁸Northeastern Illinois University, Chicago, IL, USA

⁹University of Kentucky College of Medicine, Lexington, KY, USA

¹⁰Minneapolis Veterans Affairs Hospital, Minneapolis, MN, USA

¹¹Memorial Sloan Kettering Cancer Center, New York City, NY, USA

¹²Indiana University School of Nursing, Indianapolis, IN, USA

Correspondence to: K Watson
kswatson@uic.edu

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Abstract

The Society of Behavioral Medicine (SBM) supports the United States Preventive Services Task Force (USPSTF) recommendation of low-dose computed tomography (LDCT) screening of the chest for eligible populations to reduce lung cancer mortality. Consistent with efforts to translate research findings into real-world settings, SBM encourages health-care providers and health-care systems to (1) integrate evidence-based tobacco treatment as an essential component of LDCT-based lung cancer screening, (2) examine the structural barriers that may impact screening uptake, and (3) incorporate shared decision-making as a clinical platform to facilitate consultations and engagement with individuals at high risk for lung cancer about the potential benefits and harms associated with participation in a lung cancer screening program. We advise policy makers and legislators to support screening in high-risk populations by continuing to (1) expand access to high quality LDCT-based screening among underserved high-risk populations, (2) enhance cost-effectiveness by integrating evidence-based tobacco treatments into screening in high-risk populations, and (3) increase funding for research that explores implementation science and increased public awareness and access of diverse populations to participate in clinical and translational research.

Keywords

Lung cancer, Screening, Shared decision-making, Policy

BACKGROUND

Lung cancer claims more lives than breast, colorectal, and prostate cancer combined [1]. Based on the results from the landmark National Lung Screening Trial (NLST) [2], lung cancer screening with LDCT has been shown to reduce lung cancer mortality [3]. Current recommendations from the USPSTF [4] include screening for adults who meet the following primary eligibility criteria:

Implications

Practice: Health-care providers and health-care systems should employ evidence-based practices to incorporate tobacco cessation into lung cancer screening programs using LDCT along with the use of shared decision-making to ensure high-risk populations have a clear understanding of risk and benefits of screening.

Policy: Policy makers and legislators should support expanded resources to ensure cost-effective screening and tobacco cessation programs along with expanding policies to address structural barriers that impact screening access and uptake in high-risk populations to improve compliance.

Research: SBM advocates for research that examines the incorporation of implementation science to explore structural barriers that impact access, awareness, uptake, and adherence to tobacco cessation and LDCT screening for lung cancer in high-risk populations and also strongly encourages research to include racially and ethnically diverse populations in the participation of lung cancer screening trials.

- 55–80 years of age
- Asymptomatic
- Currently smoke, or quit within the last 15 years
- A 30-pack-per-year smoking history
- Do not have other medical conditions that would preclude benefitting from screening

Despite the recent public policies establishing coverage for lung cancer screening among high-risk populations [5], lung cancer screening awareness, access, and adherence remain extremely low, particularly among underserved populations [6].

INTEGRATION OF EVIDENCE-BASED TOBACCO TREATMENT

Tobacco abstinence remains the primary method of lung cancer prevention [7], and evidence-based

guidelines for treating tobacco dependence exist [8], including preliminary guidance on how to integrate tobacco treatment into lung cancer screening programs [9]. Because adults interested in lung cancer screening are concerned about their lung cancer risk, integrating evidence-based tobacco treatments and resources within screening programs would capitalize on this “teachable moment [10–12].” Such interventions delivered within the context of lung cancer screening programs would extend the benefit and cost-effectiveness of screening [9, 13, 14].

PATIENT ENGAGEMENT AND SHARED DECISION-MAKING

With the unprecedented decision to require documentation of shared decision-making for lung cancer screening as a prerequisite for coverage, the Centers for Medicare & Medicaid Services highlighted an important aspect of the screening process [5]. Despite its demonstrated benefits, individuals seeking LDCT-based lung cancer screening should also be informed of potential harms, including false-positive results, radiation exposure, significant incidental findings, overdiagnosis, and adverse psychological effects, specifically for patients who receive an indeterminate screening result [15]. In addition, patients should be advised to adhere to annual repeat LDCT scans as well as any recommendations for follow-up of abnormal findings.

SPECIAL CONSIDERATIONS FOR UNDERSERVED POPULATIONS AT HIGH RISK

Large health disparities remain a nearly endemic aspect of lung cancer epidemiology [1]. The disproportionate burden of lung cancer incidence and mortality largely tracks disparities associated with higher tobacco use among individuals with fewer socioeconomic resources, some racial/ethnic minority groups, individuals residing in rural areas, the lesbian, gay, bisexual, transsexual and questioning (LGBTQ) community, and individuals with psychiatric comorbidity. Efforts to implement high quality lung cancer screening [16] should incorporate targeted efforts to reach underserved populations that experience an unequal burden of lung cancer both in terms of public awareness campaigns and access to high quality lung cancer screening programs in local community settings.

SUMMARY AND RECOMMENDATIONS

SBM supports integration of evidence-based tobacco treatment and a shared decision-making model in the context of LDCT-based lung cancer screening for eligible, informed adults.

Recommendations for health-care providers

1. Integrate evidence-based tobacco treatment in LDCT-based lung cancer screening protocols.
2. Engage in shared decision-making with LDCT-seeking patients, communicating and exploring

the potential benefits, harms, and uncertainties of screening, to ensure informed uptake of services.

3. Consider structural barriers that impact screening access, uptake, and subsequent adherence and develop approaches to reach underserved high-risk populations.

Recommendations for policymakers

1. Support evidence-based tobacco treatment approaches, including combined pharmacological and behavioral programs integrated within lung cancer screening programs to help individuals achieve and/or maintain smoking cessation.
2. Reinforce high-value care as opposed to high-utilization care, including efforts to screen the *right* people (i.e., eligible, informed, and committed), not simply *more* people.
3. Expand resource capacity for lung cancer screening implementation within federally qualified health centers (FQHCs) and other community health and medical centers that provide health care to a large proportion of patients at elevated risk for lung cancer to ensure access to high-quality screening services.
4. Increase funding for research to include the following:
 - a. Implementation science to inform optimal clinical operations, including exploration of efforts to promote adherence, understand infrastructure requirements, and manage pulmonary nodules and incidental findings
 - b. Public awareness efforts and patient navigation strategies that promote patient engagement and accurate understanding of the benefits, harms, and uncertainties of screening
 - c. Continued exploration of the benefits, harms, and overall effectiveness of LDCT-based lung cancer screening among underserved populations, including those minimally represented in the NLST pivotal trial [2].

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Compliance with ethical standards

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does not contain any information that would violate human rights nor does the manuscript have any impact on the welfare of animals. No IRB approval was required nor was informed consent required as the manuscript does not contact any information collected from human subject research. This manuscript does not violate the ethical standards of the declaration of Helsinki as it does not involve any human subjects research.

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