



Smoking Cessation Interventions and Lung Cancer Screening

Smoking is the leading cause of preventable disease and death in the United States.¹ Most smokers want to quit, but often require multiple quit attempts and may try various tobacco cessation treatments. The most recent data show that seven in ten smokers want to quit, but only one in ten quit successfully.² And quitting smoking is the single best thing most smokers can do to improve their health.

Lung cancer screening with low-dose CT (LDCT) scans has been found to be effective for high-risk adults with a history of smoking. The U.S. Preventive Services Task Force (USPSTF) issued a ‘B’ grade for lung cancer screenings on December 30, 2013 for those at high risk.³ Under the Affordable Care Act, most plans, including Medicaid expansion plans and most private insurance, must cover preventive services given an ‘A’ or ‘B’ by the USPSTF. Medicare has other coverage requirements.

On February 10, 2022, the Centers for Medicaid and Medicare Services (CMS) updated their coverage determination of LDCT lung cancer screening. According to CMS, eligible adults:

- Are 50–77 years of age;
- Are asymptomatic;
- Have a tobacco smoking history of at least 20 pack-years;
- Are a current smoker or have quit smoking within the last 15 years; and
- Receive a written order for lung cancer screening with LDCT.

Coverage began immediately and this policy has significantly expanded who can access lung cancer screening with Medicare.

Requirements for Cessation Counseling under Medicare

CMS issued requirements for the structure of initial LDCT screening visits. According to the NCD, in addition to eligibility determination, initial screening visits must include shared decision-making (SDM).² Both physicians and non-physician practitioners (Physician’s Assistant, Nurse Practitioner or Certified Nurse Specialist) may conduct these visits under the billing code G0296. CMS explicitly requires that SDM visits include certain components, specifically “counseling on importance of maintaining cigarette smoking abstinence if former smoker; or the importance of smoking cessation if current smoker and, if appropriate, furnishing of information about tobacco cessation interventions.” However, it does not require that subsequent annual lung cancer screenings include SDM or cessation counseling.⁵

Glossary - Key Terms

CMS – Centers for Medicare and Medicaid Services

LDCT – Low-dose computed tomography (the scan)

NCD – National coverage determination

PCP – Primary Care Provider

SDM – Shared decision-making

¹USPSTF defines high risk adult as an adult aged 55 to 80 years who has a 30 pack-year smoking history and currently smokes or has quit within the past 15 years.

²The American Medical Association (2012) defines shared-decision making (SDM) as “a formal process or tool that helps physicians and patients work together to choose the treatment option that best reflects both medical evidence and the individual patient’s priorities and goals for his or her care”

The Provider Perspective

Outside of lung cancer screening visits, Medicare allows for eight cessation counseling sessions per year. Therefore, lung cancer screening presents an additional “teachable moment” for providers to encourage patients who smoke to quit. Most smokers want to quit, and many require multiple quit attempts before they quit for good. Patients can benefit from encouragement from their providers during LDCT lung cancer screening visits. CMS guidelines are not specific about the counseling component of SDM visits, thus the extent of discussing cessation varies among physicians. In a small qualitative study, only 23 percent of physicians referred their patients to local cessation clinics and quitlines during SDM. Most of the providers cited patient resistance to discussing cessation and lack of time as reasons for not discussing smoking cessation.⁶

The American Lung Association contacted practitioners in this field to ask about their experiences with smoking cessation interventions during lung cancer screening. The following details the main aspects of lung cancer screening that were discussed:

- **Program Approach/Structure:** There are two main types of lung cancer screening programs, centralized and decentralized. The practitioners specifically highlighted their positive experiences with centralized screening programs. They also emphasized having a single specialist be required to conduct SDM and share the results of the screening, rather than dividing the responsibility between the patient’s primary care provider and the screening center.
 - In **centralized screening programs**, the patient is referred for screening by the provider, typically the patient’s primary care provider (PCP). From there, the lung cancer specialist at the screening center determines the patient’s eligibility, conducts shared decision-making, sends the patient to be screened (if appropriate) and manages the results of the screening. This type of patient-centered program adheres to CMS screening requirements.^{7, 8, 9} Not all institutions have the capability or willingness to develop centralized programs.
 - In decentralized screening programs, the original provider or PCP orders the screening and is responsible for managing the results and communicating them to the patient once they are received from the screening center.^{10, 11, 12} The involvement of the PCP is going to vary from region to region and from practice to practice. PCP may wish to be more involved but face hurdles including time commitment, the workflow adjustments, the familiarity with SDM tools and the subsequent responsibility of appropriate referral once the scan is abnormal.

Best Practices

Based on the CMS guidelines, available research and the experiences of practitioners, the following are some suggested best practices for incorporating smoking cessation into lung cancer screening for Medicare enrollees:

1. **Discuss cessation during SDM visits.** The process of lung cancer screening presents a teachable moment for providers to address quitting with patients who smoke. Therefore, all providers should follow the CMS guidelines to counsel patients on the importance of smoking cessation and/or abstinence.¹³
2. **Be comprehensive in approaching cessation.** Providers should take the steps to ask patients about their past quit attempts, motivation to quit and desired resources. They can also incorporate the five major steps to cessation intervention, also known as the “5 A’s”: Ask, Advise, Assess, Assist and Arrange.¹⁴
3. **Provide adequate resources.** Providing patients with information about quitlines is a key component of discussing cessation, but there are other important resources that physicians can share. These include additional information about the benefits of quitting, prescribing cessation medications and providing counseling and information about continued counseling. In a decentralized model, patients should be connected with an appropriate practitioner who can help them quit.

4. **If appropriate, incorporate cessation counseling into subsequent annual screening visits.** A 2017 study conducted in a major medical center found that while patient understanding of screening eligibility criteria and the benefits of LDCT improved immediately following the SDM appointment, it decreased after only one month.¹⁵ The American College of CHEST Physicians suggests that incorporating SDM into subsequent annual screenings can serve as a beneficial reminder.¹⁶ If patients currently smoke and require annual lung cancer screening, it may be valuable to discuss cessation at each visit. This can be billed to G0296 but must abide by all criteria for an SDM visit, according to CMS.¹⁷
5. **Develop a patient-centered program.** Regardless of structure, screening programs should be focused on providing quality care to patients, which includes discussing cessation with current smokers and abstinence with former smokers during SDM visits. Trusted lung cancer screening centers, as well as experienced practitioners, endorse the use of centralized lung cancer screening programs.^{18, 19} However, having primary care providers drive this process, as under decentralized screening programs, may also have a strong impact, especially if they have good relationships with their patients. In decentralized programs, the American College of CHEST Physicians notes that ordering providers should be properly trained and equipped to deliver the shared-decision making visit, specifically counseling. An important consideration for developing any screening program is coordination amongst providers to address patients' specific needs.

Low-dose CT scans are effective at finding and treating lung cancer at a more treatable stage. The guidance from CMS encourages providers to use this time to help patients quit tobacco and stay quit. Providers and health systems can work to implement a system that works best for their patients to quit tobacco for good.

February, 2022

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²Fiore MC, Bailey WC, Cohen SJ, et al. Treating Tobacco Use and Dependence. A Clinical Practice Guideline. US Department of Health and Human Services. Public Health Service, 2008. Available at: <http://www.ahrq.gov/professionals/clinicians-providers/guidelines-recommendations/tobacco/index.html>

³U.S. Preventive Services Task Force. (December 2013). Lung Cancer: Screening. Available at: <https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/lung-cancer-screening>

⁴Centers for Medicare and Medicaid Services. (October 2015). Medicare Coverage of Screening for Lung Cancer with Low Dose computed Tomography (LDCT). Available at: <https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNMattersArticles/Downloads/mm9246.pdf>

⁵Centers for Medicare and Medicaid Services. (February 2022). Screening for Lung Cancer with Low Dose Computed Tomography (LDCT). Available at: <https://www.cms.gov/medicare-coverage-database/view/ncacal-decision-memo.aspx?proposed=N&ncad=304>

⁶Kanodra NM, Pope C, Halbert CH, Silvestri GA, et al. (2016). Primary Care Provider and Patient Perspectives on Lung Cancer Screening. A Qualitative Study. Ann Am Thorac Soc. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/27676369>

⁷Swedish Cancer Institute. (2016). Model of Lung Cancer Screening Implementation: Is it Interoperable? Available at: <https://preventcancer.org/wp-content/uploads/2016/07/800am-Joelle-Fathi.pdf>

⁸Cleveland Clinic. (n.d.) Respiratory Institute Outcomes: Lung Cancer Screening Program. Available at: <https://my.clevelandclinic.org/departments/respiratory/outcomes/770-lung-cancer-screening-program>

⁹Mazzone PJ, Tenenbaum A, Seeley M, Petersen H, et al. (2017). Impact of a Lung Cancer Screening Counseling and Shared Decision-Making Visit. <https://www.ncbi.nlm.nih.gov/pubmed/27815154>

¹⁰Swedish Cancer Institute. (2016). Model of Lung Cancer Screening Implementation: Is it Interoperable? Available at: <https://preventcancer.org/wp-content/uploads/2016/07/800am-Joelle-Fathi.pdf>

¹¹Cleveland Clinic. (n.d.) Respiratory Institute Outcomes: Lung Cancer Screening Program. Available at: <https://my.clevelandclinic.org/departments/respiratory/outcomes/770-lung-cancer-screening-program>

¹²Mazzone PJ, Tenenbaum A, Seeley M, Petersen H, et al. (2017). Impact of a Lung Cancer Screening Counseling and Shared Decision-Making Visit. <https://www.ncbi.nlm.nih.gov/pubmed/27815154>

¹³Centers for Medicare and Medicaid Services. (October 2015). Medicare Coverage of Screening for Lung Cancer with Low Dose computed Tomography (LDCT). Available at: <https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNMattersArticles/Downloads/mm9246.pdf>

¹⁴Agency for Healthcare Research and Quality. (December 2012). Five major steps to Intervention (The “5 A’s”). Available at: <https://www.ahrq.gov/professionals/clinicians-providers/guidelines-recommendations/tobacco/5steps.html>

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¹⁶Mazzone PJ, Silvestri GA, Patel S, et al. (2018). Screening for Lung Cancer. Available at: [https://journal.chestnet.org/article/S0012-3692\(18\)30094-1/fulltext#sec1](https://journal.chestnet.org/article/S0012-3692(18)30094-1/fulltext#sec1)

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¹⁹Cleveland Clinic. (n.d.) Respiratory Institute Outcomes: Lung Cancer Screening Program. Available at: <https://my.clevelandclinic.org/departments/respiratory/outcomes/770-lung-cancer-screening-program>

²⁰Mazzone PJ, Silvestri GA, Patel S, et al. (2018). Screening for Lung Cancer. Available at: [https://journal.chestnet.org/article/S0012-3692\(18\)30094-1/fulltext#sec1](https://journal.chestnet.org/article/S0012-3692(18)30094-1/fulltext#sec1)