

Lung Cancer Screening in Maine: Sixth Annual Survey Summary

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Acknowledgements

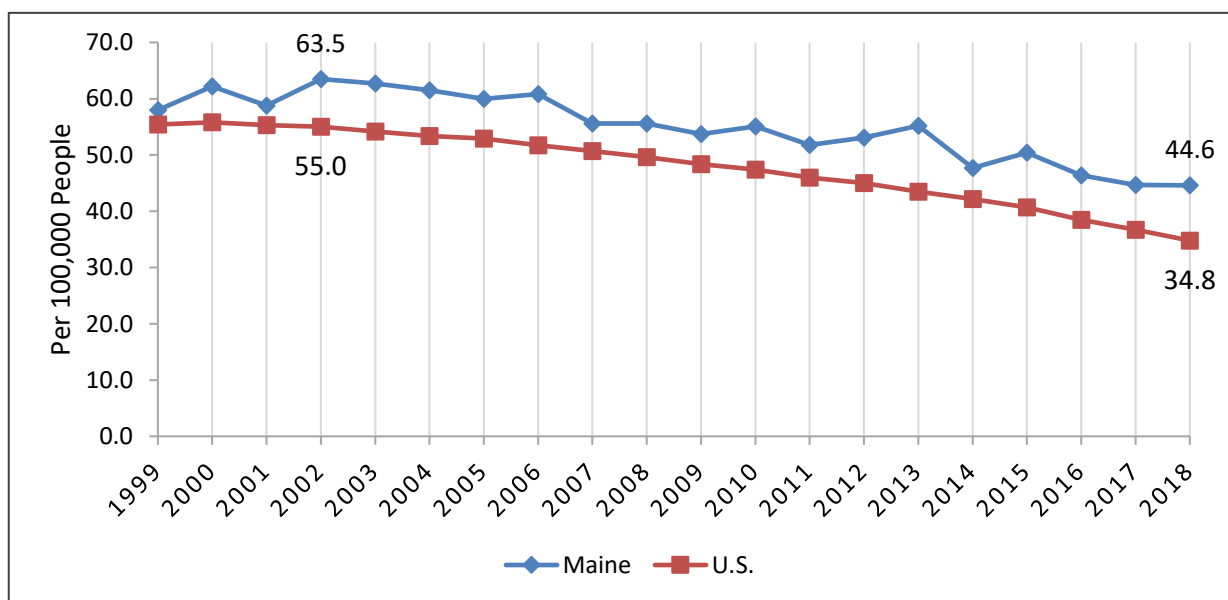
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- Cary Medical Center (Caribou)
- Central Maine Medical Center (Lewiston)
- Franklin Memorial Hospital (Farmington)
- MaineGeneral (Augusta and Waterville)
- Maine Medical Center (Scarborough)
- Millinocket Regional Hospital (Millinocket)
- Mount Desert Island Hospital (Bar Harbor)
- Northern Light Eastern Maine Medical Center (Bangor)
- Northern Light Mayo Hospital (Dover-Foxcroft)
- Northern Light Sebecook Valley Hospital (Pittsfield)
- St. Joseph Hospital (Bangor)
- Waldo County General Hospital (Belfast)
- York Hospital (York and Wells)

INTRODUCTION

This is a summary of the sixth annual Maine lung cancer screening survey. There have been many changes during the years this survey has been administered. Unfortunately, what has not changed is that cancer remains the leading cause of death in Maine and lung cancer persists as being the leading cause of cancer-related death.¹ Annual rates of lung cancer deaths in Maine from 1999-2018 indicate death from lung cancer has been steadily declining from a high of 63.5 per 100,000 people in 2002 to 44.6 per 100,000 people in 2018 (see Figure 1).² Yet Maine's lung cancer death rates remain significantly higher than the U.S. rate of 34.8 per 100,000 people (see Figure 1). In 2018 there were 1,438 new cases of lung cancer diagnosed and 928 deaths due to lung cancer in Maine.² Increasing screening rates for lung cancer could make an impact on lung cancer-related mortality.

Figure 1. Annual Rates of Lung and Bronchus Cancer Deaths, Maine and U.S., 1999-2018



United States Preventive Services Task Force

Evidence-based guidelines for lung cancer screening have been in place for nearly 10 years. In December 2013, for the first time, the U.S. Preventive Services Task Force (USPSTF) issued their recommendation statement on clinical guidelines for lung cancer screening, giving it a grade of B.³ This means the evidence indicates lung cancer screening using low dose computed tomography (LDCT) shows at least a moderate benefit for people who are eligible. Under the Affordable Care Act (ACA), cancer screening is considered a preventive service and included under the Act's Minimum Essential Benefits. Beginning in

¹ *Maine Mortality Report: Ten Most Common Causes of Death 2019*. Augusta, ME: Maine Center for Disease Control and Prevention; February 2022. <https://www.maine.gov/dhhs/mecdc/public-health-systems/data-research/data/documents/2019%20Maine%20Mortality%20Report.pdf>

² U.S. Cancer Statistics Working Group. U.S. Cancer Statistics Data Visualizations Tool, based on 2020 submission data (1999-2018): U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; <https://www.cdc.gov/cancer/dataviz>, released in June 2021.

³ *Final Recommendation Statement: Lung Cancer Screening*. U.S. Preventive Services Task Force. March 2013. <https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/lung-cancer-screening>

2013, all ACA-compliant health plans were required to cover lung cancer screening, and in most cases, must be 100% covered by the plan. (It is noted, however, that some services associated with the screening service may involve out-of-pocket costs.)

Prior to 2013 there were no recommended guidelines for lung cancer screening. The USPSTF regularly reviews current guidelines and recently completed an updated review of lung cancer screening. In March 2021, they issued their most recent guidance (see Chart 1 below) on clinical lung cancer screening. The most notable changes to their 2013 recommendations includes lowering the minimum age for screening from 55 to 50, and pack-year smoking history⁴ from 30 to 20 years.

Chart 1. United States Preventive Services Task Force Lung Cancer Screening Recommendations, 2021

Population	Recommendation	Grade = B
Adults aged 50 to 80 years who have a 20 pack-year smoking history and currently smoke or have quit within the past 15 years	The USPSTF recommends annual screening for lung cancer with low-dose computed tomography (LDCT) in adults aged 50 to 80 years who have a 20 pack-year smoking history and currently smoke or have quit within the past 15 years. Screening should be discontinued once a person has not smoked for 15 years or develops a health problem that substantially limits life expectancy or the ability or willingness to have curative lung surgery.	The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.

METHODOLOGY

Since 2016, the Maine CDC Comprehensive Cancer Control Program (MCCCP) has conducted an annual survey to assess which facilities in Maine are equipped and trained to provide the recommended LDCT lung cancer screening during the previous calendar year. This report summarizes the findings of the most recent survey capturing lung cancer screenings conducted during 2020 (which is before the current recommendations came out in March 2021). Beginning with the second annual survey, MCCCP collaborated with the Maine Lung Cancer Coalition (MLCC) in developing and distributing the survey. They were able to provide expertise on survey questions, updated facility contacts, and outreach to facilities to complete the survey.

All the surveys have included some core questions such as: where LDCT lung cancer screening was taking place, how many individuals had been screened, and perceived barriers to screening. Working in collaboration with MLCC, several questions have been added and removed over the years. (See Appendix A for the 2021 survey tool.) The current year’s survey included sections on COVID-19 and the collection of data on populations with disparities by the facilities.

⁴ *Dictionary of Cancer Terms*. National Cancer Institute. Available at: <https://www.cancer.gov/publications/dictionaries/cancer-terms/def/pack-year>

SURVEY FINDINGS

Facilities Providing Lung Cancer Screening

There were 13 responses to the survey covering 15 sites that were conducting LDCT lung cancer screening during 2020. Two respondents reported on two of their sites. Throughout the rest of this summary, the information reported will be based on the 13 responses unless otherwise noted. These screening sites cover 11 of the 16 counties in Maine, and towns from Caribou to York. The beginning of 2020 was also the beginning of the COVID-19 pandemic when many medical facilities shut down or greatly curtailed many nonemergency services. Due to these circumstances, a few questions about the impact of COVID-19 on their facilities were added to the survey. Eleven facilities reported a complete or partial shutdown of their program for some part of 2020, three indicated a redeployment of staff to COVID-19 duties, one facility added the requirement of patients needing a COVID-19 test prior to screening, one program was delayed in getting their program up and running, one facility did not begin screening until August of 2020, and one facility responded they did not alter their screening services in any way due to COVID-19. Most facilities (10) indicated they would be interested in participating in telemedicine initiatives to improve access to lung cancer screening.

When asked about additional outreach to address populations with disparities such as: uninsured or underinsured, incarcerated or institutionalized, medically underserved, race, sexual orientation/gender identity, or low literacy/non-English speaking, only one facility indicated they collect data on uninsured or underinsured individuals. The survey also asked if they collect data on any priority populations. Six responded they do not, others were unsure, and one indicated that this was handled by another area of the organization. When asked about the barriers to collecting this data, many responded with time, staffing, resources, and the fact that the systems they are reporting into do not have fields to collect this data.

All 13 facilities submit their screening data to the American College of Radiology Lung Cancer Screening Registry. A few indicated this data entry is time consuming, tedious, and takes away from other staffing duties. Eight of the facilities are accredited for LDCT screening by a professional organization (either the American College of Radiology or the GO2 Foundation for Lung Cancer), four are not accredited, and one doesn't know.

Screening Data

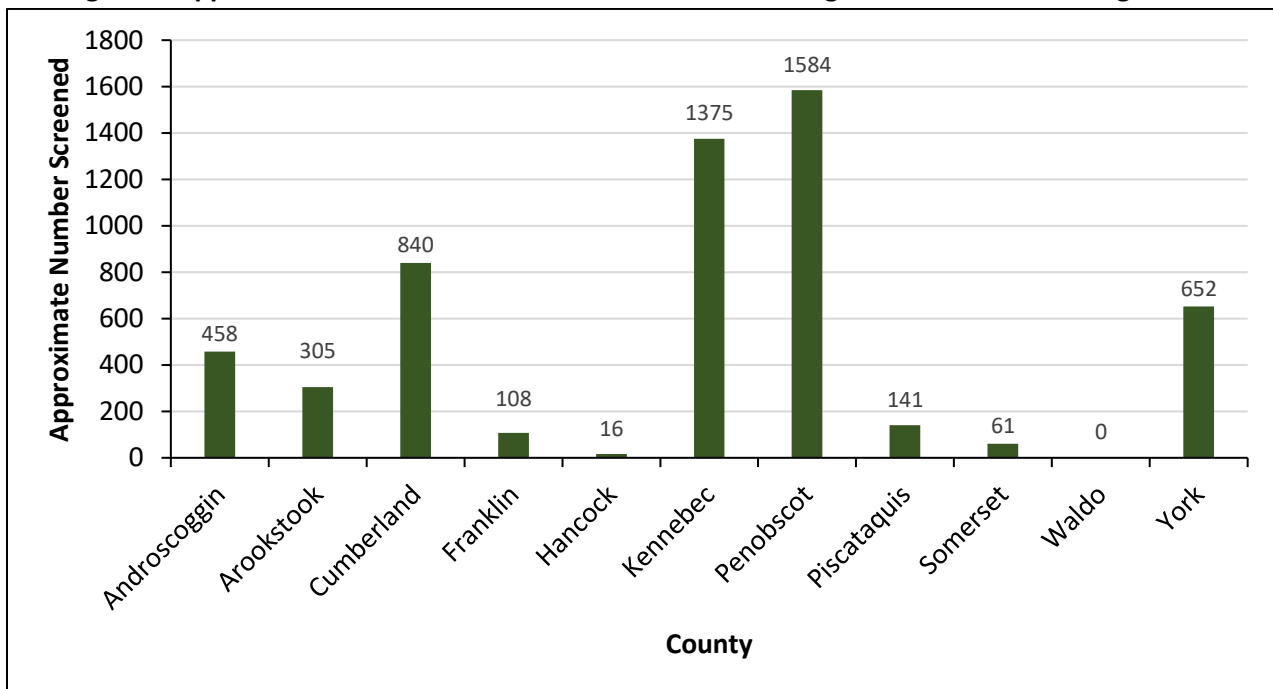
Each year there have been facilities unable to provide data on baseline and/or follow-up screenings, and others are not able to breakdown their data by sex. Therefore, any of the following data are only estimates and may not add up properly due to missing data.

Table 1 provides the reported number of lung cancer screenings conducted each year over the life of the survey. During 2020, twelve of the 13 facilities reported approximately 5,540 total baseline screenings in 10 counties (see Figure 2). One reported not being able to distinguish between the types of screening and their total was included in the baseline data. Eight of the facilities were able to provide data by sex

and reported approximately 1,738 males and 1,842 females were screened for lung cancer. Nine facilities reported an estimated 3,024 individuals participated in a follow-up screening. Based on estimates from seven facilities, 1,321 of the follow-up screenings were on males and 1,095 were on females. Nine facilities reported approximately 88 individuals were diagnosed with lung cancer during 2020. Six facilities were able to provide data by sex and reported 22 males and 29 females were diagnosed with lung cancer.

Year	Approximate Number Screened
2015	1,129
2016	2,189
2017	3,218
2018	2,719
2019	3,855
2020	5,540

Figure 2. Approximate Number of Individuals Screened for Lung Cancer in Maine During 2020



Reported Shared Decision-Making as Part of Lung Cancer Screening

All 13 facilities confirm that patients who are referred for LDCT lung cancer screening meet eligibility criteria before screening is performed. Shared decision-making (SDM) with a healthcare provider should be a part of any evidence-based cancer screening protocol and is required by the Centers for Medicare & Medicaid Services (CMS) for lung cancer screening reimbursement.⁵ Because of this, many facilities require a SDM visit for any patients they screen for lung cancer regardless of insurance coverage. Twelve of the facilities reported requiring a patient to have a SDM visit with a healthcare provider before being screened for lung cancer, and one indicated they didn't know if this happens. Of those who do require a SDM visit, seven reported this happens at the primary care office prior to scheduling the scan, two

⁵ Decision Memo for Screening for Lung Cancer with Low Dose Computed Tomography (LDCT) (CAG-00439R). Centers for Medicare & Medicaid Services. February 2022. Available at: <https://www.cms.gov/medicare-coverage-database/view/ncacal-decision-memo.aspx?proposed=N&ncaid=304&>

responded this takes place at the lung cancer screening program prior to scheduling the scan, and the other three indicated it happens on a separate day from the scan with the primary care doctor, or the lung cancer screening program. One indicated the SDM is done via a telehealth visit. Most (8) replied that SDM visits are conducted by the referring physician, but others utilized patient navigators, nurse practitioners, physician assistants, or other medical staff associated with the program.

Eight facilities reported providing decision aids or decision support tools to their patients, four said they do not provide decision aids, and one does not know. One program uses the Agency for Healthcare Research and Quality decision tools, three give written materials, others give printed materials through electronic medical records or handouts and other brochures. When asked which patient education and counseling resources would be most useful, eight said informational brochures, eight said a printed decision aid, five would like a public service announcement, and two would like an informational video to play for their patients. (Respondents were able to choose more than one answer.)

Many facilities reported utilizing a patient navigator or a designated staff person to coordinate and manage LDCT screening activities including determining screening eligibility, SDM, scheduling, and follow-up. Ten of the 13 facilities indicated the use of a patient navigator from 3 to 40 hours a week with one reporting having two full time staff to coordinate activities.

Screening and Tobacco Referral

Tobacco treatment is an important aspect of the lung cancer screening process and is part of the SDM visit. Counseling on the importance of tobacco treatment, if a current smoker, and providing information about tobacco interventions for the patient, if appropriate, is required by CMS.⁶ Survey participants were asked if a current smoker is eligible for screening, are they automatically referred to tobacco treatment resources. Three of the facilities responded they do refer, six do not, and four didn't know. Of the three facilities that do refer, the healthcare provider or the screening facility makes the referral.

Screening Follow-up

Many perceive lung cancer screening to be something that only needs to be done once, but the USPSTF recommends annual screening for lung cancer. The survey asked if their facility has a standardized process or care pathway for coordinating appropriate follow-up for patients who have received LDCT screening. Nine responded they do and four are unsure whether their facility does or not. When asked what resources their facility uses to coordinate appropriate follow-up for patients who have received LDCT screening services, ten indicated they have a designated staff person, seven have a commercial software program or electronic health record tool, and two have a designated lung cancer screening registry. (Participants were able to choose more than one response).

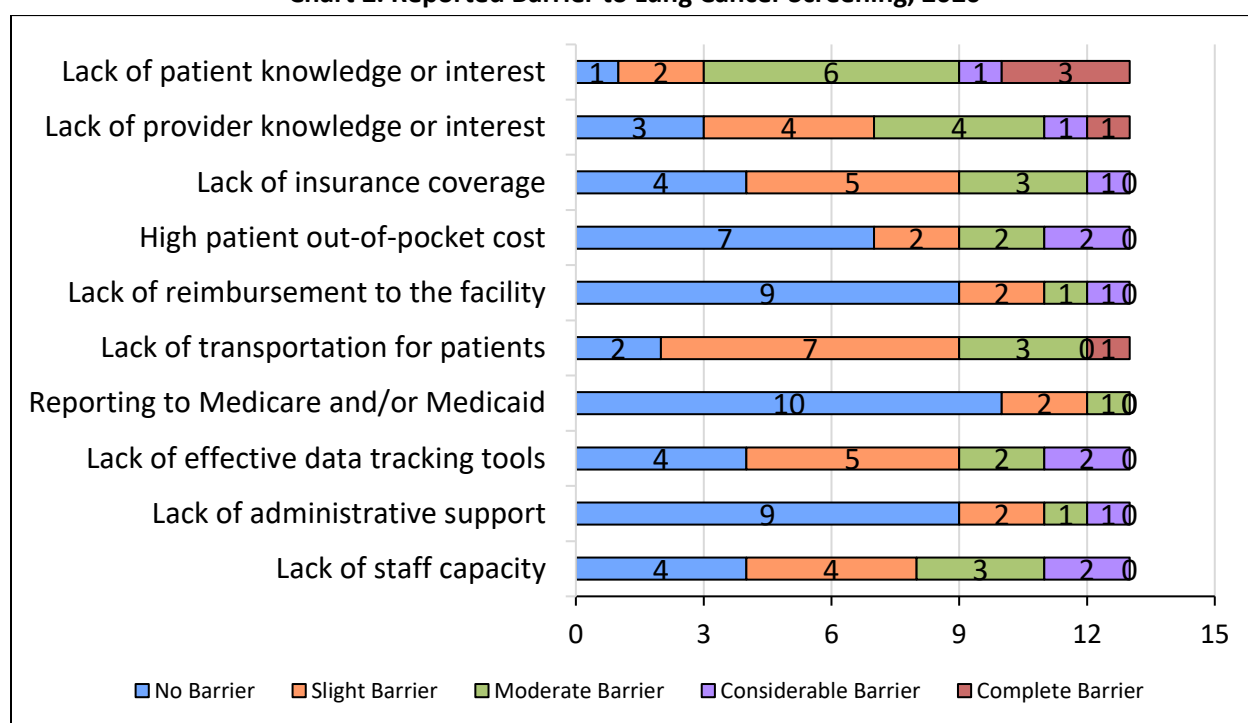
⁶ *Decision Memo for Screening for Lung Cancer with Low Dose Computed Tomography (LDCT) (CAG-00439R)*. Centers for Medicare & Medicaid Services. February 2022. Available at: <https://www.cms.gov/medicare-coverage-database/view/ncacal-decision-memo.aspx?proposed=N&ncaid=304&>

The survey also asked about whose responsibility it is to coordinate appropriate follow-up for patients for normal or abnormal LDCT scans. For normal scans, nine facilities indicated it is the primary responsibility of the referring physician to follow-up with patients, and four responded follow-ups are done by a facility staff person. For abnormal scans, eight facilities replied the referring physician is the primary person responsible for following-up with patients, and five reported a facility staff person is responsible.

Reported Barriers to Providing Lung Cancer Screening Services

The survey employed a Likert Scale to assess the degree to which each barrier to LDCT lung cancer screening was identified as an issue for facilities. Chart 2 below reflects the responses from the 13 facilities about their perceived barriers to lung cancer screening at their facility.

Chart 2. Reported Barrier to Lung Cancer Screening, 2020

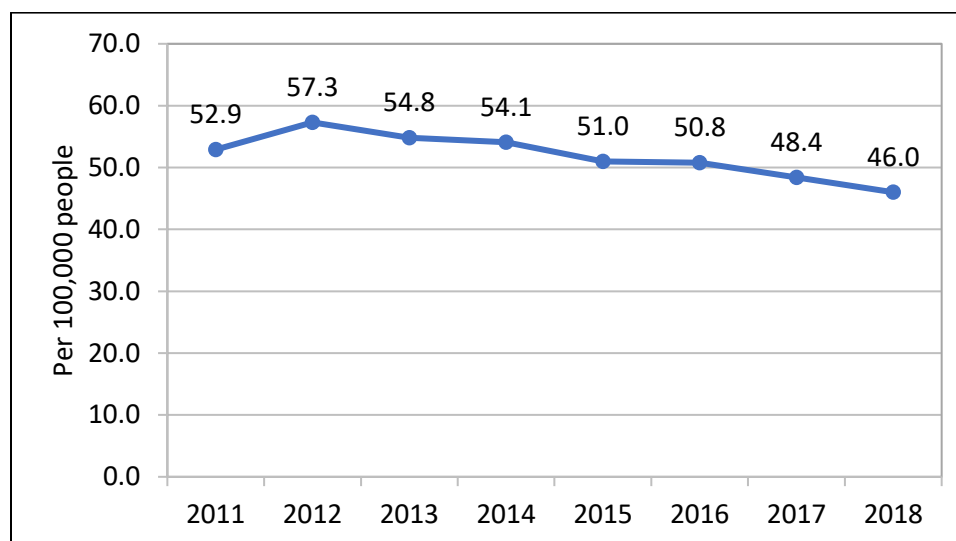


Overall, it appears more facilities are reporting less barriers in many of the categories. This is the first time in the six years of this survey where at least one facility reported “No Barrier” in each category. The work that has taken place around lung cancer screening in Maine through the MLCC and other groups like Maine’s Impact Cancer Network (the cancer coalition for the state) has helped to reduce the barriers facilities have encountered in the past, but there is still work to be done. In looking at the moderate or higher barriers, “Lack of patient and provider knowledge or interest” are two related issues that continue to rise to the top, and they are both rated as being a “Complete Barrier” by at least one facility. With the new USPSTF guidelines for lung cancer screening having come out in 2021, education around what this means for lung cancer will need to be addressed.

CONCLUSION

During 2022, it is estimated there will be 1,640 new lung cancer cases and 860 lung cancer deaths in Maine.⁷ The rates of late-stage lung cancer in Maine have been steadily decreasing since the USPSTF first recommended screening using LDCT to screen for lung cancer in 2013 (see Figure 3).⁸ The chances this is solely due to the uptake in screening are slim as relatively few eligible individuals have been screened. Tobacco use has also been decreasing over time and may be what is contributing to this trend.

Figure 3. Annual Rates of Late-Stage Lung Cancer, Maine, 2011-2018



The results from this survey reflect the responses from 13 facilities providing LDCT lung cancer screening in Maine during 2020. Considering 2020 was the height of the pandemic with many people and organizations forced into lockdown, the number of reported lung cancer screenings still went up. The USPSTF's newly expanded screening guidelines opens this service up to more individuals and essentially doubles the number of people now eligible for lung cancer screening.⁹ This could improve survival rates by finding lung cancer earlier when treatment may be more successful and may lead to continued declines in late-stage lung cancer in the future, decreasing both morbidity and mortality in Maine.

⁷ American Cancer Society. *Cancer Facts & Figures 2022*. Atlanta: American Cancer Society; 2022. Available at: <https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2022/2022-cancer-facts-and-figures.pdf>

⁸ U.S. Cancer Statistics Working Group. U.S. Cancer Statistics Data Visualizations Tool, based on 2020 submission data (1999-2018): U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; <https://www.cdc.gov/cancer/dataviz>, released in June 2021.

⁹ Potter AL, Bajaj SS, Yang CJ. *The 2021 USPSTF lung cancer screening guidelines: a new frontier*. *The Lancet*, 2021; 9(7):689-691. Available at: [https://www.thelancet.com/journals/lanres/article/PIIS2213-2600\(21\)00210-1/fulltext?rss=yes](https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(21)00210-1/fulltext?rss=yes)

Lung Cancer Screening Survey – 2021

The Maine CDC Comprehensive Cancer Control Program in collaboration with the Maine Lung Cancer Coalition has been collecting information from lung cancer screening facilities in Maine since 2016. The information is used to monitor emerging practices, barriers, and services to lung cancer screening in the state.

This survey is asking for information about screening for lung cancer at your facility during the calendar year 2020. We recognize that the US Preventive Services Task Force has updated their guidelines for lung cancer screening as of March 2021, but this survey covers lung cancer screening during 2020. We are particularly interested in the screening data for 2020 before these guidelines went into effect, and the impact that COVID-19 has had on lung cancer screening in Maine during the previous calendar year.

If you did provide lung cancer screening during 2020, having your screening data readily available before you begin may help to expedite the survey. **If your facility is not currently providing lung cancer screening, we would still appreciate your responses to a few of the questions** (the survey will skip over the screening questions if done electronically).

The MCCCCP continues to collaborate with the MLCC to reduce the amount of surveys and questions asked of lung cancer screening facilities. All information from the survey will be shared with both organizations, but identifiable information will not be shared or distributed outside of these two groups.

FACILITY INFORMATION

1. Contact Information

Your Name: _____

Facility Name: _____

Address: _____

City/town: _____

Email: _____

Phone: _____

2. Which of the following best describes your role at your facility?

- Doctor/Radiologist
- Imaging Department Administration
- Lung cancer screening program manager/coordinator
- Nurse
- Nurse Practitioner
- Patient Navigator for Lung Cancer Screening
- Physician Assistant
- Radiology Technician
- Technologist
- Other (please specify) _____

3. Please confirm that your facility is currently providing lung cancer screening.
- Yes
 - No (If your answer is "No," please skip to question number 32 on page 7.)

COVID-19 QUESTIONS

Please answer the following questions on the impact of COVID-19 to your facility.

4. What impact(s) did COVID-19 have on your lung cancer screening program? (Check all that apply)
- Complete shutdown of program for some part of 2020
 - Partial shutdown of program for some part of 2020
 - Staff redeployment
 - Restrictions due to state or local mandates (please specify) _____
 - New facility requirements (e.g., patients needing COVID test prior to screening)
 - Other (please specify) _____
5. How did your facility modify your lung cancer screening program during COVID-19?
6. Would your facility be interested in participating in telemedicine initiatives to improve access to lung cancer screening at your facility?
- Yes
 - No
 - Maybe
 - Don't know
7. COVID-19 shed a light on the health disparities within our priority populations. Has your program done any additional outreach to address any of the following populations? (Check all that apply)
- Uninsured or underinsured
 - Incarcerated or institutionalized
 - Medically underserved
 - Race
 - Sexual orientation/gender identity
 - Low literacy/non-English speaking
 - Our facility does not currently collect data on any priority populations
 - Other – please specify
8. What are the barriers at your facility to collecting priority population information?

REPORTING LUNG CANCER SCREENING

9. Is your facility accredited for LDCT screening by any professional organization(s)?
- Yes
 - No (If your answer is “No,” please skip to question 11)
 - Don’t know (If your answer is “Don’t know,” please skip to question 11)
10. Which professional organization(s) is your LDCT screening program accredited by? (Please select any that apply.)
- American College of Radiology
 - GO2 Foundation for Lung Cancer (Screening Center of Excellence)
 - Don’t know
 - Other (please specify)
- _____
11. Does your facility submit data to the American College of Radiology Lung Cancer Screening Registry?
- Yes
 - No
 - Don’t know
12. Please describe any barriers your facility faces in submitting lung cancer screening data.

SCREENING DATA AT YOUR FACILITY

Please provide the data from your facility for the questions below to the best of your ability (even if this means making a good faith estimate).

13. When did your facility begin offering lung cancer screening? (mm, yyyy) _____
14. How many **baseline screening** LDCTs were performed at your facility in 2020? (NOTE: do not include 6-month follow-up LDCTs performed in response to an abnormal finding on a screening CT.)
- Total _____
 - Males _____
 - Females _____
15. How many **annual follow-up screening** LDCTs were performed in 2020 at your facility? (NOTE: do not include 6-month follow-up LDCTs performed in response to an abnormal finding on a screening CT.)
- Total _____
 - Males _____
 - Females _____

16. How many screening LDCTs resulted in a **lung cancer diagnosis** at your facility in 2020?

- Total _____
- Males _____
- Females _____

SHARED DECISION-MAKING

Please answer the following questions about your facility's protocols for shared decision-making.

17. Does your facility confirm whether patients who are referred for LDCT screening meet eligibility criteria before screening is performed?

- Yes
- No
- Don't know

18. Does your facility require a patient to have a shared decision-making visit with a healthcare provider before being screened for lung cancer?

- Yes
- No (If your answer is "No," skip to question 21)
- Don't know (If your answer is "Don't know," skip to question 21)

19. When does the SDM visit occur?

- At primary care office prior to scheduling scan
- At lung cancer screening program prior to scheduling scan
- At lung cancer screening program at the time of the scan
- Other (please specify) _____

20. At your facility, which healthcare provider has primary responsibility for conducting the shared decision-making visit with the patient?

- Referring physician
- Physician affiliated with the institution's LDCT screening program
- Nurse practitioner affiliated with the institution's LDCT screening program
- Patient Navigator
- Other (please specify) _____

21. Does your facility provide any type of "decision aid" or decision support tool (e.g., written material, software, or web-based program) to patients to help them decide about LDCT screening?

- Yes
- No (If your answer is "No," please skip to question 23.)
- Don't know (If your answer is "Don't know," please skip to question 23.)

22. What decision aid(s) or decision support tool(s) do you use?

23. Which of the following patient education and counseling resources would be most useful to your facility to help patients understand the benefits and risks of lung cancer screening? (please pick top 3 choices)

- Informational brochure
- Informational video
- Print decision aid
- Online decision aid
- Public service announcement
- Other (please specify) _____

24. Does your facility utilize a Patient Navigator or some other designated staff person to coordinate and manage LDCT screening activities (e.g. determination of screening eligibility, shared decision-making counseling, scheduling, and follow-up)?

- Yes
- No (If your answer is "No," please skip to question 26.)
- Don't know (If your answer is "Don't know," please skip to question 26.)

25. Please estimate the number of hours per week this person devotes to these activities. _____

SCREENING AND TOBACCO REFERRAL

Please answer the following questions about lung cancer screening and patient referrals to tobacco treatment at your facility.

26. If people who smoke are screened for lung cancer, does the screening protocol at your facility include a referral to tobacco treatment services regardless of diagnosis?

- Yes
- No (If your answer is "No," please skip to question 28.)
- Don't know (If your answer is "Don't know," please skip to question 28.)

27. Who at your facility refers screened patients who currently smoke to tobacco treatment services? (check all that apply)

- Primary care office
- Screening facility
- Don't know
- Other (please specify) _____

SCREENING FOLLOW-UP

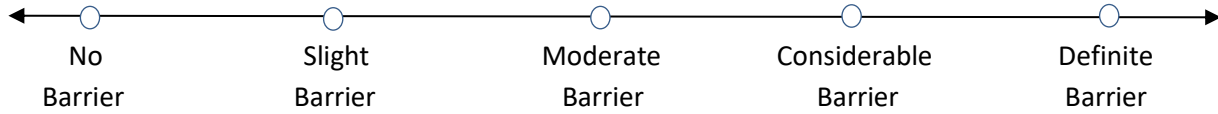
28. Does your facility have a **standardized process or care pathway** for coordinating appropriate follow-up for patients who have received LDCT screening?
- Yes
 - No
 - Don't know
29. Which of the following resources does your facility use to coordinate appropriate follow-up for patients who have received LDCT screening? (please select all that apply)
- Designated staff person (e.g., nurse, medical assistant, patient navigator)
 - Commercial software program (e.g., LungView) or electronic health record (EHR) tool (e.g., Epic Radiant)
 - Dedicated lung cancer screening data registry
 - Automated (electronic) patient reminder system
 - Other (please specify): _____
 - None
 - Don't know
30. Who at your facility has **primary** responsibility for coordinating appropriate follow-up for patients with **normal** LDCT scan results?
- Referring physician (e.g., primary care physician)
 - Facility staff person (e.g., physician, nurse, medical assistant, patient navigator)
 - Other (please specify): _____
 - Don't know
31. Who at your facility has **primary** responsibility for coordinating appropriate follow-up for patients with **abnormal** LDCT scan results?
- Referring physician (e.g., primary care physician)
 - Facility staff person (e.g., physician, nurse, medical assistant, patient navigator)
 - Other (please specify): _____
 - Don't know

FINAL QUESTIONS

There are barriers to lung cancer screening that may preclude your facility from being able to provide lung cancer screening. On the other hand, if your facility is providing lung cancer screening, there can still be barriers that make the work challenging. Whichever category your facility falls into, please provide answers to the following topics on barriers to lung cancer screening from your facility's perspective.

32. In your/your facility's opinion, what are the greatest barriers to lung cancer screening at your facility, and the degree to which each is a barrier?

Lack of insurance coverage of patients



High patient out-of-pocket cost



Lack of administrative support for lung cancer screening program



Lack of staff capacity



Lack of reimbursement to facility



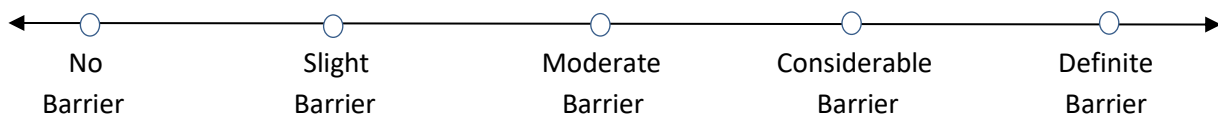
Reporting to Medicare and/or MaineCare (Medicaid)



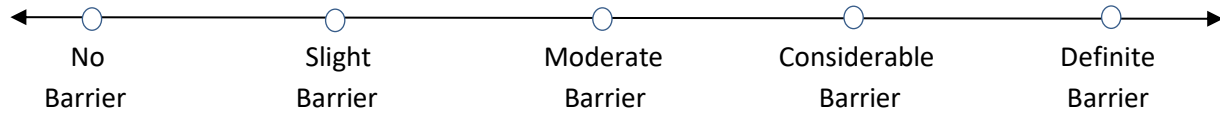
Lack of efficient/effective data tracking tools



Lack of patient knowledge or interest in screening



Lack of provider knowledge or interest in screening



Lack of transportation for patients



Other (please specify) _____



33. Is there anything you would like to add?

Thank you for participating in the survey!