

Lung Cancer Screening in Rural Primary Care

College of Health & Human Services

School of Nursing

Laura Marburger

Faculty Sponsor: Dr. Tanya Tillman-Hatch

Purpose of the Project

- Educate providers, nurses, and medical assistants about the current lung cancer screening (LCS) guidelines and the importance of early detection of lung cancer (LC).
- Enhance the clinic screening workflow and ordering process that is used to identify LCS eligible patients.

Problem

- Most patients have no symptoms until the late stages of LC, when treatment is more difficult and survival rates are lower^{6,12}.
- Only 15 percent of LC cases are diagnosed at an early stage¹ while approximately 70% are diagnosed at an advanced stage¹⁸.
- Recognizing LCS eligible patients in primary care is challenging. Unlike colon, cervical, and breast cancer screening; LCS requires a complex risk-based screening model³.
- Uptake of ordering low dose computed tomography (LDCT) for LCS are particularly low in rural underserved populations^{9,11}.

Setting

A rural primary care clinic in Apache County, AZ.

Patient Population

Adults ages 50-80 that are either current smokers or have quit within the last 15 years.

Clinical Question

Does modifying the screening questions and/or PCP ordering process for (I) adults ages 50 to 80 (P) for LCS current USPSTF recommendations expand the number of high-risk patients identified and increase the number of LDCT scans ordered (O) in rural health compared to the current primary care practices (C)?

Review of the Literature

High level evidence:

- LDCT screening significantly reduces both LC and all-cause mortality in high-risk individuals⁷.

Moderate level evidence:

- Patients state that having a PCP recommendation is a major facilitator for deciding to screen with LDCT¹³.
- Shared decision making is vital for patients to decide about LCS⁴.

Low level evidence:

- Clinical barriers to LCS are lack time, resources, competing priorities, system obstacles, and no organized LCS protocol or order set in place^{10,14}.

Patient perspectives

- Many LCS eligible patients state that their provider did not propagate a LCS discussion¹⁰.
- Most patients would rather get a LDCT scan and endure the screening risks over the possibility of missing cancer¹⁰.

Proposed Best Practice

- USPSTF current recommendations are for annual LCS with LDCT in adults ages 50 to 80 years who have a 20 pack-year smoking history, and either currently smoke or have quit within the past 15 years⁸.
- LDCT screening is more beneficial than harmful in high-risk patients and is the only available screening strategy recommended for LC prevention^{16,17}.

Conclusions

- Despite the expansion of AZ's Medicaid to cover patient's LCS cost, AZ's rate of identifying high-risk LC population is a low 2%, which is significantly inferior to the national rate of 6%².
- The national LCS with LDCT rate was 4.5% in 2015. The national goal is 7.5% by 2030¹⁹.
- Recommend the facility to use point-of-care reference materials about LCS to increase patient knowledge of the benefits and harms of LCS, and to decrease burden on the provider¹⁴.
- Recommend delegating medical assistants to ask screening questions to reduce provider burden.
- Recommend adding LCS to the Azara, along with the other cancer prevention screenings.
- Recommend creating a reminder system and/or prompts within the EHR for nurses to remember to collect and complete smoking history on a specific subset of patients⁵ and alerts the patient as "high-risk" in the EHR.