Perceptions and Practices of LDCT Lung Cancer Screening

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Background

- Primary care providers (PCPs) play an essential role in educating and helping patients make an informed decision about LDCT screening.
  - Medicare requires a shared decision-making visit with a qualified provider before screening.
- PCPs are already engaged in tobacco cessation counseling, a key element of shared decision making for LDCT screening, although the regularity and quality of such discussions is suboptimal.

Bailey et al. Am J Public Health. 2018;108(8):1082-90.
Hung et al. Health Care Manage Rev. 2014;39(2):154-63.
Bartsch et al. PLoS One. 2016;11(12):e0168482.

Background

- NCI conducted a national survey of PCPs' perceptions & practices regarding cancer screening (breast, colorectal, prostate, & lung) in 2006-2007.
  - Results showed that most providers were unsure of the effectiveness of lung cancer screening and what type of test to recommend.
  - Survey conducted prior to the release of the NLST results.

How is LDCT screening perceived among primary care physicians (PCPs) post-NLST?

Klabunde et al. Ann Fam Med. 2012;10(2):102-10.
Klabunde et al. Am J Prev Med. 2010;39(5):411-20.

South Carolina Cancer Alliance Implementation Grant

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Original Article

Knowledge of, Attitudes Toward, and Use of Low-Dose Computed Tomography for Lung Cancer Screening Among Family Physicians

Jennifer L. Ersek, MSPH[1,2]; Jan M. Eberth, PhD, MSPH[1,3]; Karen Kane McDonnell, PhD, RN, OCN[4]; Scott M. Strayer, MD, MPH[5]; Erica Sercy, MSPH[3]; Kathleen B. Cartmell, PhD, MPH[6]; and Daniela B. Friedman, PhD[3,7]

BACKGROUND: The results of the National Lung Screening Trial showed a 20% reduction in lung cancer mortality and a 6.7% reduction in all-cause mortality when high-risk patients were screened with low-dose computed tomography (LDCT) versus chest x-ray (CXR). The US Preventive Services Task Force has issued a grade B recommendation for LDCT screening, and the Centers for Medicare and Medicaid Services and private insurers now cover the screening cost under certain conditions. The purpose of this study was to assess the knowledge of, attitudes toward, and use of LDCT screening for lung cancer among family physicians. **METHODS:** A 32-item questionnaire was distributed to members of the South Carolina Academy of Family Physicians in 2015. Descriptive statistics were calculated. **RESULTS:** There were 101 respondents, and most had incorrect knowledge about which organizations recommended screening. Many physicians continued to recommend CXR for lung cancer screening. Most felt that LDCT screening increased the odds of detecting disease at earlier stages (98%) and that the benefits outweighed the harms (75%). Concerns included unnecessary procedures (88%), stress/anxiety (52%), and radiation exposure (50%). Most physicians discussed the risks/benefits of screening with their patients in some capacity (76%); however, more than 50% reported making 1 or no screening recommendations in the past year. **CONCLUSIONS:** Most family physicians report discussing LDCT with patients at high risk for lung cancer; however, referrals remain low. There are gaps in physician knowledge about screening guidelines and reimbursement, and this indicates a need for further educational outreach. The development of decision aids may facilitate shared decision-making discussions about screening, and targeted interventions may improve knowledge gaps. ***Cancer*** **2016;000:000–000.** © *2016 American Cancer Society.*

KEYWORDS: adult, early detection of cancer, lung neoplasms, mass screening, Medicare.

Survey was disseminated to family physicians affiliated with the SC chapter of the AAFP in 2015 (n = 101 completed; 8% response rate)

Ersek et al. Cancer. 2016;122(15):2324-31.

Survey Results

- In the past year, 47% of FPs referred 0 patients for LDCT screening.
- Most physicians (59%) never or infrequently discuss LDCT screening risks and benefits with high-risk patients.
- 36% of FPs knew that LDCT screening should be performed annually (31% = every 2 years, 31%, every 3 years).
- 41% felt they did not have the time needed to stay abreast of current screening guidelines.

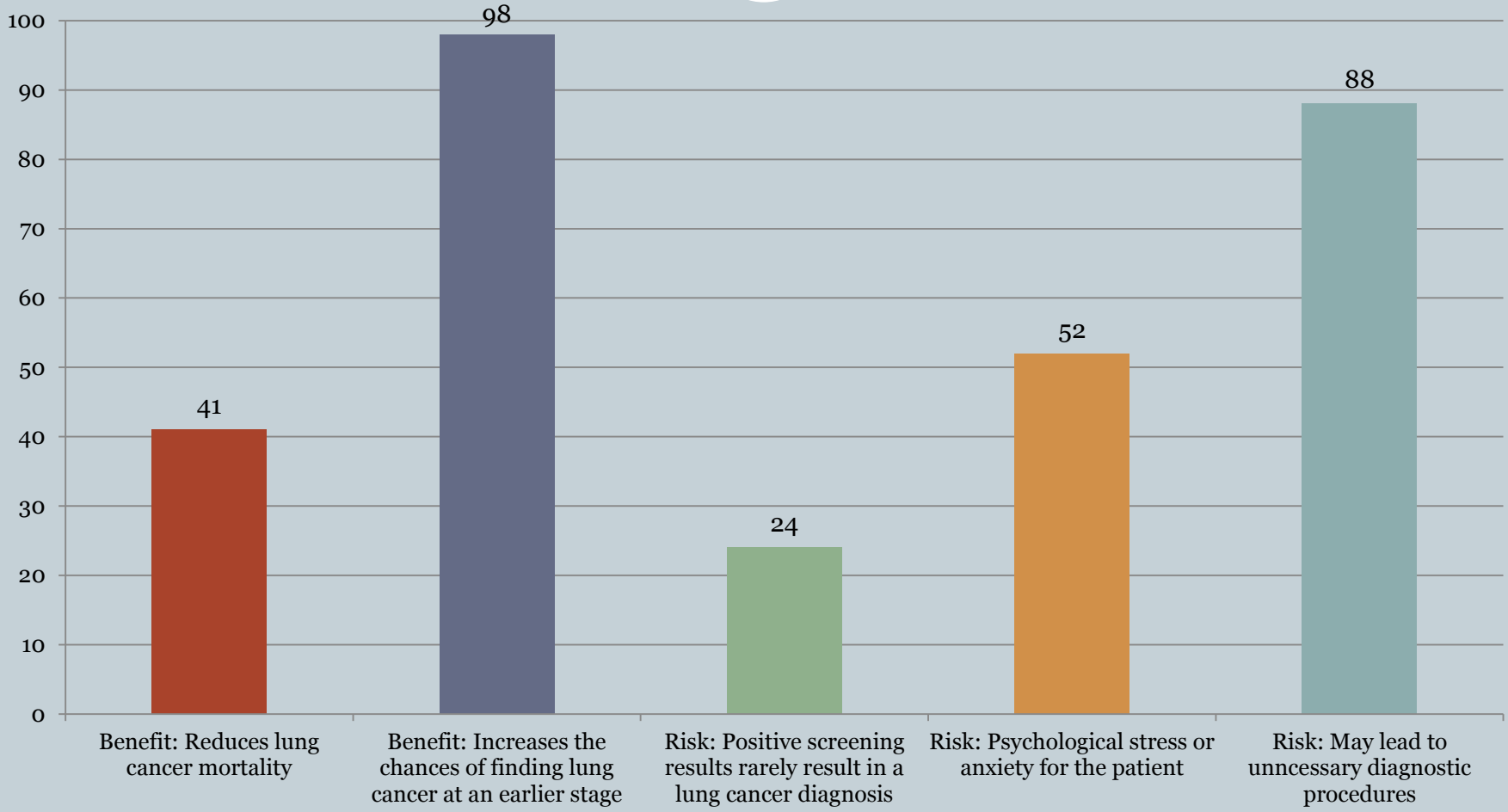
Survey Results

South Carolina FP's recommended screening strategies for a several patient scenarios

Vignette	Description	No Screening	Chest X-Ray	Low-Dose CT
		No. (%)	No. (%)	No. (%)
1	50 year old non-smoker with 30 years of secondhand smoke exposure from spouse	66 (78)	12 (14)	7 (8)
2	50 year old current smoker with 20 pack-year smoking history and family history of lung cancer	20 (24)	11 (13)	54 (64)
3	60 year old current smoker with 30 pack-year smoking history	10 (12)	8 (9)	67 (79)
4	70 year old former smoker with 30 pack-year smoking history and quit smoking 20 years ago	44 (52)	15(18)	26 (31)

For vignette #2, recommendation of an LDCT screening is appropriate per National Comprehensive Cancer Network guidelines.

Perceptions of Benefits & Risks of Screening



Institutional Research Grants from American Cancer Society

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A national survey of primary care physicians: Perceptions and practices of low-dose CT lung cancer screening

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Surveys were mailed out in Fall 2016 to 2500 randomly selected PCPs from the AMA Physician Masterfile (n= 293 *eligible* physicians returned surveys; 13% response rate)

Eberth et al. Prev Med Rep. 2018; 11:93-99.

Institutional Research Grants from USC College of Nursing

Research: Other

JAANP

Lung cancer screening: Practice guidelines and insurance coverage are not enough

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ABSTRACT

Background and purpose: Low-dose computed tomography (LDCT) is expected to increase early detection of lung cancer and improve survival. The growth in the number of advanced nurse practitioners (NPs) in primary care settings increases the likelihood that an NP will serve as a patient's provider. This study's purpose was to examine knowledge, attitudes, and practices regarding LDCT among NPs who work in primary care settings.

Methods: An explanatory, sequential, mixed-method design used a 32-item questionnaire, followed by a semi-structured telephone interview. The development of the survey and interview questions were guided by a conceptual framework representing a temporal sequence for behavior change and potential barriers to guideline adherence.

Conclusions: Nurse practitioners believe that shared decision making with their high-risk patients about LDCT is within their scope of their practice. Working in time-constrained primary care settings, NPs have limited abilities to improve the uptake of LDCT. Substantial patient barriers exist that deter follow through on providers' recommendation. Disseminating guidelines and authorizing health insurance reimbursement is insufficient.

Implications for practice: Research is needed that investigates the screening process so that barriers can be closely studied. Culture change is needed where early detection has greater value for insurers, providers, and patients.

Keywords: Cancer screening; diagnostic imaging; early detection of cancer; lung neoplasms; multimethod research; nurse practitioners; primary care; thoracic.

Journal of the American Association of Nurse Practitioners 00 (2018) 1–13,

DOI# 10.1097/JXX.0000000000000096

A similar survey mailed to primary care NPs in Fall 2016 to 5,000 licensed NPs (n = 380; 8% response rate)

McDonnell et al. J Am Assoc Nurse Pract. 2018. Epub ahead of print.

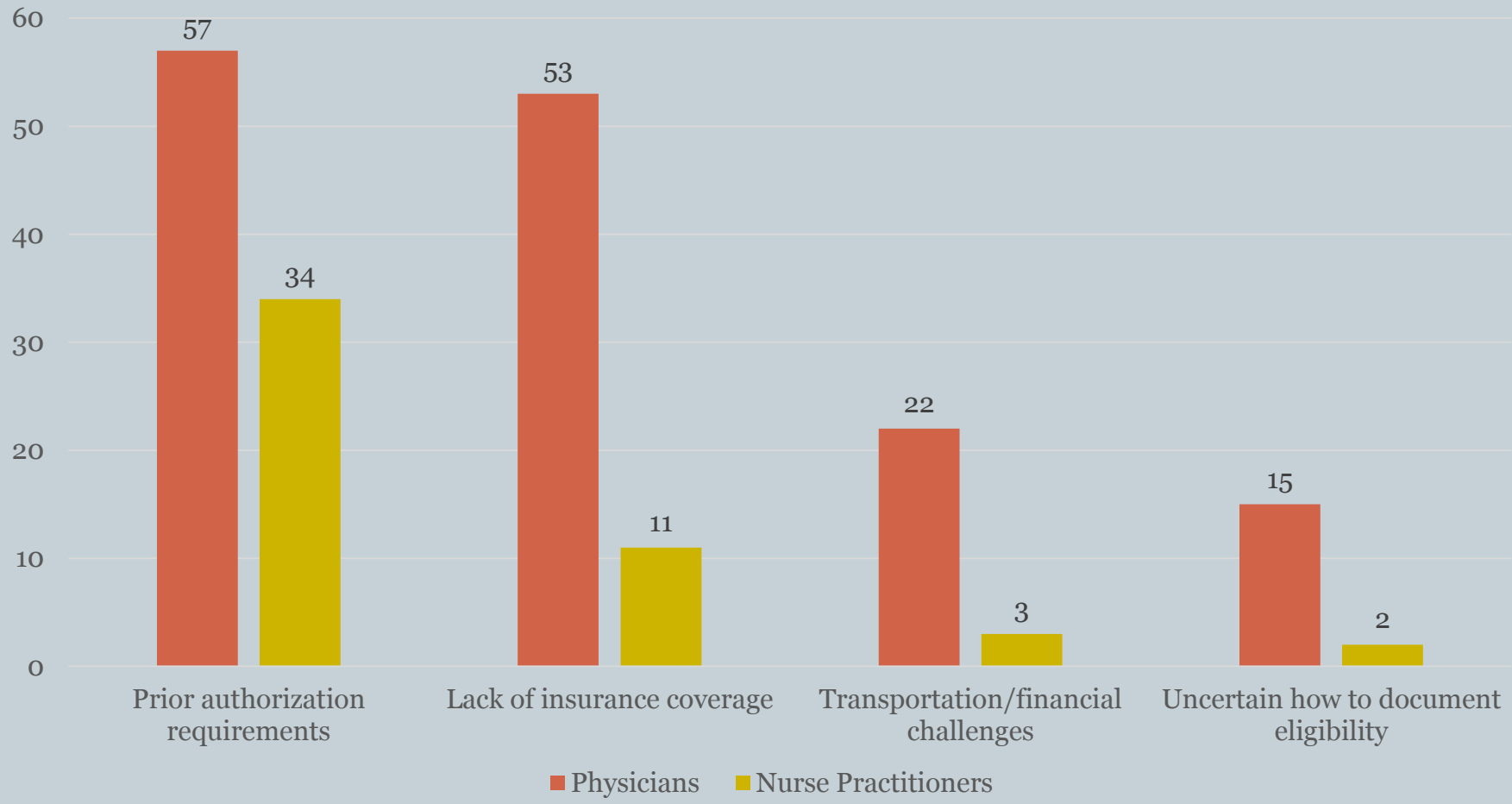
Survey Results

Providers' recommended screening strategies for a several patient scenarios

		Physicians			Nurse Practitioners		
Vignette	Description	No Screening	Chest X-Ray	Low-Dose CT	No Screening	Chest X-Ray	Low-Dose CT
		No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
1	50-year-old non-smoker with 30 years of secondhand smoke exposure from spouse	196 (67)	52 (19)	37 (15)	142 (38)	191 (51)	42 (11)
2	50-year-old current smoker with 20 pack-year smoking history and family history of lung cancer	105 (37)	44 (17)	137 (47)	34 (9)	128 (34)	214 (57)
3	60-year-old current smoker with 30 pack-year smoking history	23 (8)	36 (11)	227 (81)	12 (3)	108 (29)	256 (68)
4	70-year-old former smoker with 30 pack-year smoking history and quit smoking 20 years ago	144 (52)	48 (16)	94 (32)	97 (26)	170 (45)	109 (29)

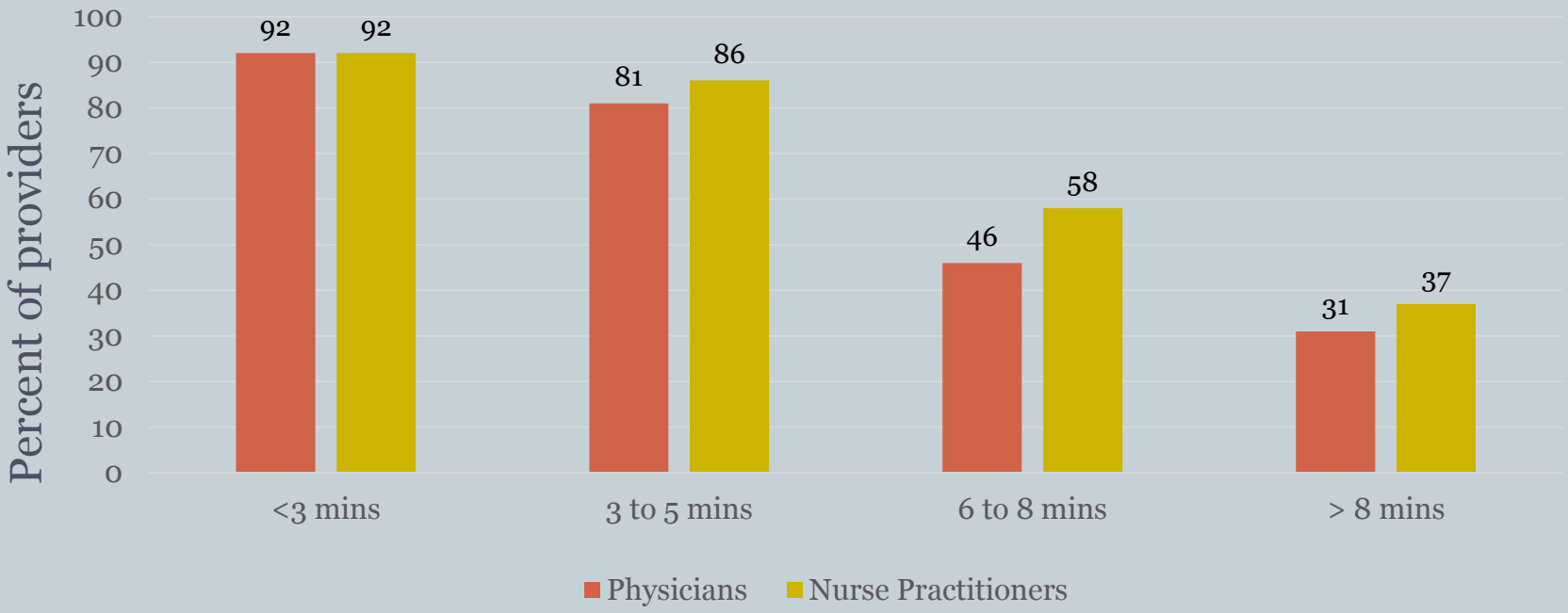
For vignette #2, recommendation of an LDCT screening is appropriate per NCCN guidelines.

Perceived barriers to LDCT screening



Survey Results

Percent “likely or very likely” to engage in SDM for LDCT screening with patient if discussion time took….



Conclusions

- Referrals for LDCT screening remain low.
- About 80% of physicians (68% NPs) would recommend LDCT screening for USPSTF-eligible patient.
  - 10-20% of PCPs and 30-50% of NPs still would recommend chest x-ray.
- Given time constraints and competing priorities, staying abreast with screening guidelines and implementing SDM are challenging for providers.
- SDM discussions should be very brief to encourage provider participation.

Discussion

- Clinical practice and policy changes are needed to encourage SDM discussion and increase referrals.
  - Increase the CMS SDM reimbursement rate
  - Changes to EHR systems to include full eligibility criteria and flag eligible patients
  - Making referral process seamless for patients
  - Team based approaches to SDM implementation

Guest Editorial

Why Are Physicians Cautious on Lung Cancer Screening Recommendation?

October 19, 2016 11:25 am Scott Strayer, M.D., M.P.H., and Jan Eberth, Ph.D., M.S.P.H. – Our research team recently embarked on a project to understand how family physicians perceived and utilized low-dose CT (LDCT) screening for lung cancer after the release of a controversial screening recommendation from the U.S. Preventive Services Task Force (USPSTF). (www.uspreventiveservicestaskforce.org)

In December 2013, the USPSTF issued a "B" recommendation (www.uspreventiveservicestaskforce.org) for LDCT screening for lung cancer in adults aged 55-80 years who have a 30 pack-year smoking history and who currently smoke or have quit within the past 15 years. Our project surveyed a convenience sample of members of the South Carolina AFP to determine family physicians' knowledge of the recommendation, assess their attitudes about screening and explore early referral patterns.

Scott Strayer, M.D., M.P.H.

Our study results, published in the Aug. 1 issue of *Cancer*, (onlinelibrary.wiley.com) found that many family physicians were not aware of recommendations on this topic issued by professional organizations and agencies (including the AAFP), expressed concerns about the risk for unnecessary followup testing, and had made few patient referrals.

Although a good deal of media coverage of the study cast our findings as primarily showing a lack of knowledge by physicians, focusing only on that aspect ignores many complex factors that likely explain the survey results, including inconsistent screening recommendations across organizations, institutional barriers to implementing screening and uncertainty about the value of screening outside the clinical trial setting.

Guest Editorial for AAFP News, Oct. 19, 2016.
https://www.aafp.org/news/opinion/20161019guidelinesed.html

Thank you!

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