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Implementing Lung Cancer Screening in Federally Qualified Health Centers: Concerns about Resources and Quality

CPCRN Tobacco and Lung Cancer Screening Work Group
Presented by Robin Vanderpool, DrPH
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PRC Prevention Research Centers

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CPCRN Research Team

University of Washington
Steven Zeliadt, PhD

Case Western Reserve
Susan Flocke, PhD
Genevieve Birkby, MPH

University of Iowa
Richard Hoffman, MD, MPH

University of Kentucky
Robin Vanderpool, DrPH
Lindsay Stradtman, MPH

University of South Carolina
Jan Eberth, PhD

University of North Carolina
Dan Reuland, MD, MPH
Alison Tytell-Brenner, PhD

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Background

- The USPSTF now recommends Low Dose Computed Tomography (LDCT) for lung cancer screening for high-risk smokers = Grade B.

NLST National Lung Screening Trial NATIONAL CANCER INSTITUTE

20%

U.S. Preventive Services TASK FORCE

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

- Adults aged 55 to 80 with a 30 pack-year smoking history and currently smoke or have quit within the last 15 years.

Background

- Uptake has been slow = only 5.8% of the target population has been screened for lung cancer. (NHIS, 2015)
- Cost effectiveness is still uncertain. (Raymakers et al., 2016)
- In 2016, the Society of Behavioral Medicine highlighted that disparities endemic to lung cancer will remain and may be exacerbated by gaps in implementation of high quality screening among high-risk populations. (Watson et al., 2016)
  - Medically underserved
  - Rural
  - Low socioeconomic status
  - Minority populations
  - LGTBQ community
  - Psychiatric comorbidities

Purpose

- **Challenge**: How to implement an effective LDCT lung cancer screening protocol in community practice?

- **Federally Qualified Health Centers (FQHC):** Safety net clinics, often located in rural areas, whose underserved populations have a high burden of tobacco use and increased risk for lung cancer.
  - Served 24 million low-income patients in 2015
  - Tobacco use is 25% higher in FQHCs compared to the general population

- **Purpose:** To identify potential barriers faced by FQHCs that impact lung cancer screening access, uptake, and adherence in FQHC populations.

Methods

- Data was drawn from the 2013 Uniform Data System (UDS).
- 299 FQHCs (from all 1,202 FQHCs) were sampled based on reported adult tobacco use above the median of all U.S. FQHCs.
  - Median tobacco use: > 26% of adult patients.
- 258 FQHCs received survey invitations.
  - The Medical Director for each FQHC was sent a link to the online survey via an introductory email and up to 5 reminder emails.
- Data collection: August 2016 – October 2016

Methods

- The survey assessed:
  - FQHCs' current tobacco assessment and assistance practices
  - The degree to which they utilize the electronic health record (EHR) for documentation and tracking, and
  - Their connection to resources to conduct lung cancer screening using LDCT for high-risk patients
- Geography (urban or rural) and # of adults within the lung cancer screening range (55-74) were extracted from UDS data.
- Descriptive statistics and chi-square tests for comparisons between FQHCs that reported they were aware of providers offering lung cancer screening vs. FQHCs that reported not offering lung cancer screening

The study protocol was reviewed and approved by the Case Western Reserve University Institutional Review Board.

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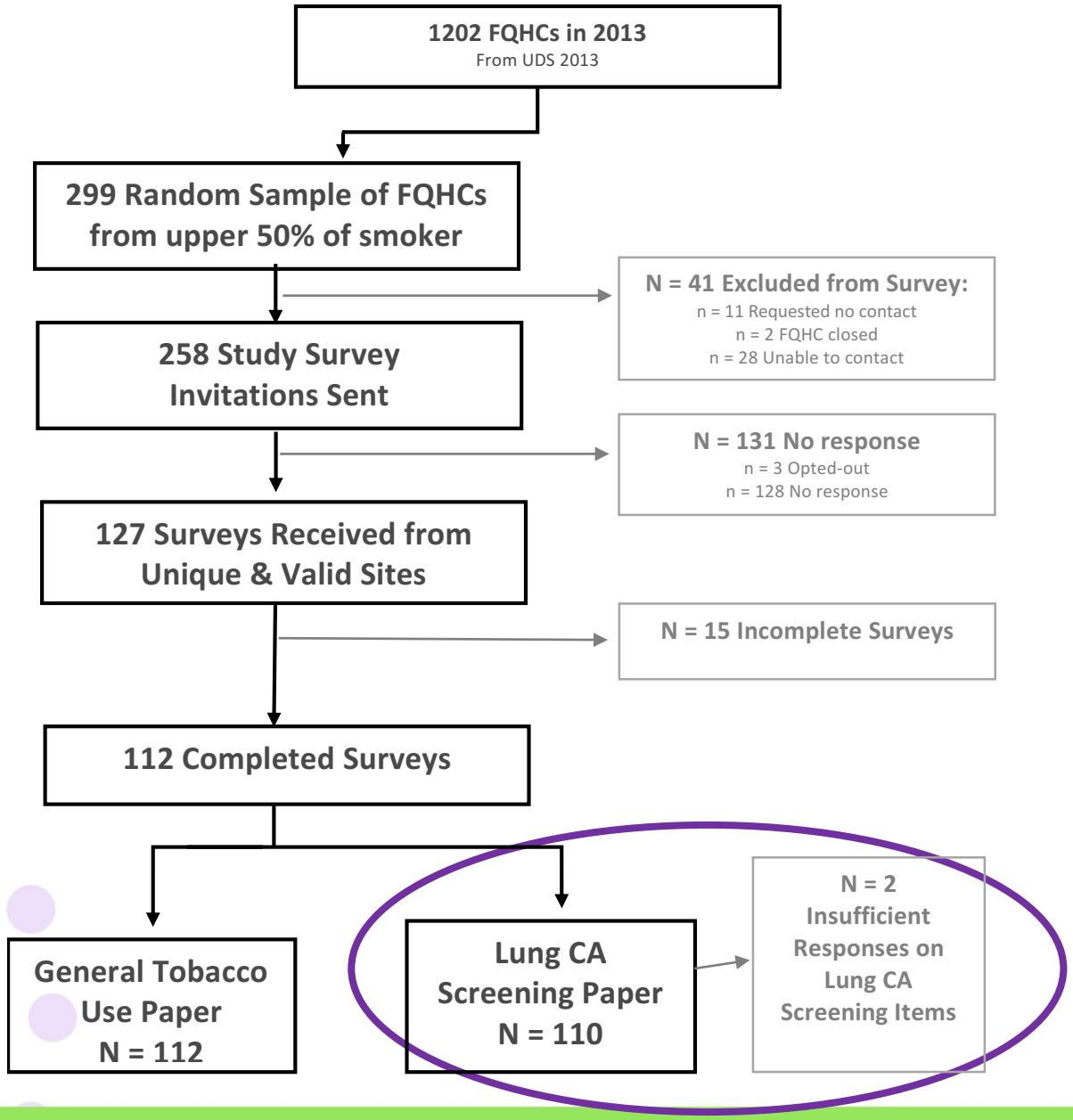

43% response rate

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Results: Respondent Characteristics

Respondent Characteristics	Total n (% yes)
Role	
Chief Medical Officer	72 (65.5)
CEO or COO	19 (17.3)
Quality Officer	5 (4.5)
Other	14 (12.7)
Time in position	
Less than 1 year	21 (19.1)
1-3 years	46 (41.8)
More than 3 years	43 (39.1)

	Total
Site Characteristics	
# of sites, *Mdn*	4.0
% of adults aged 55-74, *M* (*SD*)	17.5 (5.1)
% of adults using tobacco, *M* (*SD*)	39.6 (9.9)
Urban, n (% yes)	54 (49.5)

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Results: Lung Cancer Screening

- Among respondents, 47 FQHCs (43%) reported that some providers in their system offer lung cancer screening
  - Only 3 clinics reported <10 screenings / month
  - <10 clinics reporting using EHR reminders for providers
  - <5 clinics reported using a patient reminder system for annual adherence to LDCT

- 42 (38%) reported providers are not currently offering screening

- 21 (19%) reported they did not know if providers were offering screening

Results

	Total	Providers Offer Screening (*n* = 47)	Providers Do Not Offer Screening (*n* = 42)	Don't Know if Screening is Offered (*n* = 21)	*p*
Site Characteristics					
# of sites, *Mdn*	4.0	6.0	3.0	4.0	.06
% of adults aged 55-74, *M* (*SD*)	17.5 (5.1)	17.6 (6.0)	17.3 (4.4)	17.4 (4.7)	.96
% of adults using tobacco, *M* (*SD*)	39.6 (9.9)	39.3 (9.1)	38.9 (10.3)	41.5 (11.2)	.60
Urban, n (% yes)	54 (49.5)	26 (55.3)	16 (38.1)	12 (57.1)	.19

Results: Resources and Infrastructure to Support Lung Cancer Screening

- 41% of clinics reported they were aware of a LDCT screening center within 30 miles of their system's main clinic.

- Although smoking status is assessed by all clinics, only 59 (54%) indicated that pack-year history is routinely documented in the EHR, which is used to determine eligibility for LDCT.
  - Only 29% indicated the data was "very accurate"

- Only 51% agreed that their clinical site had adequate access to specialty providers to appropriately manage abnormal findings.

Results: Screening Resources

Resources to Support Screening, n (% yes)	**Total**	**Providers Offer Screening (*n* = 47)**	**Providers Do Not Offer Screening (*n* = 42)**	**Don't Know if Screening is Offered (*n* = 21)**	***p***
LDCT screening center within 30 miles	45 (40.9)	28 (59.6)	12 (28.6)	5 (23.8)	**<.001**
Routinely document pack-year smoking history	59 (53.6)	25 (53.2)	21 (50.0)	13 (61.9)	.67
Pack-year smoking history accuracy					.67
Very accurate	17 (28.8)	7 (28.0)	5 (23.8)	5 (38.5)	
Somewhat	30 (50.8)	12 (48.0)	13 (61.9)	5 (38.5)	
Not at all accurate	4 (6.8)	3 (12.0)	0 (0.0)	1 (7.7)	
Don’t know	8 (13.6)	3 (12.0)	3 (14.3)	2 (15.4)	
≥ 1 smoking cessation resource that meets patient needs (e.g., referral to Quitline)	81 (73.6)	33 (70.2)	33 (78.6)	15 (71.4)	.65

Results: Barriers to Screening

- Financial barriers most commonly cited
  - Patient lack of insurance (72%)
  - Challenges with prior authorization (58%)
  - Coverage denials (30%)
  - Patient out-of-pocket costs for follow-up procedures for suspicious screening findings (73%)
- Transportation was also listed as a major barrier (55%)

Results: Barriers

Barriers to Lung Cancer Screening n (% yes)	**Total**	**Providers Offer Screening (*n* = 47)**	**Providers Do Not Offer Screening or Don't know if Screening is Offered (*n* = 63)**	***p***
Lack of insurance coverage	79 (71.8)	33 (70.2)	46 (73.0)	.75
Prior authorization by health insurance is required	64 (58.2)	27 (57.54)	37 (58.7)	.89
Transportation challenges for patients	60 (54.5)	28 (59.6)	32 (50.8)	.36
Difficult to refer certain patient populations	43 (39.1)	17 (36.2)	26 (41.3)	.59
Coverage denials received	33 (30.0)	18 (38.3)	25 (23.8)	.10
Services for Non-English speaking patients are limited or unavailable	32 (29.1)	11 (23.4)	21 (33.3)	.26
Other	21 (19.1)	6 (12.8)	15 (23.8)	.15
We do not have any barriers to LDCT	7 (6.4)	3 (6.4)	4 (6.3)	.99

Results: Screening Perceptions

Lung Cancer Screening Perceptions, n (% Agree or Strongly Agree)	**Total**	**Providers Offer Screening (*n* = 47)**	**Providers Do Not Offer Screening or Don't know if Screening is Offered (*n* = 63)**	***p***
Evidence from randomized trials show that lung cancer screening with LDCT scans prevents lung cancer deaths.	73 (67.0)	40 (85.1)	33 (53.2)	**<.001**
The benefits of lung cancer screening with LDCT outweigh the potential harms.	59 (54.1)	36 (76.6)	23 (37.1)	**<.001**

Conclusions: Pathways for Disparities

- We found very low reported use of lung cancer screening by the end of 2016 among FQHC clinic sites with a high proportion of smokers.
  - The patient population served by safety-net clinics currently has limited access to dedicated lung cancer screening programs
  - Many FQHCs lack infrastructure and capacity to document and query variables in the EHR to identify eligible populations, to monitor abnormal findings, and to remind patients of follow-up procedures or annual repeat screening.
  - FQHCs have limited access to specialty providers to manage necessary follow-up care
  - Significant financial burdens to patients

Conclusions

- FQHCs and other safety-net clinics may need to consider whether expending resources to widely offer lung cancer makes sense.

- Given that the benefit of screening becomes less certain due to challenges with properly managing abnormal findings, it is important to be cautious.

- Allocating resources to smoking cessation and prevention efforts may be a more effective strategy for FQHCs to reduce lung cancer burden and harms of tobacco-related illnesses.

Thank you!

Robin Vanderpool: robin@kcr.uky.edu
Susan Flocke: susan.flocke@case.edu

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