The Maine Lung Cancer Coalition

Working Together to Reduce Lung Cancer in Maine

June 13, 2017
Paul Han, MD, MA, MPH

Maine Medical Center
Disclosure

We have no financial relationships with commercial entities that could pose a conflict of interest.
learning objectives

1. To understand the extent of the lung cancer problem in Maine

2. To understand the promise and challenges of implementing new evidence-based strategies for lung cancer prevention and screening

3. To become familiar with the goals, activities, and partner organizations of the MLCC
Maine Lung Cancer Coalition

• Four-year initiative devoted to reducing the burden of lung cancer in Maine
• Multi-institutional collaborative partnership
• Central areas of focus:
  • Prevention
  • Early detection
  • Health of rural underserved populations
Maine Lung Cancer Coalition: Goals

• **Engage and educate** the general public, patients, health care providers, health care payers, and policymakers about evidence-based lung cancer prevention and screening services

• **Innovate and evaluate** community-based strategies to increase access to evidence-based lung cancer prevention, screening, and treatment services to the entire Maine population, including high-risk individuals in rural underserved communities.
partners

Maine Medical Center
MaineGeneral Prevention Center
Eastern Maine Healthcare Systems
Central Maine Medical Center
MaineHealth
Southern Maine Medical Center
St. Mary’s Regional Medical Center
Chest Medicine Associates
HealthReach Community Health Centers

American Lung Association
Maine Quality Counts
University of Southern Maine
MaineHealth Center for Tobacco Independence
Maine Public Health Association
American Cancer Society
Free ME from Lung Cancer
Lung Cancer Alliance
Maine Cancer Foundation
Lung cancer in Maine: the problem

- **High burden**
  - 3rd most common malignancy, leading cause of cancer mortality in Maine
  - 75% late-stage disease at diagnosis
  - 6th highest incidence, 12th highest mortality in US

- **Tobacco use**: 3rd highest prevalence of ever-smokers, 11th highest prevalence of current smokers in US (highest in NE states); significant rural burden

- **Environmental risk factors** (radon, arsenic)

- **Geographic, sociodemographic inequalities**
Lung cancer in Maine: the problem

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- Environmental risk factors (radon, arsenic)

- Geographic, sociodemographic inequalities
Burden of Lung Cancer in Maine

Data Analytic Team, Maine Lung Cancer Coalition

Adam Black
Kim Murray
Lee Lucas
Kathleen Fairfield
## Lung cancer incidence: Maine vs US

<table>
<thead>
<tr>
<th></th>
<th>Age-Adjusted Incidence Rate cases per 100,000 (95% CI)</th>
<th>Average Annual Count</th>
<th>Recent Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maine</td>
<td>74.6 (72.8, 76.4)</td>
<td>1,323</td>
<td>stable</td>
</tr>
<tr>
<td>US</td>
<td>62.4 (62.3, 62.6)</td>
<td>214,614</td>
<td>falling</td>
</tr>
</tbody>
</table>

https://statecancerprofiles.cancer.gov/incidencerates/
Geography of lung cancer in Maine: unequal distribution

https://statecancerprofiles.cancer.gov/incidencerates/
Understanding the geography of lung cancer in Maine: Data Analytic Team work

**Health Behaviors**
Maine behavioral risk factor surveillance system (BRFSS)

**Mortality**
Maine death certificates

**Cancer incidence and survival**
Maine Cancer Registry

**Treatment patterns**
All-payer claims data (MHDO)
Geographic variation in population health across Maine as a context for understanding lung cancer incidence and deaths

**Census data**
- poverty
- poor education

**BRFSS: Behavioral risk factors**
- Smoking

**Death Certificate: Mortality**
- All cause
- Cancer

Use Hospital Service Area (HSA) as unit of analysis.

We assign patients to HSA where they live….
Burden of lung cancer in Maine over 4 years

Number of new lung cancer cases by year

Source: Maine Cancer Registry
Geographic variation in lung cancer mortality and risk factors

Lung Cancer Mortality

Current Smoking

Age-sex adj SMR
- 0.52 to 0.90
- 0.90 to 1.00
- 1.00 to 1.08
- 1.08 to 1.16
- 1.16 to 1.40

% Adults
- 12.4 to 16.6
- 16.6 to 21.3
- 21.3 to 22.9
- 22.9 to 25.1
- 25.1 to 28.6
Geographic variation in social determinants of health

% Without HS degree

% Adults
- 2.9 to 8.4
- 8.4 to 9.6
- 9.6 to 11.1
- 11.1 to 12.8
- 12.8 to 17.7

Poverty

% Adults
- 4.4 to 9.9
- 9.9 to 12.3
- 12.3 to 13.6
- 13.6 to 17.1
- 17.1 to 21.1
## HSA-level Correlation Between Lung Cancer Mortality, Smoking, Poverty, and Education

<table>
<thead>
<tr>
<th>Lung cancer mortality</th>
<th>Smoking</th>
<th>Poverty</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.63</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.61</td>
<td>0.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.49</td>
<td>0.67</td>
<td>0.73</td>
<td></td>
</tr>
</tbody>
</table>
Burden of lung cancer in Maine: observations to date

- There is substantial small-area geographic variation in lung cancer mortality, smoking, and sociodemographic characteristics in the state of Maine.
- There are significant associations between lung cancer mortality, smoking, low education, and poverty.
- Variation in type of lung cancer surgery performed by geographic location.
Burden of lung cancer in Maine: Data Analytic Team work

- Continue tumor registry analyses to ascertain differences in incidence and stage at diagnosis by HSA
- Monitor incidence and stage at diagnosis using these tools over time as the MLCC work continues
- Understand association between rurality, stage of diagnosis and timeliness of treatment
- Provide data to target efforts to improve lung cancer prevention, screening, treatment
Maine Lung Cancer Coalition: Structure and Initiatives

In order of Presenters:
Paul Han, MD, MA, MPH
Natalie Morse: Prevention CORE
Jessica Reed, MSN, GNP-BC: SEEC CORE
Neil Korsen, MD, MS: Early Detection CORE
Lung cancer in Maine: the solution

• Collaboration: join forces, work together
• Leverage existing expertise and resources across the state
  • Inter-institutional
  • Inter-disciplinary
  • Multi-stakeholder
• Share knowledge, learning, evidence-based practices
• Strengthen health care systems, cooperative partnerships, patient-centered care
Maine Lung Cancer Coalition Pilot Projects

Prevention Core
- Develop messaging strategies to educate at-risk rural populations about lung cancer prevention and screening

Early Detection Core
- Define and disseminate evidence-based practices for lung cancer screening
- Assess feasibility and impact of telemedicine & patient navigation in lung cancer screening

Stakeholder Engagement & Education Core
- Identify needs and barriers to lung cancer prevention and screening services for at-risk rural populations
- Develop and implement education programs and outreach strategies

Statewide System for Prevention, Screening, & Treatment of Lung Cancer

Evidence-based Care, Improved Patient Access & Outcomes

Health Care Providers
Community Members
Patients
Health Policymakers
Health Insurance Providers

Engage and Educate
Innovate and Evaluate

Promote Evidence-based Practice
Expand Access to Care
Engage Patients & Other Key Stakeholders
leadership team

- Paul Han, MD, MA, MPH (Principal Investigator & Early Detection Core Co-Lead)
- Neil Korsen, MD, MSc (Co-PI & Early Detection Core Co-Lead)
- Leo Waterston, MA (Project Director)
- Natalie Morse (Prevention Core Co-Lead)
- Barbara Perry, RN, TTS-C (Prevention Core Co-Lead)
- Lee Beth Gilman, MS (Stakeholder Engagement & Education Core Co-Lead)
- Erika Ziller, PhD (Stakeholder Engagement & Education Core Co-Lead)
- Jessica Reed, MSN, GNP (Stakeholder Engagement & Education Core Co-Lead)
- Brenda Joly, PhD, MPH (Lead Program Evaluator)
- Kathleen Fairfield, MD (Data Analytic Team Lead)
advisory board

- Anne M. Haskell, Senator, Maine Senate, Lung Cancer Caregiver
- Jeff Holmstrom, DO, Medical Director, Anthem Blue Cross & Blue Shield of Maine
- Kevin Lewis, CEO, Community Health Options
- Daniel K. Onion, MD, MPH, Director (Emeritus), Dartmouth Family Medicine Residency
- Christopher Pezzullo, DO, Chief Health Officer, Maine Center for Disease Control & Prevention
- Linda F. Sanborn, MD, Representative, Maine House of Representatives
- Debra Violette, President & CEO, Free Me From Lung Cancer; Lung Cancer Survivor & Advocate
- Ralph Warnock, Lung Cancer Survivor
- Lisa Nolan, Director, Value-Based Purchasing, Maine Health Management Coalition
- Sheldon White, Lung Cancer Survivor
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Evidence-based Care, Improved Patient Access & Outcomes

Health Care Providers

Community Members

Patients

Health Policymakers

Health Insurance Providers

Innovate and Evaluate

Engage and Educate

Build Capacity

Expand Access to Care

Engage Patients & Other Key Stakeholders

Promote Evidence-based Practice

Utilize community health workers (CHWs) to promote lung cancer prevention and screening for at-risk rural populations

Assess feasibility and impact of telemedicine & patient navigation in lung cancer screening

Develop and implement education programs and outreach strategies

Develop messaging strategies to educate at-risk rural populations about lung cancer prevention and screening

Define and disseminate evidence-based practices for lung cancer screening

Identify needs and barriers to lung cancer prevention and screening services for at-risk rural populations

Stakeholder Engagement & Education Core

Early Detection Core

Prevention Core

Expand Access to Care

Engage Patients & Other Key Stakeholders

Promote Evidence-based Practice

Statewide System for Prevention, Screening, & Treatment of Lung Cancer

Maine Lung Cancer Coalition Pilot Projects

Engage and Educate

Innovate and Evaluate
Prevention Activities

**Environmental Health**
- Outreach and messaging to address environmental risks for lung cancer: radon and arsenic
- Inform policy

**Message Development**
- Intercept Interviews in Kennebec and Somerset Counties
- Risk reduction message development and testing for Priority Population
- Multi-Stakeholder Communications Advisory Group

**Primary Care Pilot**
- 4 MG PC Practices
- Proactive referral and outreach
- Population Health Approach
Prevention Activities

Community Health Worker Outreach

- Lung Cancer Risk reduction messaging outreach to at-risk population
- Working collaboratively with PC
- Link patient to services

Tobacco Cessation

- Primary care linkage to CTI
- CHW outreach cessation referral and support
- Increase Tobacco Treatment Training for providers/staff for high risk patients in rural areas
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**Evidence-based Care, Improved Patient Access & Outcomes**

- Health Care Providers
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**Innovate and Evaluate**

**Engage and Educate**

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**Stakeholder Engagement & Education Core**

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**Expand Access to Care**

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**Promote Evidence-based Practice**

**Build Capacity**

**Evidence-based Care, Improved Patient Access & Outcomes**

**Statewide System for Prevention, Screening, & Treatment of Lung Cancer**

**Maine Lung Cancer Coalition Pilot Projects**
Stakeholder Engagement & Education Activities

Vulnerable Population Demo - USM
- Identify individuals at risk for lung cancer who are disengaged from health care system; learn about barriers and health beliefs

Community Outreach - USM
- Engage rural health, community coalitions across Maine in SEEC efforts

MLCC Summit ALANE
- Bring together key stakeholders to assess current status and achieve consensus on lung cancer screening in Maine
- Create network of stakeholders to focus on improving lung cancer screening rates
Stakeholder Engagement & Education Activities

Policy - ALANE

- Host a Lung Cancer Screening Awareness Day
- Introduce legislation for MaineCare to cover LDCT lung cancer screening

Provider Outreach and Education - QC

- Develop statewide education program for clinicians on evidence-based lung cancer screening and prevention
- Tools and resources for implementation in practice
- Years 3-4: Learning Collaborative

Patient and Family Advisory Group - QC

- MLCC efforts informed by Patient and Family Advisory Group
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- Build Capacity
- Expand Access to Care
- Engage Patients & Other Key Stakeholders

Maine Lung Cancer Coalition Pilot Projects
# Early Detection Activities

## Education about Lung Cancer Screening

In partnership with Stakeholder Engagement and Education Core:

- Develop education materials and training related to lung cancer screening for a variety of audiences

## Lung Cancer Screening Standards

Align efforts related to lung cancer screening across the state:

- Eligibility criteria,
- Tobacco use history,
- Shared decision making process,
- Follow-up guidelines,
- Data tracking about screening and follow up
Early Detection Activities

Nurse Navigator Pilot

• Implement/evaluate the use of nurse-led patient navigation to facilitate access and coordinate Screening follow-up

Telemedicine Pilot

• Implement and evaluate the use of telemedicine to reach patients in underserved, rural areas to provide pre-screening shared decision making (SDM) counseling
Maine Lung Cancer Coalition Summit: 
*Coordinating Best Practice In Maine*

- First Meeting: May 12th, 2017
- Brought together Lung Cancer Screening Programs across the state; shared success stories and challenges
- Maine CDC presented data from their 2016 Lung Cancer Screening Survey
- Intention to meet quarterly and to continue to learn from each other about best practices
- Goal of developing standard approaches across programs
Lung cancer in Maine: the solution

• Collaboration: join forces, work together
• Leverage existing expertise and resources across the state
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→ Building a statewide coalition
MLCC Webinar Series

Future Topics

- What Your Patients Need to Know About Radon and Arsenic
- Components of the CMS Lung Cancer Screening Visit
- Shared Decision Making for Lung Cancer Screening
- And much more!!
Thank You

mainelungcancercoalition.org