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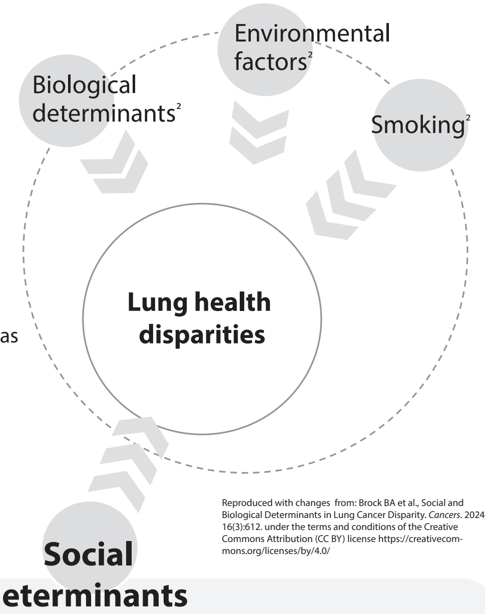
Defining effective Lung Cancer Screening (LCS)

On the road to equitable lung health

What contributes to disparity in lung health equity?



Non-medical factors, known as social determinants of health (SDoH) account for **30-55%** of the global disease burden and also influence cancer rates.[1]

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Access to low-dose computed tomography (LDCT) LCS and income

In low-income countries
1,694,000
people are served by

1 CT scanner

vs. 25,000
in high-income countries.[3]

Even in countries with higher income, low income is associated with a lower screening rate[4] and proximity to LDCT is often suboptimal in rural areas.[5,6]

Housing insecurity

In one lung cancer study
62%
of participants reported housing insecurity.[7]

Housing insecurity → **Cancer mortality**

Cancer patients experiencing housing insecurity had the highest risk of mortality.[8]

Housing insecurity **was highly associated** with **poor compliance of follow-up/ annual scan** (odds ratio [OR] 5.3, p=0.0013).[9]

Education

Education might have a **larger** impact than *health literacy* when making informed decisions about cancer care.[10]

Occupation

Occupational exposure to multiple carcinogenic agents compounds the risk of lung cancer.[11]

Co-exposure to selected lung carcinogens > Exposure to each agent alone

Risk of lung cancer

Others

- Ethnicity[12]
- Insurance[12,13]
- Belief system [2]

Properly addressing SDoH can improve lung health and reduce inequities in lung cancer outcomes.

Strategies for addressing SDoH and improving lung health equity

Enhance **education, community outreach and shared decision making,**[4,14] particularly for those of low socioeconomic status.[10]

Improved LCS participation rate[14]

5.5% vs. 1.8%

Outreach contacts/ Outreach + Shared Decision Making group
P = .001

No Outreach contacts or Shared Decision Making group

Centralize screening programs

Establishing organized national LCS programs can ensure quality and cost-effectiveness[15,16] and increase appropriate referrals.[16]

Advancing lung health equity in local communities

implement mobile CT units to overcome geographic barriers[6,17-22]

A mobile unit can reach underserved and rural populations, offering easy access to annual scans and follow-up[6,23] as well as educating about lung cancer and the benefits of LCS.[17,24,25]

One study reported
66%
of patients scheduled for a second scan at a mobile unit **accepted the invitation and attended it.**[18]

Find screening opportunities near you
(based on Interactive Map of LCS by Lung Cancer Policy Network)[26]

Click here

Best practices for developing and sustaining a mobile screening unit

Needs assessment and establishment of partnerships[18,23,25,27]

Building an ideal program

Equipment

- To tackle operational challenges like rough terrain and regional climate conditions, **collaborate closely with engineers and medical technology experts** and gather relevant technical input on unit design.[24,25]
- A reliable power source is essential for smooth, long-distance travel. An **additional truck carrying a generator** can be highly beneficial.[23,27]

Staff

- Onboard the mobile unit, the following personnel are essential: a CT technician,[23,25,27] a patient coordinator,[17] and a commercially licensed driver.[23,24,27]
- The following **staff** can **support** mobile screening **remotely**: a scheduler,[17] nurse practitioner,[25] nurse navigator[17,18,24] and radiologist.[17,25]
- Selecting staff **passionate about LCS** and **adaptable to a mobile setting**, including handling multiple roles, is essential.[23,24]

Promotion and community outreach

- Assessing the **needs of the community** and **choosing areas without LCS** in place can help to secure its **buy-in.**[23,27]
- **Flyers, reminder cards, social media advertising, and internet marketing** might be beneficial in promotion of the mobile unit.[17,23]
- **Multilingual promotion** can help attract a diversity of community members.[17]

Radius and schedule

- Creating a **plan for service including route of travel** ensures better follow-up of patients.[23,24]
- **Areas with high smoking rates and occupational exposure** can help to determine the travelling location priority.[23,27]
- **Travel time** within a community **may range from** 1.5 hours[24,25] to 3 months.[23,27]
- **Avoiding months with** particularly **poor weather** can help to safely navigate rural roads.[23,27]

Monitoring cost efficiency and sustaining operations

- The recommended daily screening volume to offset costs ranges from **12** to **27** scans.[23]
- **Evaluation of the early lung cancer detection rate** over five years[23] and the introduction of **measures to identify downstream revenue**[25] are essential to optimize the efficacy of the program.

Our mobile solutions

Learn more about how you can improve healthcare access and transform care pathways with dedicated Mobile CT LCS.

Learn more

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NEXT edition

Defining effective LCS:
At the crossroad of cost & efficiency.

What factors affect lung health disparities in your community?

Take a poll and find out if others are experiencing similar challenges.

Click here to take the poll

Hear what the experts say

Watch our webinar
"Unlocking Access to Lung Cancer Screening".

Click here to watch

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