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## Background

Lung cancer incidence is highest and survival poorest in deprived communities.

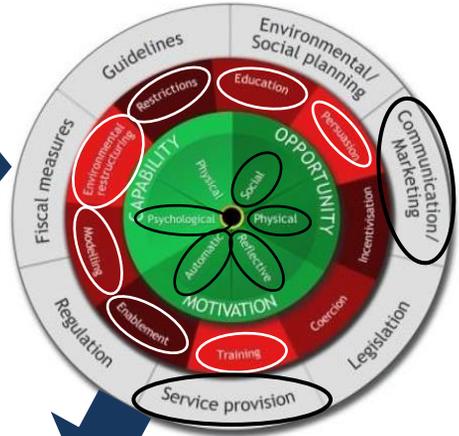
Interventions targeted at deprived communities to raise awareness of lung cancer and prompt symptom presentation can be used to promote earlier diagnosis of lung cancer to improve outcomes.

## Intervention development

Findings from studies to explore the barriers to cancer symptom presentation in deprived groups:

1. A systematic review (n=56)<sup>1</sup>
2. Qualitative interviews (n=30)<sup>2</sup>
3. Focus groups (n=6)<sup>3</sup>

Were mapped to the Behaviour Change Wheel<sup>4</sup> of intervention development.



## Group based educational session developed

Targeted at over 40s, living in deprived communities who are current smokers, former smokers or family members of smokers

Framed as a community responsibility intervention and information provided in third person to facilitate dissemination of information through social networks



Delivered using PowerPoint and a script (delivered by a trained, trusted member of the community) with activities and discussion. Designed to (examples of PowerPoint slides):

Modify negative beliefs about lung cancer e.g.

Provide information about eight lung cancer symptoms e.g.

Overcome reported barriers to symptom presentation e.g.

Help to prepare for an appointment with the GP

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'If you catch lung cancer in the early stages it can be cured'

True or false?

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A cough

-For 3 weeks or more  
-Or a change in normal cough

Go and see the doctor

NICE National Institute for Health and Care Excellence

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What stops people going to the doctor?

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What can you take with you to an appointment?

## Tested for acceptability with two groups of users (Site 1, n=7; site 2, n=7)

1. Complete pre-intervention questionnaire

2. Take part in intervention session (observed by researcher for group attentiveness)

3. Complete post-intervention questionnaire

4. Take part in focus group

1. The following may or may not be warning signs for lung cancer. We are interested in your opinion.

	Yes	No	Don't know
Do you think that unexplained weight loss could be a sign of lung cancer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you think that a chest infection that won't go away could be a sign of lung cancer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you think that a cough for three weeks or more could be a sign of lung cancer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you think that persistent wheezing of breaths	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



2. The following may or may not be warning signs for lung cancer. We are interested in your opinion.

	Yes	No	Don't know
Do you think that unexplained weight loss could be a sign of lung cancer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you think that a chest infection that won't go away could be a sign of lung cancer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you think that a cough for three weeks or more could be a sign of lung cancer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you think that persistent wheezing of breaths	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



### Questionnaire data

Pre to post intervention:

- Improved symptom knowledge
- Shift to more positive beliefs
- More appropriate symptom presentation
- Higher confidence to detect symptoms

### Observation and focus group data

- Information pitched at the right level
- Participants were engaged and participated throughout the session
- Questions mainly around lung cancer risk
- Community responsibility aspect acceptable

"It was just straight to the point, telling us about different symptoms. Like some of them I didn't even know was the symptoms. So it was a big eye-opener for me on understanding the symptoms. Yes, so it was good"

## Conclusion

Group-based education was an acceptable mode of intervention delivery for engaging people in deprived communities in lung cancer early detection, and warrants further feasibility and pilot testing.

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### References

<sup>1</sup>McCutchan G, et al (2015) Influences of cancer symptom knowledge, beliefs and barriers on cancer symptom presentation in relation to socioeconomic deprivation: a systematic review. *BMC Cancer*, 15: 1000; <sup>2</sup>McCutchan G, et al (2016) Barriers to cancer symptom presentation among people from low socioeconomic groups: a qualitative study. *BMC Public Health*; <sup>3</sup>Smits S, et al (2016) Development of a behaviour change intervention to encourage timely cancer symptom presentation among people living in deprived communities using the Behaviour Change Wheel. *Annals of Behavioural Medicine*; <sup>4</sup>Michie, S et al. (2011) The behaviour change wheel: A new method for characterising and designing behaviour change interventions. *Implementation Science*