

The UK Yorkshire Lung Screening Trial: implementation of telephone-based risk assessment and mobile, community- based Low Dose CT screening.

Rhian Gabe

Professor of Biostatistics and Clinical Trials
Wolfson Institute of Population Health

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Randomised trials of LDCT screening for lung cancer

- 2011: US NLST, N = 53,454
- 2022: Europe NELSON, N = 15,789
- Meta-analyses with:



~ 20% reduction in
lung cancer mortality

- 2018 YLST, N = 89,917
 - 3 screening rounds over 6 years



Yorkshire Lung Screening Trial



- Participation – “Lung Health Check”
- Accessibility – mobile vans in community locations
- Location – Leeds, areas of deprivation, high lung cancer mortality

WHAT WILL HAPPEN

Your invitation letter asks you to contact our telephone number 0113 XXX XXXX

If you choose to take part in the trial you will have a home visit from a specially trained nurse and other experts at your home to discuss the process.

This will allow us to decide whether you are eligible to take part in the mobile van for a trial.

0113 XXX XXXX

You'll meet a specially trained nurse who will ask you to have a home visit to check your lung function. The nurse will also talk to you about having a lung scan to check for any early signs of lung disease. In both cases you'll have plenty of time to ask for any extra information you need.

Dr Mary Houghton
Leeds Teaching Hospitals

LUNG HEALTH CHECKS

GPs in the local area are inviting people aged 55 to 80 for the Lung Health check.

For more information call our advice line on 0113 XXX XXXX or see www.leedslunghealthcheck.co.uk

Dr Mary Houghton
Leeds Teaching Hospitals







YLST Primary objectives

- Participation
 - Response to invitation to telephone to check eligibility
 - Attendance at the Lung Health Check on the van
- Performance of risk criteria
 - USPSTF
 - $PLCO_{m12}$
 - LLP_{v2}
- Lung cancer outcomes by trial arm
 - Advanced stage (III-IV)



55-80 years olds with a history of smoking identified through primary care,
84 GPs, n= 106,822

Ineligible, n= 16,509

- 13,079 Primary care review
- 3,826 Secondary care review

Randomisation
76,126 households
N = 89,917 individuals



Invitation to a LHC
38,102 households, n=45,047

Withdrawal/opt out
n=104

analysis
n=44,943


No invitation control
38,024 households , n=44,870


Withdrawal/opt out
n=19

analysis
n=44,851

Participation




 analysis
n=44,943

 22,815 Telephone responders (51%)
assessment: USPSTF, PLCO and LLP
Median call time: 4.1 mins

22,128 non responders (49%)

7,853 High risk by any criteria – eligible for
LHC appointment mobile van (34%)

14,962 Low risk -
ineligible (66%)

 6,819 attended (87%)
89% (1905/2150) current smokers
accepted cessation support

1,034 Declined/DNA (13%)

Telephone Response – 1st round (1)

	Non-responders	Responders	Total invited	P value
Number, n (%)	22,128 (49.2)	22,815 (50.8)	44,943	
Age, mean (SD)	64.8 (7.1)	67.3 (7.1)	66.1 (7.2)	<0.001
Sex, n (%)				<0.001
Female	9,969 (45.1)	11,477 (50.3)	21,446 (47.7)	
Male	12,158 (54.9)	11,338 (49.7)	23,496 (52.2)	
Indeterminate	1 (<0.1)	0	1 (<0.1)	
IMD quintile, n (%)				<0.001
1 - most deprived	8,102 (36.6)	5,539 (24.3)	13,641 (30.4)	
2	3,706 (16.8)	3,475 (15.2)	7,184 (16.0)	
3	3,537 (16.0)	4,084 (17.9)	7,621 (17.0)	
4	4,012 (18.1)	5,626 (24.7)	9,638 (21.4)	
5	2,744 (12.4)	4,067 (17.8)	6,811 (15.2)	
Missing	24 (0.1)	24 (0.1)	48 (0.1)	

Telephone Response – 1st round (2)

	Non-responders	Responders	Total invited	P value
Number, n (%)	22,128 (49.2)	22,815 (50.8)	44,943	
Ethnicity (derived), n(%)				<0.001
White	10,524 (47.6)	11,958 (52.4)	22,500 (50.1)	
Black or Black British	415 (1.9)	275 (1.2)	690 (1.5)	
Asian or Asian British	544 (2.5)	388 (1.7)	932 (2.1)	
Mixed	9,102 (41.1)	9,237 (40.5)	18,339 (40.8)	
Other	291 (1.3)	195 (0.9)	486 (1.1)	
Unclear	167 (0.8)	190 (0.8)	357 (0.8)	
Not stated	1,067 (4.8)	572 (2.5)	1,639 (3.7)	
COPD, n(%)	2,219 (10.0)	2,145 (9.4)	4,364 (9.7)	0.16
Smoking status (derived), n(%)				<0.001
Current Smoker	8,907 (40.3)	4,528 (19.9)	13,435 (29.9)	
Ex-Smoker	12,990 (58.7)	18,046 (79.1)	31,036 (69.1)	
Never Smoker	5 (<0.1)	8 (<0.1)	13 (<0.1)	
Non-informative code	226 (1.0)	233 (1.0)	459 (1.0)	

Telephone Response

- Multivariable analyses including age, sex, IMD, ethnicity, smoking status

	OR_{adj}	(95% CI)
Age (75+ v <60 years)	1.99	(1.87, 2.12)
Sex (Male v Female)	0.81	(0.78, 0.84)
IMD (Q1 v Q5)	0.58	(0.54, 0.62)
Ethnicity (Asian v White)	0.79	(0.68, 0.90)
Smoking (Current v Ex)	0.44	(0.42, 0.46)

Crosbie, Gabe, Simmonds et al. Participation in community-based lung cancer screening: the Yorkshire Lung Screening Trial. European Respiratory Journal, 2022

LHC Attendance

- 7,853 (34.4%) were eligible for a LHC on the mobile van
- 6,819 (86.8%) attended
- Multivariable analysis including age, sex, IMD, self-reported smoking status

	OR_{adj}	(95% CI)
Age (75+ v <60 years)	0.43	(0.34, 0.55)
Sex (Male v Female)	1.38	(1.21, 1.57)
IMD (Q1 v Q5)	0.78	(0.62, 0.98)
Smoking (Current v Ex)	0.63	(0.55, 0.73)

- 6,650 (97.5%) had a baseline LDCT scan

YLST future

- Second round participation
 - responders and non-responders/non-attenders were reinvited
- Third round until Oct 2024
 - T4 & T2 scans
 - Nested RCT of Pathway Navigation in individuals not engaging (CI: Sammy Quaife)
- Evaluation of risk criteria, lung cancer outcomes, cost-effectiveness, smoking cessation, participation in co-cancer screening (Kidney, Bladder)

Summary

- YLST demonstrates a feasible approach to targeted lung cancer screening
 - 51% response, 34% eligible, 87% attendance,
 - 4.1 mins per telephone call, 89% smokers accepting cessation support
- Research is required to address uptake and inequalities in screening
- YLST findings + data on costs included in the UK NSC report
- which lead to.....

September 2022 - UK NSC Recommendation



UK National Screening Committee

Lung cancer

Lung cancer is one of the most common types of cancer in the UK and worldwide. Around 48,000 people are diagnosed with lung cancer and about 35,000 people die from the disease every year in the UK. Smoking is the most common cause of lung cancer. Other causes include passive smoking and exposure to certain gases and chemicals.

» [Read more about lung cancer on NHS UK](#)

UK NSC screening recommendation

Based on the last UK NSC review of this condition that occurred in June 2022.

Screening for this condition is recommended.

Targeted screening for lung cancer is recommended for people aged 55 to 74 identified as being at high risk of lung cancer. Evidence shows that screening with low-dose computed tomography:

- reduces lung cancer mortality
- is acceptable to patients and professionals if adequately resourced and quality assured

The UK NSC recommended that the 4 nations move towards implementation of targeted lung cancer screening with integrated smoking cessation service provision. The Targeted Lung Health Checks (TLHC) programme provides a feasible and effective starting point for implementation in England.



News
Flash!
22 June

The Daily Telegraph

BRITAIN'S BEST QUALITY NEWSPAPER

INSIDE

Beat the system
How to snag this
year's hottest
concert tickets



Mind the
age gap
Things older
husbands can't
say to a younger
wife



Ben Lawrence
Literary fiction
is a snobbish
term



Michael Dougan

NHS lung cancer test for every ex-smoker

Checks from middle age and mass rollout of scanning units to boost poor survival rates

By Laura Donnelly, Health editor
ANYONE who has ever smoked is likely to be offered a lung check from middle age under an NHS plan to boost cancer survival rates.
Ministers are poised to back a new consultation to support the mass rollout of CT scans to middle-aged men and to be implemented in two parts.
Healthcare chiefs expect to announce how such checks will be able to spot those at most risk of lung cancer at an early stage in two.

Initially, most scans are focused here, where the proportion of men in the largest group of Health and Social Care are predicted to be at highest risk of developing lung cancer, which would significantly improve the quality of its output.

The discussion follows recommendations from the UK National Screening Committee (UKNSC), who in 2014 called for a mass and targeted approach to lung cancer screening. It is a move that is expected to be implemented in two stages.

The first stage is to offer a low-dose CT scan to men aged 55 to 74 who have smoked at least 10 cigarettes a day for 20 years. This is a move that is expected to be implemented in two stages.

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and the success of the trials is such that further scans are being written into quality contracts for scanning hospitals.
Dame Barbara told the health and social care committee: "We are now actually doing more stage one and two scans in the most deprived communities than in the most affluent communities and that is the aim of the lung cancer screening programme. That we've got to plan."

Last week, she told the NHS Confederation conference in Manchester that the plan to screen men "is a positive step and a good use of resources".

She said that there is almost no lung cancer diagnosis and about 10,000 deaths from lung cancer in the UK each year and that it is one of the most common causes of death in men.

Last year, a major advisory body called for a "mass and targeted" approach to lung cancer screening, which would significantly improve the quality of its output.

"The pilot schemes provide a feasible and effective starting point for implementation."

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And he's off...



Britain's best jockey, Richard Kingsmill, celebrating after winning the British Flat racing opener, the Queen Elizabeth Stakes, at Ascot on Tuesday. See Page 12

Titanic sub operator 'too slow to raise alarm'

By Michael Murphy and Jessica Kessler in Washington

THE family of the British billionaire who died in the Titanic disaster last year warning his ship was in danger for 18 minutes before the iceberg was sighted.

The former owner of the ship, John Jacob Astor IV, was not alone on the ship when it was hit by the iceberg.

The Titanic was hit by the iceberg on the night of April 14, 1912, and sank in the North Atlantic on the morning of April 15.

The ship's captain, Edward Smith, was killed in the disaster. The ship's last moments were captured on film by the Titanic Camera crew.

Richard Kingsmill, 36, a British racing jockey, was seen celebrating his victory on the racecourse.

"It's very exciting," Mr Kingsmill said. "I look forward to the next week of the season."

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Thank you

