Greater Manchester Cancer Conference
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Lung cancer screening: Manchester’s Lung Health Checks

Dr Phil Crosbie
Senior Lecturer, University of Manchester
Honorary Consultant in Respiratory Medicine
Early Detection Lead, Cancer Research UK Lung Cancer Centre of Excellence
Lung cancer incidence: not evenly distributed

Incidence rates by region, England and Wales

174
NHS North Manchester CCG

79.1
National Average

European age standardised incidence rates by deprivation quintile, England (2006-10)

Incidence per 100,000 (95% CI)

Rate per 100,000

Public Health England
Lung cancer paradox

Practical barriers most commonly cited
- Balata et al Thorax 2019

Tonge J et al Health Expectation 2019
Mobile truck in supermarket car parks
Immediate access to low dose CT scan

Lung Health Check / lung MOT
- age 55-74, ever smoker
- Located in deprived areas
  - North, Central and South Manchester
- Community-based
  - Supermarket car parks / free parking
- Targeted at those most at risk
  - 6-yr lung cancer risk score ≥1.51% (PLCOu2012)
- Immediate access to low dose CT (mobile)
  - One stop shop model for maximum convenience

90% PS 0-1
35% current smokers

Lung Health Check
n = 2,541

Lung Cancer Risk

56%

High *

Low

Screening
n = 1,384

Annual LDCT screening over 2 screening rounds

Symptoms

Spirometry

Smoking advice
**Lung Health Check: results**

- **75% attendees in lowest deprivation quintile**

**Lung cancer detection rate**

- 1 cancer detected for every 23 people screened

**Lung cancer stage**

- **GM**: 80% early stage (<30% in GM)
- **Screening**: >90% offered curative intent treatment
- Surgical resection rate 4x national average

**Screening**

- Preventing cardiovascular disease: 1 in 3 attendees at high risk but not receiving primary prevention
- Reducing smoking: 1 in 10 smokers stopped smoking. No sign licence to smoke
- Early detection of COPD: 1 in 5 attendees no history of COPD but have airflow obstruction
£4.2M funding to expand LHCs across North and East Manchester
Chief Investigator: Dr Mat Callister (Leeds)
Co-chief Investigator: Dr Phil Crosbie (Manchester)

Funded by Yorkshire Cancer Research £5.9M
Recruitment started Nov 2018
Telephone triage

Primary aims
1. Screening participation rates
2. Comparison screening selection criteria:
   - NLST (to age 80), PLCO (≥1.51%), LLP (≥5%)
3. Assess lung cancer outcomes in screening vs. usual care
National Health Service for England

£70M investment to fund **Lung Health Check** pilots across England based on the **Manchester model**
- Biennial screening over 2 rounds
- Scale ≈ 60,000 individuals screened

Protocol to standardise approach across sites

Screening eligibility based on risk
- $\text{PLCO}_{M2012}$ - threshold $\geq 1.51\%$
- $\text{LLP}_v^2$ – threshold $\geq 2.5\%$