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Participation in community-based lung cancer screening: the Yorkshire Lung Screening Trial

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Shareable abstract (@ERSpublications)
Telephone triage followed by community-based lung cancer screening is an effective model of screening delivery. However, lower participation in people who currently smoke and those from more deprived areas is notable and requires further research. https://bit.ly/38O9z2m

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Abstract

Background Screening with low-dose computed tomography (LDCT) reduces lung cancer mortality; however, the most effective strategy for optimising participation is unknown. Here we present data from the Yorkshire Lung Screening Trial, including response to invitation, screening eligibility and uptake of community-based LDCT screening.

Methods Individuals aged 55–80 years, identified from primary care records as having ever smoked, were randomised prior to consent to invitation to telephone lung cancer risk assessment or usual care. The invitation strategy included general practitioner endorsement, pre-invitation and two reminder invitations. After telephone triage, those at higher risk were invited to a Lung Health Check (LHC) with immediate access to a mobile CT scanner.

Results Of 44 943 individuals invited, 50.8% (n=22 815) responded and underwent telephone-based risk assessment (16.7% and 7.3% following first and second reminders, respectively). A lower response rate was associated with current smoking status (adjusted OR 0.44, 95% CI 0.42–0.46) and socioeconomic deprivation (adjusted OR 0.58, 95% CI 0.54–0.62 for the most *versus* the least deprived quintile). Of those responding, 34.4% (n=7853) were potentially eligible for screening and offered a LHC, of whom 86.8% (n=6819) attended. Lower uptake was associated with current smoking status (adjusted OR 0.73, 95% CI 0.62–0.87) and socioeconomic deprivation (adjusted OR 0.78, 95% CI 0.62–0.98). In total, 6650 individuals had a baseline LDCT scan, representing 99.7% of eligible LHC attendees.

Conclusions Telephone risk assessment followed by a community-based LHC is an effective strategy for lung cancer screening implementation. However, lower participation associated with current smoking status and socioeconomic deprivation underlines the importance of research to ensure equitable access to screening.

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