Future Health Research

Relieving an obstructed pathway

Building a national pathway for respiratory findings identified through lung cancer screening that can narrow health inequalities



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About this report

This research report sets out how the Government and the NHS can act on the respiratory findings already being identified through the NHS Lung Cancer Screening Programme (LCSP), a major national targeted screening programme.[1] The same low dose computed tomography (CT) scans that find lung cancer also find undiagnosed respiratory disease, principally emphysema, the structural lung damage that underlies most chronic obstructive pulmonary disease (COPD). The report examines the scale of these findings, what happens to the people in whom they are found, and what a nationally endorsed and funded pathway would involve.

The report is in three parts:

1) An overview of respiratory health inequalities in England and of the LCSP as an effective, place based response to them
2) The state of play today: the respiratory findings the LCSP generates, the national pathway that applies to them, Government action on respiratory health and the Men's Health Strategy commitment, and where the blockages to a funded pathway lie
3) The opportunity: a four part framework for acting on those findings through a national pathway for assessment, a funding mechanism, access to diagnostics and clear accountability

The report has been informed by an evidence, literature and data review, original analysis of published official statistics, interviews, and discussion with Asthma + Lung UK and a primary care respiratory clinician (see Appendix). Where figures are modelled, from a single site or from conference presentations rather than peer reviewed papers, the report says so.

About the author

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Executive summary

Respiratory disease is the third leading cause of premature death in England and a major pressure on the NHS. The burden falls hardest on people living in deprived communities and on former industrial workers.[2] Deaths from respiratory disease considered preventable in people under 75 range from 7.8 per 100,000 in Wokingham to 49.2 in Manchester.[3]

> Among 1.2 million people with COPD in England, mean monthly all cause mortality is 41% higher and exacerbation rates are 68% higher in the most deprived tenth of the population than in the least deprived, and these inequalities have persisted since 2019 despite sustained policy focus on reducing them.[4]

The NHS Lung Cancer Screening Programme (LCSP) is an effective, place based response to inequalities in lung health. Its first sites were chosen for their high lung cancer incidence and mortality.[5] By March 2025 more than two million people had been invited and 7,193 lung cancers diagnosed, three quarters at stage 1 or 2. The most deprived fifth of the population has moved from the lowest to the highest proportion of early stage lung cancer diagnosis, an effect not reported in any other cancer.[6] It shows what can be achieved when a national programme is targeted at the communities with the greatest need. The LCSP is expected to reach full national coverage by 2030.[7]

The same scans in the LCSP identify respiratory disease at scale. By April 2025 the programme had recorded 100,845 incidental findings of emphysema against 7,462 lung cancers.[8] Around one in eight people scanned in the LCSP's initial phase had emphysema graded moderate or severe, the threshold at which the LCSP's own standards say action is required.[9] [10] Independent UK studies find undiagnosed, symptomatic COPD in roughly between one in ten and one in five people attending screening.[11] [12] [13]

> The LCSP is therefore finding a second, highly prevalent condition in the same deprived communities, but is not currently set up to diagnose and treat it.

In the Men's Health Strategy of November 2025 the Government committed to ensuring that respiratory incidental findings from the LCSP, including COPD, are followed up according to the LCSP's incidental findings protocol and relevant NICE guidance.[14] The LCSP's quality assurance standards set a national pathway for each incidental finding. However, for moderate or severe emphysema the preferred pathway is communication only: a standard letter to the participant, copied to their GP. Assessment, including spirometry, is an alternative available only where services are locally agreed and funded,[15] and the LCSP's protocol prohibits the use of screening funding for such interventions.[16] The evidence suggests that where disease identification is not followed by a funded pathway, care gaps will emerge: in a West London pilot, management changed for fewer than a quarter of people referred to primary care.[17] Where a pathway has been funded locally, the return is substantial: in Hull, 46.8% of people assessed at the follow up clinic received a new COPD diagnosis.[18]

This report sets out a four part policy framework for capitalising on the opportunity the LCSP presents for tackling respiratory health inequalities. This includes:

- **A clear national pathway for assessment, with local flexibility for service implementation:** amending the LCSP quality assurance standards so that the preferred pathway for symptomatic moderate or severe emphysema is assessment with confirmatory spirometry, with integrated care boards (ICBs) choosing the delivery model (an illustrative pathway is set out in Annex A)
- **A funding mechanism:** a single national service specification and price for the assessment step, funded outside the cancer screening budget, with funding allocated to ICBs to commission the model that fits locally (see Figure 3). Once the specification is established, the general practice model should move into the national GP contract as a Directed Enhanced Service (DES), so that it is offered to every practice as the LCSP reaches full national coverage by 2030, or into neighbourhood health contracts as they develop.
- **Access to diagnostics:** ensuring quality assured spirometry is available for participants with moderate or severe emphysema, delivered in the setting that works best locally, for example alongside the screening appointment, in community diagnostic centres (CDCs) or in primary care, drawing on the expanding CDC network and on ICB commissioning of spirometry in general practice
- **Clear accountability:** a named accountable respiratory clinical lead in every ICB, extension of the LCSP's existing clinical roles to respiratory incidental findings, a national measure of confirmatory spirometry reported by deprivation quintile, and national reporting of spirometry waiting times

Taken together, these would allow a programme that already reaches the communities with the greatest respiratory need, and already finds the disease, to deliver earlier diagnosis and better outcomes for the people it finds.

Summary of key recommendations

Framework area	Recommendations
A national pathway for assessment	Amend Annex 3 of the LCSP quality assurance standards so that the preferred pathway for symptomatic moderate or severe emphysema is assessment with confirmatory spirometry, with local flexibility over the delivery model. Adjust quality standard 13 so respiratory assessment is not counted against the referral ceiling. Add incidental findings referral and outcome to the national minimum dataset and effectiveness standards. Publicly confirm the outcome of the scheduled review of the incidental findings table. DHSC to set a timetable for delivering the Men's Health Strategy commitment.
A funding mechanism	Establish a single national service specification and price for the assessment of respiratory incidental findings, funded outside the cancer screening budget. Allocate earmarked funding to ICBs by volume of findings, with payment linked to completed assessment. Once the specification is established, the general practice model should move into the national GP contract as a DES, so that it is offered to every practice as the LCSP reaches full national coverage by 2030, or into neighbourhood health contracts as they develop.
Access to diagnostics	Make quality assured spirometry available for participants with moderate or severe emphysema. NHS England to use the CDC programme so that every CDC serving a screening site offers quality assured spirometry. ICBs with an LCSP in their region to commission spirometry, including in general practice, to match the volume of findings, and to commission one stop assessment and confirmatory spirometry in the settings that work best locally, for example alongside screening appointments, in CDCs or in primary care. Require all providers of the assessment step to meet the LCSP's spirometry standard.
Clear accountability	Every ICB to confirm a named accountable clinical lead for respiratory care and outcomes, using existing leadership. Extend the LCSP's responsible clinician and clinical director roles to cover respiratory incidental findings, with a standard referral replacing the letter. Report the proportion of eligible participants receiving confirmatory spirometry, by deprivation quintile. Add spirometry to the national diagnostic waiting times collection, with waits reported by deprivation quintile.

Respiratory health inequalities and the Lung Cancer Screening Programme

41%

higher all cause mortality among people with COPD in the most deprived tenth of England than the least[19]

6x

difference in preventable respiratory death rates between the best and worst local authorities in England[20]

RESPIRATORY HEALTH INEQUALITIES IN ENGLAND

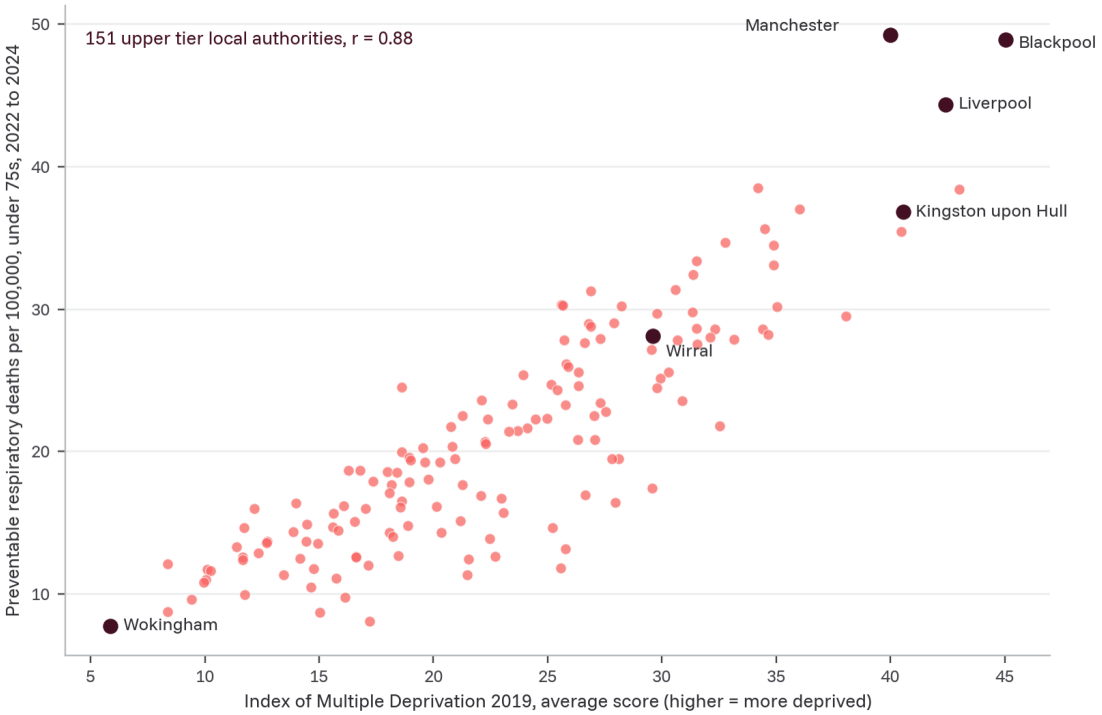
Chronic respiratory disease is the third leading cause of premature death in England.[21] The Government has recognised that rates of cancer, circulatory and respiratory conditions drive much of the ten year gap in life expectancy between men in the most and least deprived areas.[22] Analysis of official data on deaths from respiratory disease considered preventable in people under 75, for every upper tier local authority in England, shows a range from 7.8 deaths per 100,000 in Wokingham, Berkshire to 49.2 per 100,000 in Manchester, against an England rate of 19.3, with 57 authorities significantly worse than the national average.[23]

Evidence published in August 2026 by researchers at Imperial College London and partner institutions, covering 1.2 million people with COPD in England, found that mean monthly all cause mortality was 41% higher and exacerbation rates 68% higher in the most deprived tenth of the population than in the least deprived. Rates were also 15% and 42% higher respectively in the North East than in the South West. The authors conclude that inequalities in chronic respiratory disease outcomes persist across England despite sustained policy focus on reducing them.[24]

Future Health Research analysis linking the preventable mortality data to the Index of Multiple Deprivation 2019 for 151 upper tier local authorities with a published rate finds a correlation of 0.88 between deprivation score and preventable respiratory mortality.[25] [26] [27] The mean rate rises at every step of deprivation, from 12.4 per 100,000 in the least deprived fifth of authorities to 32.4 in the most deprived. Kingston upon Hull has the seventh highest rate in England.[28]

Figure 1:

Preventable respiratory mortality against deprivation, upper tier local authorities in England, 2022 to 2024



Sources: OHID Respiratory Disease profile, indicator 93724; MHCLG English indices of deprivation 2019, upper tier local authority summaries; Future Health Research analysis. Successor authorities created after 2019 in Cumbria and Northamptonshire are assigned the 2019 county score. The 2019 index is used for consistency with the Thorax study and the Taskforce for Lung Health dashboard. The analysis is at area level and shows an association between deprivation and preventable respiratory mortality; it does not describe individual risk. The index includes a health domain; against the income deprivation domain alone the correlation is 0.84.

THE LUNG CANCER SCREENING PROGRAMME: AN EFFECTIVE PLACE BASED RESPONSE TO TACKLE HEALTH INEQUALITIES

The Targeted Lung Health Check began in 2019 with the aim of reducing mortality from lung cancer by detecting it at an earlier stage in people at high risk, when treatment is more likely to be curative.[29] Sites for the programme were selected using lung cancer data for individual commissioners, choosing the areas with the highest incidence or mortality. Fourteen sites issued first invitations in July 2019 before expansion to all regions.[30] NHS England describes the programme as working with commissioners that have some of the highest rates of lung cancer mortality.[31] The community based Lung Health Check model that the national programme adopted was first piloted in Manchester in 2016 and 2017, in three deprived areas of the city and delivered from mobile units in supermarket car parks. The pilot showed that people at high risk who rarely engaged with health services would attend, and that 99.4% of attendees could perform spirometry on the day.[32 33]

The programme was recommended by the UK National Screening Committee in September 2022 and accepted by Government in June 2023 at an acknowledged cost of approximately £270 million a year at full rollout. In accepting the recommendation, the Secretary of State noted that the Targeted Lung Health Check was being run in predominantly deprived areas and committed the national programme to reaching 100% of the eligible population by March 2030.[34] It was renamed the NHS Lung Cancer Screening Programme on 1 February 2025 and is expected to reach full national coverage by 2030.[35 36] At full rollout everyone aged 55 to 74 should be offered the opportunity to participate irrespective of recorded smoking history.[37]

By March 2025 more than two million people had been invited and 7,193 lung cancers diagnosed, 63.1% at stage 1 and 12.6% at stage 2.[38] Uptake of lung health checks in the LCSP is lower in the most deprived fifth of the population (33.2%) than in the least (41.6%), although those who attend are more likely to be at high risk and to have a screen-detected cancer.[39] On outcomes, the LCSP is successfully tackling health inequalities for lung cancer. NHS England reported that early stage diagnosis in the most deprived areas rose from 30% in 2019 to 34.5% in 2022.[40] The LCSP's five year evaluation confirms that since it started, the proportion of stage 1 and 2 lung cancers in the most deprived fifth of the population has risen from the lowest of any group to the highest, an effect not seen in other cancers in England.[41]

The state of play: respiratory findings from lung cancer screening

WHAT THE SCANS FIND

A low dose CT scan images the whole lung, and when present, emphysema is visible on it. The LCSP's reporting proforma includes emphysema extent (none or mild, moderate, severe) as a field on every scan report, and its quality standards require 100% of reports to contain the proforma information.[42] The cohort is therefore already identified, graded and held as structured data. Two figures describe the scale of the finding:

- In a written answer of 25 July 2025, the Department of Health and Social Care (DHSC) confirmed that from the start of the programme to April 2025, 1,268,938 lung health checks had been attended, 7,462 lung cancers diagnosed and 100,845 incidental findings of emphysema recorded, without severity grading.[43] Set against the 528,686 baseline scans reported for approximately the same period, emphysema was recorded on approximately one in five scans, with approximately 13.5 emphysema findings for every lung cancer diagnosed.[44]
- The LCSP's five year evaluation reports that of 114,430 people scanned in the initial phase, 13,830 (12.1%) had emphysema graded moderate or severe, alongside 47.8% with coronary artery calcification.[45] Moderate or severe is the threshold at which the national pathway says action is required.[46]

Emphysema on a scan is not itself a diagnosis of COPD, which requires spirometry, and treatment is not indicated without confirmed airflow limitation.[47] Independent UK studies in screening cohorts show that the finding reflects real, undiagnosed disease:

- In the SUMMIT study in London, 16,010 people had a respiratory consultation and spirometry as part of their lung health check, and 19.7% met the criteria for undiagnosed COPD.[48]
- In the Yorkshire Lung Screening Trial, 17% of 3,920 attendees had undiagnosed airflow obstruction with symptoms. The trial authors summarise the wider literature as between 10% and 20% of people attending screening having unexplained symptomatic airflow obstruction, and thus possibly undiagnosed COPD.[49] [50]
- In the Manchester pilot, 37.4% of the 2,525 attendees who performed spirometry had airflow obstruction on spirometry, half of them (49.7%) with no prior diagnosis of COPD, and over half of that group were symptomatic.[51]

THE NATIONAL PATHWAY FOR INCIDENTAL FINDINGS

For the finding the LCSP exists to detect, a suspicious nodule, the standard protocol sets a defined, timed and quality assured pathway: review at the screening review meeting, referral through a named responsible clinician and audited follow up against national standards.[52] [53] For incidental findings, the quality assurance standards set a national pathway for each type of finding, with a preferred route and, in some cases, an alternative.[54] The two most common respiratory incidental findings are treated differently:

- **Interstitial lung abnormalities.** The preferred pathway is direct referral by the screening service to the local interstitial lung disease service where the abnormality affects more than 10% of the lungs or has progressed.[55]
- **Emphysema.** The preferred pathway for moderate or severe emphysema is communication only. This means a standard letter, sent by the screening coordinator to the participant with a copy to their GP, which tells the participant about the finding, recommends that they seek advice from primary care if they have symptoms and encourages smoking cessation. No referral is made and no appointment is offered. It is left to the participant to seek an assessment, and the standards say that screening sites should in general avoid asking primary care to act on incidental findings, although this can vary by local agreement. Emphysema is the one common respiratory finding with no referral in its preferred national pathway. The full entry is set out in Figure 2.[56]

Figure 2: The national incidental findings pathway for emphysema

Finding: emphysema, with action required for moderate or severe grades only.

Preferred pathway: communication only.

Alternative pathway: locally agreed and funded services may offer assessment in primary or secondary care, which may include assessment of symptoms and integration of spirometry.

Communication: a standard letter from the screening coordinator informing the participant of the finding, recommending they seek advice from primary care if they have symptoms, and encouraging smoking cessation. Standard letters are copied to the participant's GP, but the pathway does not include a referral or a request for the GP to act.[57]

The LCSP's funding rules and quality standards reinforce the communication only pathway. The standard protocol states that programmes may include other health interventions as long as funding for lung cancer screening is not used to provide them, so assessment of emphysema findings depends on a local system agreeing and funding it. National screening funding therefore pays to find and grade emphysema on the scan, but cannot be used to assess the person in whom it is found. The cost of that assessment, principally nurse time, spirometry and clinic capacity, falls on local NHS budgets, and the incidental findings protocol notes that the costs of investigating incidental findings are not necessarily borne by the screening programme.[58 59] Quality standard 13 sets a target for significant incidental findings referrals below 8% of participants; emphysema, being communication only, is not counted, so a site adding a diagnostic pathway adds activity the framework measures as a cost.[60] The LCSP's incentives are therefore aligned to finding lung cancer, while identifying COPD is not measured by any of its quality standards. This reflects the relatively low priority that respiratory care has within NHS policy more widely, despite the high burden of disease.

GOVERNMENT ACTION ON RESPIRATORY HEALTH AND THE MEN'S HEALTH STRATEGY COMMITMENT

The Government has taken a series of steps on respiratory health since 2025. The Tobacco and Vapes Act 2026 received Royal Assent on 29 April 2026.[61 62] The Respiratory Transformation Partnership, announced in March 2026, brought NHS England, the health innovation networks and industry together to redesign asthma and COPD care closer to home.[63] The 10 Year Health Plan commits to a neighbourhood health centre in every community, starting where healthy life expectancy is lowest, and to the shifts from sickness to prevention and from hospital to community.[64 65] The context for these commitments is a rising burden of unscheduled care. Emergency admissions for COPD in England stood at 201 per 100,000 population in 2024/25, on a trend Fingertips records as increasing and getting worse,[66] and the Taskforce for Lung Health publishes lung condition emergency admissions by integrated care board and deprivation quintile.[67]

On incidental findings from lung cancer screening specifically, the Men's Health Strategy, presented to Parliament on 19 November 2025, states that around a third of those referred to primary care from the programme were for undiagnosed COPD or other incidental findings, that many would benefit from further care, and that the LCSP has a clear protocol on the management of incidental findings to ensure they can access appropriate follow up. Among its actions, the Strategy commits the Government to ensuring that incidental findings from the programme, including respiratory illnesses such as COPD, are followed up according to that protocol and relevant NICE guidance.[68] In the Commons on 14 July 2026, the Parliamentary Under-Secretary of State restated that clear national protocols and quality assurance arrangements are in place so that clinically significant incidental findings are reported, followed up and acted on appropriately.[69]

The figure of around a third is consistent with the West London pilot, in which 33.7% of primary care referrals were for suspected COPD.[70] As set out above, the protocol on which the commitment relies sets communication only as the preferred pathway for emphysema. On its own, communication of incidental findings to primary care does not provide assurance that further assessment or management has taken place. Delivering the Men's Health Strategy commitment therefore requires the incidental findings protocol itself to change, so that the preferred pathway for symptomatic moderate or severe emphysema becomes active assessment.[71]

THE CONSEQUENCES OF IDENTIFICATION WITHOUT A FUNDED PATHWAY

The published evidence on what follows identification without a funded pathway is consistent:

- In the West London pilot, management changed for only 22.6% of those referred to primary care.[72] The LCSP's evaluators cite that study when explaining why the protocol now includes nationally standardised pathways.[73]
- In Yorkshire, nearly a third of those invited for further assessment declined, and 29% of those who had confirmatory testing did not have airflow obstruction on confirmatory testing.[74]
- Emphysema on a screening scan is a prognostic marker associated with increased mortality risk even without airflow limitation.[75] In Hull, one in four people diagnosed with COPD through the follow up clinic had been treated for a chest infection in the previous year, consistent with exacerbations of undiagnosed disease.[76]

WHERE THE BLOCKAGES LIE: FUNDING, DIAGNOSTICS AND LEADERSHIP

Three linked constraints explain why the alternative pathway in the national standards has been taken up in only a small number of areas. The first is funding. Because screening funding cannot be used, each local system that wants to assess emphysema findings must identify recurrent funding for diagnostic capacity, principally nurse time, from elsewhere. A parliamentary roundtable in November 2025, funded by Chiesi Ltd and sponsored by Jim Shannon MP as Chair of the All Party Parliamentary Group on Respiratory Health, identified the way screening funding is allocated as a barrier to including COPD diagnosis,[77] and Chiesi Market Access and NHS Engagement colleagues interviewed for this report described recurrent funding as the most common reason local discussions do not progress (see Appendix). Quality standard 13 compounds this by setting a maximum referral rate for significant incidental findings, so additional respiratory referrals count against performance.[78]

The second is access to quality assured spirometry, without which a finding on a scan cannot become a diagnosis. Spirometry was stopped within lung health checks during the pandemic and is now offered at only some lung health checks.[79] The Primary Care Respiratory Society (PCRS) links the loss of respiratory clinical leadership to widening variation in access to quality assured spirometry and diagnostics.[80] Respiratory diagnostic waiting times are not reported nationally in the way that other diagnostics are, so the scale of the capacity gap is not visible to national or local decision makers.

The third is leadership. A pathway that runs between a screening service, a diagnostic service and primary care requires a clinician or multidisciplinary team with responsibility for it. The PCRS's June 2026 position statement records a marked and sustained reduction in dedicated respiratory clinical leadership roles at ICB, regional and primary care network level.[81] ICBs were reorganised and reduced in number on 1 April 2026 as part of a redesign to reduce running costs, and their capacity to take on new responsibilities is limited.[82] In practice, this means that in many ICBs no one is asked to own the emphysema finding once the letter has been sent. The LCSP's evaluators list incidental findings referral rate among the measures for which limited data were available, so the outcome of the current pathway cannot be assessed nationally either.[83]

Capitalising on the opportunity

100,845

incidental findings of emphysema recorded by the LCSP to April 2025, against 7,462 lung cancers[84]

46.8%

of people assessed at the follow up clinic after screening in Hull received a new COPD diagnosis[85]

NHS England's lead clinician for lung cancer has written that clear guidance on incidental findings serves both to prevent referral of clinically insignificant findings and to optimise follow up where interventions could be hugely beneficial.[86] The Taskforce for Lung Health, a collaboration of more than 40 members of the respiratory community, set out four principles for the incidental findings protocol in 2024, the first of which was clear thresholds for follow up by clinical significance, severity and symptoms.[87] Local systems in England, and one other national screening programme, have already developed models for the assessment step:

Model	What it looks like
Hospital diagnostic hub (Hull)	FRONTIER, a collaborative working project between Hull University Teaching Hospitals NHS Trust and Chiesi Ltd, invites screening participants identified as high risk of COPD to a nurse led one stop clinic with symptom assessment and lung function testing; 46.8% of those assessed received a new COPD diagnosis (see case study below).[88] A second phase, FRONTIER 2, is delivering the same model through a community diagnostic centre (CDC).[89]
Community diagnostic centre (Wirral)	COMET, a collaborative working project between Wirral Primary Care Collaborative and Chiesi Ltd, supported lung health check participants referred for spirometry at a community diagnostic centre. Following spirometry, patients were clinically triaged, with those identified as being at risk of COPD invited to the COMET clinic for further assessment, diagnosis and timely management where appropriate.[90]
Guidance only (Central Lancashire)	Local guidance for primary care sets out what a GP should do when a CT report shows emphysema: baseline spirometry, referral to pulmonary rehabilitation where the Medical Research Council (MRC) dyspnoea grade is 2 or above, and testing for alpha-1 antitrypsin deficiency. The guidance does not set out dedicated funding, capacity or accountability, so delivery depends on the individual practice.[91]
National mandate (Australia)	Australia launched its National Lung Cancer Screening Program in July 2025. Its national COPD guideline, most recently updated in December 2025, requires that all individuals with scan findings suggestive of emphysema undergo formal spirometry to confirm or exclude airflow limitation.[92]

Case study: FRONTIER, Hull

Where. Kingston upon Hull has the seventh highest rate of preventable respiratory death in England and was one of the early Targeted Lung Health Check sites.[93]

Who. FRONTIER (Finding the hidden millions: restoration of early COPD diagnosis for Hull Lung Health Check participants) is a collaborative working project between Hull University Teaching Hospitals NHS Trust, now part of NHS Humber Health Partnership, and Chiesi Ltd. The clinical lead is Professor Michael Crooks, Professor of Respiratory Medicine at Hull York Medical School.[94]

What. Participants in the Hull Lung Health Check whose scan or symptoms indicate a high risk of COPD, principally emphysema on CT, are invited to a nurse led one stop clinic combining symptom assessment with lung function testing. Newly diagnosed patients are offered evidence based treatment and, where eligible, referral to pulmonary rehabilitation and specialist stop smoking support.[95]

Results. Data presented at the European Respiratory Society Congress in September 2025 reported that 383 people, 46.8% of those assessed, received a new diagnosis of COPD. One in four of those diagnosed had been treated for a chest infection in the previous year.[96]

Cost. A budget impact model presented at ISPOR Europe 2025 estimated a cost of approximately £95 per participant screened, with the programme becoming cost saving from around year five as avoided exacerbations and admissions accumulate.[97]

Next. FRONTIER 2 is delivering the same model through a community diagnostic centre (CDC), testing whether the pathway can run outside the acute hospital.[98]

What it shows. The assessment step can be delivered within the existing infrastructure of the LCSP, using its own identification of the cohort. The constraint on spread is not the model but the absence of a national pathway and recurrent funding for the diagnostic capacity it requires.



A budget impact model presented at ISPOR Europe in 2025 tested whether early diagnosis pays for itself. The model compared a cohort diagnosed early through the diagnostic hub with a cohort diagnosed later in the usual way, using healthcare resource use from the published literature over ten years. It estimated a cost per screened participant of approximately £95, with the programme becoming cost saving from around year five as avoided exacerbations and admissions accumulate, and a net saving of approximately £636,000 over ten years when 800 high-risk people are screened each year.[99] These are modelled figures from a single site and depend on the diagnostic yield that a targeted approach produces. Answering a written question from Bob Blackman MP in June 2025, DHSC confirmed that NHS England was aware of the Hull data and that the work is informing policy considerations.[100]

The following four areas set out how the Government and the NHS can build on these models to act on the findings the programme already generates:

- A national pathway for assessment, with local flexibility for implementation
- A funding mechanism
- Access to diagnostics
- Clear accountability

A NATIONAL PATHWAY FOR ASSESSMENT, WITH LOCAL FLEXIBILITY FOR IMPLEMENTATION

The national standard should determine whether assessment happens. ICBs should be given flexibility over the approach to adopt, according to local capacity and need, and Figure 3 sets out four models they could choose between or combine. Amending Annex 3 of the quality assurance standards so that the preferred pathway for symptomatic moderate or severe emphysema is assessment with confirmatory post bronchodilator spirometry would align the LCSP with the Australian guideline and with what the LCSP's existing alternative pathway already permits.[101] [102] Confirmatory post bronchodilator spirometry is the safeguard against overdiagnosis: in Yorkshire, 29% of those with obstruction on initial testing did not have it on confirmatory testing.[103]

Two consequential changes follow. Quality standard 13 currently counts significant incidental findings referrals against an 8% ceiling; respiratory assessment under an amended pathway should sit outside that measure so that sites are not penalised for acting on the finding.[104] And the outcome of the pathway needs to be measurable. The LCSP's evaluators report that limited data were available on incidental findings referral rates, that NHS England has developed 14 effectiveness standards which are currently in consultation, and that a participant level information system for the programme is expected in mid 2026.[105] Incidental findings referral and outcome should be added to the national minimum dataset and to the effectiveness standards as they are finalised, so that the amended pathway can be performance managed in the same way as the cancer pathway.

Future Health Research found no published outcome of the review of the incidental findings table that the quality assurance standards recommended for January 2026; the February 2025 standards remain the current version on NHS England's website.[106]

How the assessment is delivered should be a local decision. Figure 3 sets out four delivery models, drawn from the approaches already in use and from the stakeholder discussions held for this report. They are not mutually exclusive: most systems would combine more than one, for example a community or general practice route for most participants and a hospital diagnostic hub for participants who need specialist review. The assessment of where each model is best suited is a qualitative judgement by Future Health Research. Annex A sets out an illustrative patient-led pathway, developed by Future Health Research, which shows how a finding on the scan would be graded, routed, assessed and diagnosed before a local decision is taken on where the generalist route is delivered and how it is funded.

Figure 3: Local delivery models for the assessment step

Model	How it works	Best suited to	Funding route	Example
General practice or primary care network (PCN)	The screening site sends a coded referral to the practice. A practice or network spirometry service carries out the assessment, and the practice manages the patient from the outset.	Areas where practices or networks already provide quality assured spirometry.	Enhanced service commissioned by the ICB and paid per completed assessment; in time a Directed Enhanced Service or neighbourhood health contract.	Central Lancashire guidance for primary care, although this has no dedicated funding.
Community diagnostic hub	The screening site refers to a single community service, often in a CDC, which carries out a one stop assessment and passes a coded care plan	Urban and suburban areas with a CDC or community respiratory team.	ICB contract with the hub provider.	COMET, Wirral; FRONTIER 2, Hull.
One stop review at screening	Spirometry is offered alongside a screening appointment, and the outcome is coded and sent to the practice.	Rural and coastal areas, where a second journey is a barrier to attendance.	Commissioned alongside, but separately from, the cancer screening contract and paid from the assessment funding.	None identified in England.
Hospital diagnostic hub	The trust hosting the screening site runs a nurse led clinic for participants with findings and discharges them to a named practice with a coded diagnosis and plan.	Areas where community capacity is limited, and participants who need specialist review, for example with severe disease or other significant findings on the scan.	ICB payment per case to the trust.	FRONTIER, Hull.

Source: Future Health Research. Examples as referenced on page 12.

Recommendations for policymakers

- NHS England should amend Annex 3 of the LCSP quality assurance standards so that the preferred pathway for moderate or severe emphysema with symptoms is assessment with confirmatory post bronchodilator spirometry, rather than communication only, with ICBs given flexibility over the delivery model
- NHS England should adjust quality standard 13 so that respiratory assessment under the amended pathway is not counted against the ceiling for significant incidental findings referrals
- NHS England should add incidental findings referral and outcome to the LCSP's national minimum dataset and to the effectiveness standards currently in consultation
- NHS England should publicly confirm the outcome of the scheduled review of the incidental findings table, and DHSC should set a timetable for delivering the commitment in the Men's Health Strategy

A FUNDING MECHANISM

Because the standard protocol prohibits the use of screening funding for other interventions,[107] the assessment step needs a clear and defined funding mechanism of its own. This should begin with a single national service specification and price for the assessment step, with earmarked funding allocated to ICBs according to the number of moderate or severe emphysema findings their screening sites record. ICBs would commission against the specification from the provider best placed locally, using a relevant model in Figure 3. Payment should be linked to completed assessment and coding of the outcome rather than to referral, so that funding follows completion of the pathway. Allocating funding to ICBs first allows any of the four models to be commissioned, including the hospital and community models tested in Hull and Wirral.[108] Annex A illustrates how an ICB could use agreed grading definitions, the expected proportions of findings and an agreed rate per assessment to size and commission the service for its population.

Once the specification is established, the general practice model should move into the national GP contract as a Directed Enhanced Service (DES), so that it is offered to every practice with LCSP coverage. This would align with the direction of the 10 Year Health Plan towards care closer to home.[109] As the 10 Year Health Plan's neighbourhood model matures and Single and Multi-Neighbourhood Provider contracts develop, the specification and its funding should transfer into those contracts, so that the pathway is built into neighbourhood health from the outset rather than added later.[110]

Recommendations for policymakers

- DHSC and NHS England should establish a single national service specification and price for the assessment of respiratory incidental findings from the Lung Cancer Screening Programme, funded outside the cancer screening budget, with earmarked funding allocated to ICBs according to their volume of moderate or severe emphysema findings and payment linked to completed assessment and coding
- Once the specification is established, DHSC and NHS England should bring the general practice model into the national GP contract as a DES, phased in line with the LCSP's rollout to full national coverage by 2030, and as neighbourhood health contracting develops, the specification and its funding should be carried into Single and Multi-Neighbourhood Provider contracts

ACCESS TO DIAGNOSTICS

A funded pathway will only deliver diagnoses if quality assured spirometry is available in the communities where the finding is made. Where this is best provided will vary between local systems, as Figure 3 sets out. One option is to offer spirometry alongside screening. It was part of the model piloted in Manchester, where 99.4% of attendees performed it successfully on the day,[111] and it was stopped during the pandemic and is now offered at only some lung health checks.[112] Offering it to participants whose scan shows moderate or severe emphysema would allow assessment to begin before the participant has left the pathway. Spirometry offered alongside screening would be paid for through the funding mechanism set out above, not from the LCSP's own funding. Current workforce pressures, including the availability of staff trained to carry out and interpret quality assured spirometry, will make this difficult to achieve quickly in some areas, and capacity will need to be built up over time.

There are also opportunities to make better use of the diagnostic capacity the NHS has already built. FRONTIER 2 in Hull delivers assessment through a CDC, and in Wirral the spirometry that preceded the COMET clinic was provided at an existing CDC.[113] [114] CDCs are one setting for confirmatory spirometry and one stop respiratory assessment, alongside general practice and hospital diagnostic hubs. The CDC network is expanding: in April 2026 the Government announced £237 million to open four new centres and expand or enhance 32 more, with some of the enhancements adding respiratory services.[115] Provision in general practice is uneven: a Pulse investigation found that 11 of the 42 ICBs did not offer general practice a spirometry local enhanced service in 2025/26.[116]

ICBs should commission quality assured spirometry, including in general practice, at a level that matches the volume of moderate or severe emphysema findings their screening sites generate, and NHS England should use the CDC programme to ensure that every CDC serving a screening site offers spirometry and accepts direct referral from it.

As spirometry capacity is increased, quality and monitoring will be important. The LCSP's standards already require anyone performing spirometry in a lung health check to be on the national spirometry register,[117] and that standard should apply to every provider of the assessment step.

Recommendations for policymakers

- NHS England should confirm that local systems can offer spirometry alongside screening appointments to participants whose scan shows moderate or severe emphysema
- NHS England should use the community diagnostic centre programme, including the expansion announced in April 2026, to ensure that every CDC serving a screening site offers quality assured spirometry and accepts direct referral from it
- ICBs should commission quality assured spirometry, including in general practice, at a level that matches the volume of emphysema findings from their screening sites, and commission confirmatory spirometry and one stop assessment in the settings that work best locally, for example alongside screening appointments, in CDCs or in primary care
- NHS England should require every provider of the assessment step to meet the LCSP's spirometry standard, including registration on the national spirometry register

CLEAR ACCOUNTABILITY

The roles required to give the emphysema assessment pathway an owner already exist within the LCSP. Every screening programme has named clinical roles, including a clinical director, who is accountable for ensuring that findings are acted on, and a responsible clinician, a respiratory physician who signs off communications to primary care. Every programme also runs a screening review meeting at which incidental findings are considered, uses national template letters, and codes findings to the GP record.[118] [119] Cancer Alliances hold the contracts under which screening sites are commissioned and are therefore the level at which the pathway between the screening site, the diagnostic service and primary care should be agreed. Extending the existing LCSP roles to cover respiratory incidental findings explicitly, and pairing them with an accountable respiratory lead in each ICB, would establish clear ownership without creating new posts at a time of major organisational restructuring in the system.[120]

The Respiratory Transformation Partnership has appointed clinical leads for its asthma and COPD workstreams, recognising at national level that named clinical leadership matters for respiratory care; the same principle should apply in each ICB.[121] Accountability for delivery should be managed through a measure such as the proportion of participants with symptomatic moderate or severe emphysema who receive confirmatory spirometry within a defined period of their screening result, reported nationally by deprivation quintile. This would allow progress to be assessed and would make the inequality effect visible in the same way that the LCSP's cancer staging data has done.[122] The measure should sit alongside national reporting of spirometry waiting times. The national diagnostic waiting times collection includes sleep studies but not spirometry,[123] so waits for the test on which a COPD diagnosis depends are not visible to national or local decision makers. Adding spirometry to that collection, with waits reported by ICB and by deprivation quintile, would show where access is falling short and where capacity is most needed.

Recommendations for policymakers

- ICBs should follow the lead of the Respiratory Transformation Partnership and confirm a named, accountable clinical lead for respiratory care and outcomes across their population, drawing on existing clinical leadership rather than creating new posts
- Within each Lung Cancer Screening Programme, the responsible clinician's remit and the clinical director's accountability should be extended to cover respiratory incidental findings, with a standard referral from the screening review meeting to the assessment service replacing the letter to the participant
- NHS England should report the proportion of eligible participants receiving confirmatory spirometry within a defined period, by deprivation quintile, and add spirometry to the national diagnostic waiting times collection, with waits reported by ICB and deprivation quintile

Summary of recommendations by organisation

Organisation	Recommendations
DHSC	Set a timetable for delivering the Men's Health Strategy commitment on incidental findings; establish, with NHS England, the national service specification and its funding.
NHS England	Amend Annex 3 and quality standard 13; publicly confirm the outcome of the scheduled review of the incidental findings table; add incidental findings referral and outcome to the minimum dataset and effectiveness standards; specify the assessment service and its price, and allocate earmarked funding to ICBs; bring the general practice model into the national GP contract as a Directed Enhanced Service once the specification is established; confirm that local systems can offer spirometry alongside screening appointments; use the CDC programme so that every CDC serving a screening site offers quality assured spirometry; add spirometry to the national diagnostic waiting times collection and report it, with the confirmatory spirometry measure, by deprivation quintile; require every provider of the assessment step to meet the LCSP's spirometry standard.
ICBs	Follow the lead of the Respiratory Transformation Partnership and confirm the accountable respiratory clinical lead; commission quality assured spirometry, including in general practice, to match the volume of emphysema findings, and commission confirmatory spirometry and one stop assessment in the settings that work best locally, for example alongside screening appointments, in community diagnostic centres or in primary care; carry the specification into neighbourhood provider contracts as they develop.
Cancer Alliances	Agree the pathway between each screening site, the diagnostic service and primary care as part of screening contracts.
Lung Cancer Screening Programme providers	Extend the responsible clinician and clinical director roles to respiratory incidental findings; replace the letter with a standard referral from the screening review meeting; apply the LCSP's spirometry standard to spirometry delivered alongside screening.

Conclusion

The Lung Cancer Screening Programme has had success in narrowing inequalities in lung cancer outcomes.[124] As the programme is now being scaled nationally, there is an opportunity to use it to support action on inequalities in respiratory health more widely. The programme already grades emphysema on every scan, and studies in screening cohorts find undiagnosed COPD in roughly between one in ten and one in five of the people it sees.[125] [126]

However, the current national pathway responds to that finding with an unfunded letter rather than a referral.[127] More encouragingly, the Government has committed in the Men's Health Strategy to ensuring that respiratory incidental findings are followed up, and the vehicle for doing so, the incidental findings protocol, was recommended for review in January 2026, and the outcome of that review has yet to be published.[128] [129] Australia provides a precedent: its national COPD guideline requires confirmatory spirometry for everyone whose lung cancer screening scan suggests emphysema.[130]

The four part framework in this report is designed to close that gap. A national pathway for assessing incidental findings, supported by a funding mechanism, access to diagnostics and clear accountability, and combined with local flexibility on how the pathway is delivered, would allow a programme that already reaches the communities with the greatest respiratory need to deliver earlier diagnosis and better outcomes for the people it already finds.

Appendix



Appendix: methodology and consultation

Future Health Research undertook the research in three parts.

The first was an evidence, literature and data review covering respiratory health inequalities in England, the structure and results of the Lung Cancer Screening Programme, the national incidental findings protocol and the published evidence on downstream outcomes. Sources were prioritised in three tiers: NHS England and Government publications; peer reviewed journals and official statistics; and policy material and reports from the respiratory community, which were used to identify primary sources rather than cited directly wherever possible. Alongside the review, Future Health Research analysed published Office for Health Improvement and Disparities data on preventable respiratory mortality for the 151 upper tier local authorities in England with a published rate against the Index of Multiple Deprivation 2019.[131] [132]

The second was a series of interviews with Chiesi Market Access and NHS Engagement colleagues in September 2026 on the design, delivery and health economics of the Hull and Wirral case studies, and on barriers to local adoption.

The third was external engagement. The themes, evidence and emerging recommendations of the report were discussed with Asthma + Lung UK and with a primary care respiratory clinician, who contributed in a personal capacity and not on behalf of any organisation. The statements, findings and recommendations in the report are the views of Future Health Research alone and should be attributed as such. The illustrative pathway in Annex A was developed by Future Health Research and informed by these discussions; it is Future Health Research's pathway alone.

A note on the evidence. FRONTIER and COMET are collaborative working projects between Chiesi and NHS organisations. They are presented as case studies of delivery models with their provenance stated. The recommendations rest on NHS England's programme documents, the programme's published five year evaluation, independent peer reviewed screening cohorts and official statistics. Economic figures from the Hull budget impact model are modelled, from a single site, and described as approximate.

Annex A: A patient-led pathway for incidental findings from lung cancer screening

An illustrative pathway developed by Future Health Research. It is not clinical guidance.

This annex sets out an example pathway developed by Future Health Research to show how a national expectation to act on incidental findings could be delivered in practice. It is illustrative rather than clinical guidance. It was informed by discussion with respiratory leaders working in primary care, but it is Future Health Research's pathway alone and Future Health Research is accountable for its content. It starts with the finding on the scan rather than with a service, and runs through four steps: grade the finding, route it, investigate and assess, and diagnose and hand over. Alongside those steps sits a local decision on where the generalist route is delivered and how it is funded. Any pathway adopted locally would be designed and agreed by the clinicians and commissioners involved.

STEP 1: GRADE THE FINDING

- The scan is reported against definitions of mild, moderate and severe emphysema agreed across organisational boundaries, with other findings reported by type. Radiologists vary in what they call mild or normal, so a shared definition is the foundation of a consistent pathway.
- AI-supported reporting can grade emphysema at the point of reading, allowing the system to prioritise from the outset.
- Mild findings still need to be communicated. The answer to the current problem of communication without funded follow up is not to communicate less, but to attach a funded route to each grade.

STEP 2: ROUTE BY TYPE AND SEVERITY

- Severe emphysema is routed for a one-off specialist respiratory assessment, as are other significant or complex findings on the scan (for example fibrotic interstitial lung disease, nodules needing work up or severe aortic stenosis), with the practice copied in. The assessment may be delivered by a community respiratory team, a GP or nurse with extended respiratory training, or a hospital clinic, as agreed locally. Routing direct from the screening report avoids the delay of a further referral via the practice (see note 1).
- Moderate and mild emphysema, the most common findings, go through a generalist route of quality assured spirometry and clinical assessment. Coronary calcification goes to the practice for cardiovascular risk management.
- Routing is set by a clinician or the programme team at the point of reporting, not left to the practice to filter. The CT shows far more than emphysema, and not every finding needs a respiratory test.

STEP 3: INVESTIGATE AND ASSESS

- The test is not the diagnosis. A spirometry report has to be followed by a clinical assessment that confirms COPD or considers other causes, so funding must cover both the test and the assessment.
- GPs and practice nurses with appropriate respiratory training diagnose and manage COPD at all levels of severity. For moderate and mild emphysema, the most common findings, both the test and the assessment can be delivered by generalists. The specialist assessment in step 2 is for findings where the scan raises questions beyond a COPD diagnosis.
- Spirometry is bought at an agreed cost to a quality assured standard. Different staff groups charge very differently for the same test, and the aim is a reliable service rather than the most expensive one.

STEP 4: DIAGNOSE, TREAT AND HAND OVER

- Where COPD is confirmed, the patient is added to the practice register and suitable treatment and support start, so that the finding leads to care rather than a letter.
- Where the test is normal but the scan shows emphysema, the patient is told what has been found, given advice and brought back for review at an interval agreed locally, rather than discharged with no plan.
- Specialist assessments hand the patient back to the practice with a coded plan, and ongoing care is managed in primary care whatever the severity. Every outcome is coded to the GP record so the system can see volumes, conversion to diagnosis and time from scan to treatment.

DECIDE LOCALLY WHERE THE GENERALIST ROUTE IS DELIVERED, AND FUND IT

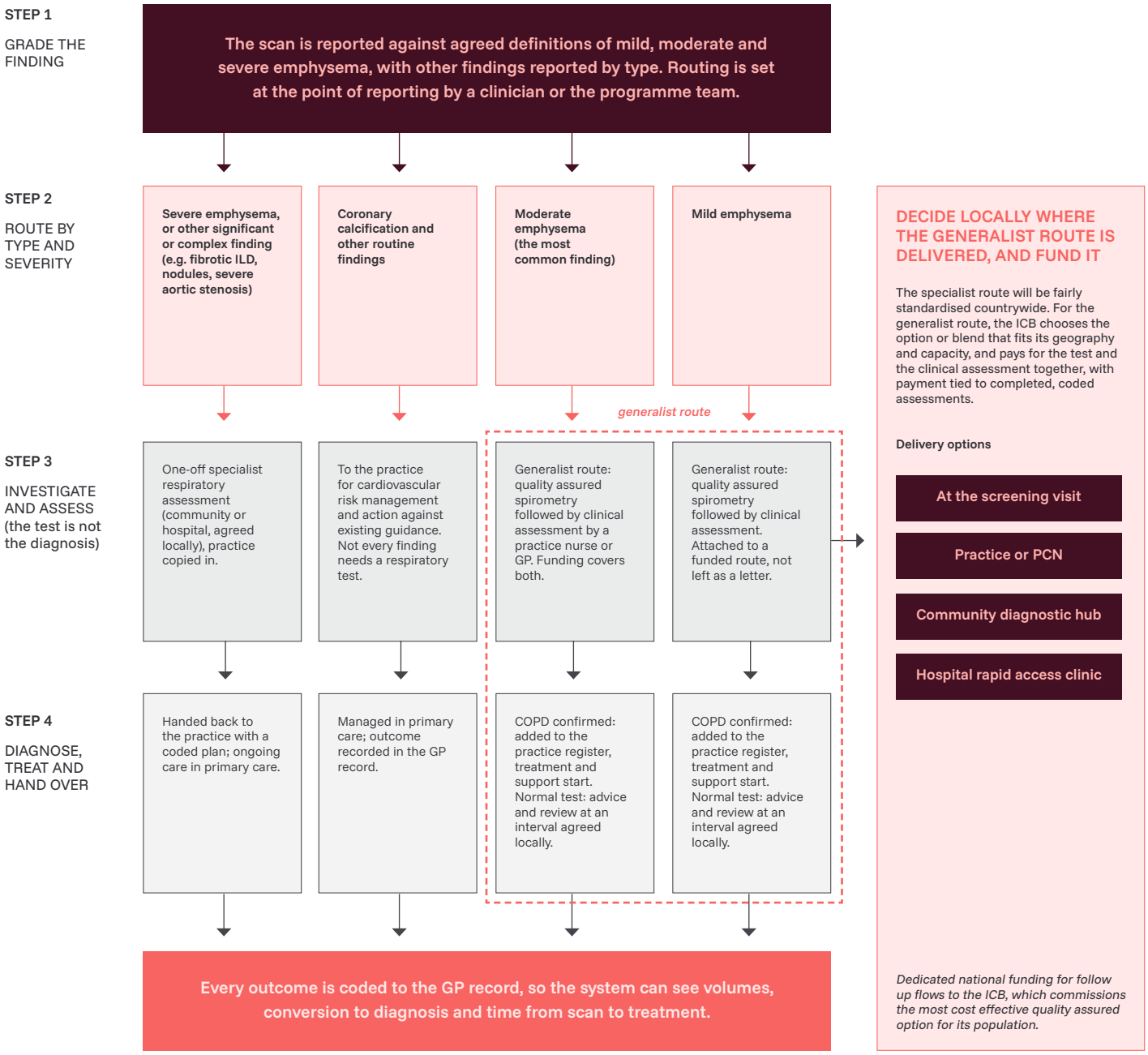
- The specialist route will be broadly standard across the country. The generalist route is where geography, capacity and cost come in, and most systems would run a blend of the options below.
- Nationally, follow up of significant incidental findings is a required consequence of running the screen, with dedicated funding rather than an optional incentive. The money flows to the ICB, which commissions the most cost effective quality assured option for its population and pays for the test and the clinical assessment together.
- Where a regional mobile scanner moves around, the system is warned before it arrives, with expected volumes, agreed routes and funded roles set out before the first scans are reported.

Table A1: Options for delivering the generalist route

Option	How it works	Best fit	Main risk
At the screening visit	Where the scan is read on the day, a nurse or physiologist on site carries out spirometry for anyone with emphysema reported, with an accredited clinician to assess and send a coded plan to the practice. Lipid testing can be added for calcification.	Rural and coastal areas where a second journey is a barrier; mobile units; populations with poor follow up attendance	Scheduling and space pressure on the screening visit; governance for tests outside the cancer programme
Practice or PCN	A funded PCN spirometry service or accredited practice carries out the test and assessment and owns the patient from the start.	Suburban and urban areas with PCNs already running quality assured spirometry	Capacity and accreditation vary; findings received but not acted on if payment is not tied to completion
Community diagnostic hub	A single community respiratory service (CDC or community clinic) led by a GP with a special interest or respiratory nurse specialist, with consultant review of complex cases, handing a coded plan to the practice.	Urban and dense suburban systems with an existing CDC or community respiratory team	Many CDCs sit on hospital sites; a new waiting list if undersized; weak handover
Hospital rapid access clinic	A trust run nurse led clinic with consultant oversight, paid per case at a community rather than outpatient rate, discharging to a named practice owner.	Where primary care capacity is thin, or as a bridge while community capacity is built	Cost if charged at outpatient tariff; runs against the hospital to community shift

The pathway at a glance

Figure A1: A patient-led pathway for incidental findings: grade, route, investigate, diagnose, then decide local delivery and funding (see note 2)



WHAT NEEDS TO HAPPEN TO DELIVER THE PATHWAY IN PRACTICE

- **At the national level.** Agreed grading definitions and an estimate of the proportions: the share of people screened whose scans show mild, moderate and severe emphysema, and the share with interstitial lung disease, bronchiectasis or cardiac findings needing routine or specialist action. UK data exist but vary with the definitions used, which is why agreed grading comes first. With those proportions and an agreed cost per test and assessment, the national level can size the funding and allocate it to ICBs.
- **At the commissioning level.** With the proportions and an agreed rate, an ICB can estimate for its population how many tests and assessments are needed and how many people will start treatment, choose the delivery options that fit its geography and capacity, and commission them with payment tied to completed, coded assessments. ICBs have limited capacity of their own, so in practice many will pass the money to PCNs, neighbourhood providers or to the hospital with a clear specification and a rollout plan agreed with the screening programme.

NOTES TO ANNEX A

Note 1.

The non-emphysema findings listed are examples given in discussion with respiratory leaders working in primary care to illustrate the routing principle. They are not a definitive list, and the criteria for specialist referral would be agreed locally. Severe emphysema on CT is a radiological grading, not a measure of COPD severity, which is assessed by spirometry and symptoms. Routing it for specialist assessment does not mean severe COPD should be managed by specialists.

Note 2.

Future Health Research's example pathway, shown for illustration. It is informed by discussion with respiratory leaders working in primary care but is Future Health Research's own and is not clinical guidance.

References

1 Lee RW, Nair A, Balata H, et al, on behalf of the UK Lung Cancer Screening Research Consortium. Implementation of the NHS England Lung Cancer Screening Programme over 5 years. Nature Medicine 2026;32:1817 to 1826. doi:10.1038/s41591-026-04292-y. Available from: https://www.nature.com/articles/s41591-026-04292-y Accessed November 2026

2 Department of Health and Social Care. Men's health: a strategic vision for England. CP 1432. Presented to Parliament 19 November 2025; corrected 15 December 2025. Chapter 6, pages 36 to 39. Available from: https://www.gov.uk/government/publications/mens-health-strategy-for-england Accessed November 2026

3 Office for Health Improvement and Disparities. Indicator 93724: under 75 mortality rate from respiratory disease considered preventable, persons, upper tier local authorities (post 4/23), 2022 to 2024. Fingertips. Extracted September 2026. Available from: https://fingertips.phe.org.uk/profile/respiratory-disease Accessed November 2026

4 Whittaker H, Bolton T, Sinha I, Heaney LG, Busby J, Davies GA, Sheikh A, Quint JK, on behalf of the CVD-COVID-UK/COVID-Impact Consortium. Impact of sex, socioeconomic deprivation, ethnicity and region on exacerbation rates and mortality of chronic respiratory diseases in England: population-based cohorts. Thorax 2026; published online 20 August 2026. doi:10.1136/thorax-2026-224765. Available from: https://thorax.bmj.com/content/early/2026/08/19/thorax-2026-224765 Accessed November 2026

5 Lee RW, Nair A, Balata H, et al, on behalf of the UK Lung Cancer Screening Research Consortium. Implementation of the NHS England Lung Cancer Screening Programme over 5 years. Nature Medicine 2026;32:1817 to 1826. doi:10.1038/s41591-026-04292-y. Available from: https://www.nature.com/articles/s41591-026-04292-y Accessed November 2026

6 Lee RW, Nair A, Balata H, et al, on behalf of the UK Lung Cancer Screening Research Consortium. Implementation of the NHS England Lung Cancer Screening Programme over 5 years. Nature Medicine 2026;32:1817 to 1826. doi:10.1038/s41591-026-04292-y. Available from: https://www.nature.com/articles/s41591-026-04292-y Accessed November 2026

7 Lee RW, Nair A, Balata H, et al, on behalf of the UK Lung Cancer Screening Research Consortium. Implementation of the NHS England Lung Cancer Screening Programme over 5 years. Nature Medicine 2026;32:1817 to 1826. doi:10.1038/s41591-026-04292-y. Available from: https://www.nature.com/articles/s41591-026-04292-y Accessed November 2026

8 UK Parliament. Written question 67321, Lung Cancer: Screening, tabled by Bob Blackman MP on 14 July 2025 and answered by Ashley Dalton MP on 25 July 2025. Available from: https://questions-statements.parliament.uk/written-questions/detail/2025-07-14/67321 Accessed November 2026

9 Lee RW, Nair A, Balata H, et al, on behalf of the UK Lung Cancer Screening Research Consortium. Implementation of the NHS England Lung Cancer Screening Programme over 5 years. Nature Medicine 2026;32:1817 to 1826. doi:10.1038/s41591-026-04292-y. Available from: https://www.nature.com/articles/s41591-026-04292-y Accessed November 2026

10 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: quality assurance standards prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1647. Annex 1 (reporting proforma), Annex 2 (protocol for the management of incidental findings), Annex 3 (national incidental findings pathways) and QA standard 13. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

11 Tisi S, Dickson JL, Horst C, et al. Detection of COPD in the SUMMIT Study lung cancer screening cohort using symptoms and spirometry. European Respiratory Journal 2022;60(6):2200795. doi:10.1183/13993003.00795-2022. Available from: https://publications.ersnet.org/content/erj/60/6/2200795 Accessed November 2026

12 Bradley C, Alexandris P, Baldwin DR, et al. Measuring spirometry in a lung cancer screening cohort highlights possible underdiagnosis and misdiagnosis of COPD. ERJ Open Research 2023;9(4):00203-2023. doi:10.1183/23120541.00203-2023. Available from: https://publications.ersnet.org/content/erjor/9/4/00203-2023 Accessed November 2026

13 Bradley C, Boland A, Clarke L, et al. Diagnosis and treatment outcomes from prebronchodilator spirometry performed alongside lung cancer screening in a Lung Health Check programme. Thorax 2023;78:543 to 550. doi:10.1136/thorax-2022-219683. Available from: https://pubmed.ncbi.nlm.nih.gov/36972979/ Accessed November 2026

14 Department of Health and Social Care. Men's health: a strategic vision for England. CP 1432. Presented to Parliament 19 November 2025; corrected 15 December 2025. Chapter 6, pages 36 to 39. Available from: https://www.gov.uk/government/publications/mens-health-strategy-for-england Accessed November 2026

15 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: quality assurance standards prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1647. Annex 1 (reporting proforma), Annex 2 (protocol for the management of incidental findings), Annex 3 (national incidental findings pathways) and QA standard 13. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

16 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: standard protocol prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1646. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

17 Bartlett EC, Belsey J, Derbyshire J, et al. Implications of incidental findings from lung screening for primary care: data from a UK pilot. npj Primary Care Respiratory Medicine 2021;31:36. Available from: https://doi.org/10.1038/s41533-021-00246-8 Accessed November 2026

18 Chiesi UK and Ireland. FRONTIER Hull data reveals 50% diagnosis rate in COPD case-finding programme. Press release, 30 September 2025, reference UK-CHI-2500916. Reports data presented at the European Respiratory Society Congress 2025 (Brindle K, Watkins K, Gilroy-Cheetham J, Maxted C, Niazi-Ali S, Crooks M. The burden of undiagnosed COPD among Lung Cancer Screening participants). Available from: https://www.chiesi.uk.com/media/press-releases/frontier-hull-data-reveals-diagnosis-rate-in-copd Accessed November 2026

19 Whittaker H, Bolton T, Sinha I, Heaney LG, Busby J, Davies GA, Sheikh A, Quint JK, on behalf of the CVD-COVID-UK/COVID-Impact Consortium. Impact of sex, socioeconomic deprivation, ethnicity and region on exacerbation rates and mortality of chronic respiratory diseases in England: population-based cohorts. Thorax 2026; published online 20 August 2026. doi:10.1136/thorax-2026-224765. Available from: https://thorax.bmj.com/content/early/2026/08/19/thorax-2026-224765 Accessed November 2026

20 Office for Health Improvement and Disparities. Indicator 93724: under 75 mortality rate from respiratory disease considered preventable, persons, upper tier local authorities (post 4/23), 2022 to 2024. Fingertips. Extracted September 2026. Available from: https://fingertips.phe.org.uk/profile/respiratory-disease Accessed November 2026

21 Department of Health and Social Care. Men's health: a strategic vision for England. CP 1432. Presented to Parliament 19 November 2025; corrected 15 December 2025. Chapter 6, pages 36 to 39. Available from: https://www.gov.uk/government/publications/mens-health-strategy-for-england Accessed November 2026

22 Department of Health and Social Care. Men's health: a strategic vision for England. CP 1432. Presented to Parliament 19 November 2025; corrected 15 December 2025. Page 8. Available from: https://www.gov.uk/government/publications/mens-health-strategy-for-england Accessed November 2026

23 Office for Health Improvement and Disparities. Indicator 93724: under 75 mortality rate from respiratory disease considered preventable, persons, upper tier local authorities (post 4/23), 2022 to 2024. Fingertips. Extracted September 2026. Available from: https://fingertips.phe.org.uk/profile/respiratory-disease Accessed November 2026

24 Whittaker H, Bolton T, Sinha I, Heaney LG, Busby J, Davies GA, Sheikh A, Quint JK, on behalf of the CVD-COVID-UK/COVID-Impact Consortium. Impact of sex, socioeconomic deprivation, ethnicity and region on exacerbation rates and mortality of chronic respiratory diseases in England: population-based cohorts. Thorax 2026; published online 20 August 2026. doi:10.1136/thorax-2026-224765. Available from: https://thorax.bmj.com/content/early/2026/08/19/thorax-2026-224765 Accessed November 2026

25 Office for Health Improvement and Disparities. Indicator 93724: under 75 mortality rate from respiratory disease considered preventable, persons, upper tier local authorities (post 4/23), 2022 to 2024. Fingertips. Extracted September 2026. Available from: https://fingertips.phe.org.uk/profile/respiratory-disease Accessed November 2026

26 Ministry of Housing, Communities and Local Government. English indices of deprivation 2019. Available from: https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019 Accessed November 2026

27 Future Health Research analysis, September 2026. Under 75 preventable respiratory mortality (OHID Respiratory Disease profile, 2022 to 2024) matched by area code to the IMD 2019 average score (MHCLG File 11, upper tier local authority summaries) for 151 upper tier local authorities in England on post April 2023 boundaries (City of London and the Isles of Scilly are reported combined with Hackney and Cornwall and are excluded); successor authorities in Cumbria and Northamptonshire assigned the 2019 county score. Pearson r = 0.879; Spearman rho = 0.865; excluding the four successor authorities r = 0.883. The IMD includes a health deprivation domain, so a degree of circularity is present; against the income deprivation domain alone r = 0.842. Data and workings available on request.

28 Future Health Research analysis, September 2026. Under 75 preventable respiratory mortality (OHID Respiratory Disease profile, 2022 to 2024) matched by area code to the IMD 2019 average score (MHCLG File 11, upper tier local authority summaries) for 151 upper tier local authorities in England on post April 2023 boundaries (City of London and the Isles of Scilly are reported combined with Hackney and Cornwall and are excluded); successor authorities in Cumbria and Northamptonshire assigned the 2019 county score. Pearson r = 0.879; Spearman rho = 0.865; excluding the four successor authorities r = 0.883. The IMD includes a health deprivation domain, so a degree of circularity is present; against the income deprivation domain alone r = 0.842. Data and workings available on request.

29 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: standard protocol prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1646. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

30 Lee RW, Nair A, Balata H, et al, on behalf of the UK Lung Cancer Screening Research Consortium. Implementation of the NHS England Lung Cancer Screening Programme over 5 years. Nature Medicine 2026;32:1817 to 1826. doi:10.1038/s41591-026-04292-y. Available from: https://www.nature.com/articles/s41591-026-04292-y Accessed November 2026

31 NHS England. Evaluation of the Targeted Lung Health Check programme: privacy notice. Available from: https://www.england.nhs.uk/evaluation-of-the-targeted-lung-health-check-programme/ Accessed November 2026

32 Crosbie PA, Balata H, Evison M, et al. Implementing lung cancer screening: baseline results from a community-based Lung Health Check pilot in deprived areas of Manchester. Thorax 2019;74:405 to 409. doi:10.1136/thoraxjnl-2017-211377. Available from: https://doi.org/10.1136/thoraxjnl-2017-211377 Accessed November 2026

33 Balata H, Harvey J, Barber PV, et al. Spirometry performed as part of the Manchester community-based lung cancer screening programme detects a high prevalence of airflow obstruction in individuals without a prior diagnosis of COPD. Thorax 2020;75:655 to 660. doi:10.1136/thoraxjnl-2019-213584. Available from: https://pubmed.ncbi.nlm.nih.gov/32444437/ Accessed November 2026

34 Department of Health and Social Care. Introduction of a National Targeted Lung Cancer Screening Programme in England. Written statement HCWS880, 26 June 2023. Available from: https://questions-statements.parliament.uk/written-statements/1647603 Accessed November 2026; UK National Screening Committee. UK NSC recommends introduction of targeted lung cancer screening. Blog, 29 September 2022. Available from: https://nationalscreening.blog.gov.uk/2022/09/29/uk-nsc-recommends-introduction-of-targeted-lung-cancer-screening/ Accessed November 2026; Department of Health and Social Care. New lung cancer screening roll out to detect cancer sooner. Press release, 26 June 2023. Available from: https://www.gov.uk/government/news/new-lung-cancer-screening-roll-out-to-detect-cancer-sooner Accessed November 2026

35 Lee RW, Nair A, Balata H, et al, on behalf of the UK Lung Cancer Screening Research Consortium. Implementation of the NHS England Lung Cancer Screening Programme over 5 years. Nature Medicine 2026;32:1817 to 1826. doi:10.1038/s41591-026-04292-y. Available from: https://www.nature.com/articles/s41591-026-04292-y Accessed November 2026

36 UK National Screening Committee. Targeted Lung Health Check programme renamed the NHS Lung Cancer Screening Programme. Blog, 31 January 2025. Available from: https://nationalscreening.blog.gov.uk/2025/01/31/targeted-lung-health-check-programme-renamed-the-nhs-lung-cancer-screening-programme/ Accessed November 2026

37 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: standard protocol prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1646. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

38 Lee RW, Nair A, Balata H, et al, on behalf of the UK Lung Cancer Screening Research Consortium. Implementation of the NHS England Lung Cancer Screening Programme over 5 years. Nature Medicine 2026;32:1817 to 1826. doi:10.1038/s41591-026-04292-y. Available from: https://www.nature.com/articles/s41591-026-04292-y Accessed November 2026

39 Lee RW, Nair A, Balata H, et al, on behalf of the UK Lung Cancer Screening Research Consortium. Implementation of the NHS England Lung Cancer Screening Programme over 5 years. Nature Medicine 2026;32:1817 to 1826. doi:10.1038/s41591-026-04292-y. Available from: https://www.nature.com/articles/s41591-026-04292-y Accessed November 2026

40 NHS England. NHS England invites more than one million people for lung cancer checks. Press release, September 2023. Available from: https://www.england.nhs.uk/2023/09/nhs-england-invites-more-than-one-million-people-for-lung-cancer-checks/ Accessed November 2026

41 Lee RW, Nair A, Balata H, et al, on behalf of the UK Lung Cancer Screening Research Consortium. Implementation of the NHS England Lung Cancer Screening Programme over 5 years. Nature Medicine 2026;32:1817 to 1826. doi:10.1038/s41591-026-04292-y. Available from: https://www.nature.com/articles/s41591-026-04292-y Accessed November 2026

42 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: quality assurance standards prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1647. Annex 1 (reporting proforma), Annex 2 (protocol for the management of incidental findings), Annex 3 (national incidental findings pathways) and QA standard 13. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

43 UK Parliament. Written question 67321, Lung Cancer: Screening, tabled by Bob Blackman MP on 14 July 2025 and answered by Ashley Dalton MP on 25 July 2025. Available from: https://questions-statements.parliament.uk/written-questions/detail/2025-07-14/67321 Accessed November 2026

44 Lee RW, Nair A, Balata H, et al, on behalf of the UK Lung Cancer Screening Research Consortium. Implementation of the NHS England Lung Cancer Screening Programme over 5 years. Nature Medicine 2026;32:1817 to 1826. doi:10.1038/s41591-026-04292-y. Available from: https://www.nature.com/articles/s41591-026-04292-y Accessed November 2026

45 Lee RW, Nair A, Balata H, et al, on behalf of the UK Lung Cancer Screening Research Consortium. Implementation of the NHS England Lung Cancer Screening Programme over 5 years. Nature Medicine 2026;32:1817 to 1826. doi:10.1038/s41591-026-04292-y. Available from: https://www.nature.com/articles/s41591-026-04292-y Accessed November 2026

46 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: quality assurance standards prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1647. Annex 1 (reporting proforma), Annex 2 (protocol for the management of incidental findings), Annex 3 (national incidental findings pathways) and QA standard 13. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

47 Lung Foundation Australia. COPD-X Plan: Australian and New Zealand guidelines for the management of COPD. Section C2.6, Incidental findings (National Lung Cancer Screening Program). Version 2.78, December 2025. Available from: https://copdx.org.au/copd-x-plan/ and https://copdx.org.au/copd-x-plan/confirm-diagnosis/c2-diagnosis/c2-6-incidental-findings-national-lung-cancer-screening-program/ Accessed November 2026

48 Tisi S, Dickson JL, Horst C, et al. Detection of COPD in the SUMMIT Study lung cancer screening cohort using symptoms and spirometry. European Respiratory Journal 2022;60(6):2200795. doi:10.1183/13993003.00795-2022. Available from: https://publications.ersnet.org/content/erj/60/6/2200795 Accessed November 2026

49 Bradley C, Alexandris P, Baldwin DR, et al. Measuring spirometry in a lung cancer screening cohort highlights possible underdiagnosis and misdiagnosis of COPD. ERJ Open Research 2023;9(4):00203-2023. doi:10.1183/23120541.00203-2023. Available from: https://publications.ersnet.org/content/erjor/9/4/00203-2023 Accessed November 2026

50 Bradley C, Boland A, Clarke L, et al. Diagnosis and treatment outcomes from prebronchodilator spirometry performed alongside lung cancer screening in a Lung Health Check programme. Thorax 2023;78:543 to 550. doi:10.1136/thorax-2022-219683. Available from: https://pubmed.ncbi.nlm.nih.gov/36972979/ Accessed November 2026

51 Balata H, Harvey J, Barber PV, et al. Spirometry performed as part of the Manchester community-based lung cancer screening programme detects a high prevalence of airflow obstruction in individuals without a prior diagnosis of COPD. Thorax 2020;75:655 to 660. doi:10.1136/thoraxjnl-2019-213584. Available from: https://pubmed.ncbi.nlm.nih.gov/32444437/ Accessed November 2026

52 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: standard protocol prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1646. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

53 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: quality assurance standards prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1647. Annex 1 (reporting proforma), Annex 2 (protocol for the management of incidental findings), Annex 3 (national incidental findings pathways) and QA standard 13. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

54 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: quality assurance standards prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1647. Annex 1 (reporting proforma), Annex 2 (protocol for the management of incidental findings), Annex 3 (national incidental findings pathways) and QA standard 13. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

55 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: quality assurance standards prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1647. Annex 1 (reporting proforma), Annex 2 (protocol for the management of incidental findings), Annex 3 (national incidental findings pathways) and QA standard 13. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

56 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: quality assurance standards prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1647. Annex 1 (reporting proforma), Annex 2 (protocol for the management of incidental findings), Annex 3 (national incidental findings pathways), QA standard 9 (general practice communications) and QA standard 13. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

57 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: quality assurance standards prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1647. Annex 1 (reporting proforma), Annex 2 (protocol for the management of incidental findings), Annex 3 (national incidental findings pathways), QA standard 9 (general practice communications) and QA standard 13. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

58 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: standard protocol prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1646. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

59 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: quality assurance standards prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1647. Annex 1 (reporting proforma), Annex 2 (protocol for the management of incidental findings), Annex 3 (national incidental findings pathways) and QA standard 13. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

60 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: quality assurance standards prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1647. Annex 1 (reporting proforma), Annex 2 (protocol for the management of incidental findings), Annex 3 (national incidental findings pathways) and QA standard 13. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

61 Tobacco and Vapes Act 2026 (c. 18). Royal Assent 29 April 2026. Available from: https://www.legislation.gov.uk/ukpga/2026/18 Accessed November 2026

62 Department of Health and Social Care. Tobacco and Vapes Bill becomes law. Press release, 29 April 2026. Available from: https://www.gov.uk/government/news/tobacco-and-vapes-bill-becomes-law Accessed November 2026

63 Department of Health and Social Care. Asthma and COPD patients to receive better care closer to home. Announcement of the Respiratory Transformation Partnership, March 2026. Available from: https://www.gov.uk/government/news/asthma-and-copd-patients-to-receive-better-care-closer-to-home Accessed November 2026

64 Department of Health and Social Care. Fit for the future: 10 Year Health Plan for England. July 2025. Available from: https://www.gov.uk/government/publications/10-year-health-plan-for-england-fit-for-the-future Accessed November 2026

65 Department of Health and Social Care. Men's health: a strategic vision for England. CP 1432. Presented to Parliament 19 November 2025; corrected 15 December 2025. Chapter 6, pages 36 to 39. Available from: https://www.gov.uk/government/publications/mens-health-strategy-for-england Accessed November 2026

66 Office for Health Improvement and Disparities. Respiratory Disease profile, indicator 93577: emergency hospital admissions for COPD, all ages, England, 2024/25. Fingertips. Extracted September 2026. Available from: https://fingertips.phe.org.uk/profile/respiratory-disease Accessed November 2026

67 Taskforce for Lung Health. Health inequalities data dashboards: Integrated Care Board deprivation. Hospital Episode Statistics 2024/25 with IMD 2019. Available from: https://www.taskforceforlunghealth.org.uk/data-dashboards/health-inequalities/integrated-care-board-icb-deprivation/ Accessed November 2026

68 Department of Health and Social Care. Men's health: a strategic vision for England. CP 1432. Presented to Parliament 19 November 2025; corrected 15 December 2025. Chapter 6, pages 36 to 39. Available from: https://www.gov.uk/government/publications/mens-health-strategy-for-england Accessed November 2026

69 House of Commons. Health and Social Care oral questions: Lung Cancer Screening Programme, 14 July 2026. Question from Mike Kane MP, with a supplementary question from Jim Shannon MP, answered by Sharon Hodgson MP, Parliamentary Under-Secretary of State. Available from: https://hansard.parliament.uk/commons/2026-07-14/debates/41039299-B1A2-46F0-A931-1F32D204F894/LungCancerScreeningProgramme Accessed November 2026

70 Bartlett EC, Belsey J, Derbyshire J, et al. Implications of incidental findings from lung screening for primary care: data from a UK pilot. npj Primary Care Respiratory Medicine 2021;31:36. Available from: https://doi.org/10.1038/s41533-021-00246-8 Accessed November 2026

71 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: quality assurance standards prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1647. Annex 1 (reporting proforma), Annex 2 (protocol for the management of incidental findings), Annex 3 (national incidental findings pathways) and QA standard 13. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

72 Bartlett EC, Belsey J, Derbyshire J, et al. Implications of incidental findings from lung screening for primary care: data from a UK pilot. npj Primary Care Respiratory Medicine 2021;31:36. Available from: https://doi.org/10.1038/s41533-021-00246-8 Accessed November 2026

73 Lee RW, Nair A, Balata H, et al, on behalf of the UK Lung Cancer Screening Research Consortium. Implementation of the NHS England Lung Cancer Screening Programme over 5 years. Nature Medicine 2026;32:1817 to 1826. doi:10.1038/s41591-026-04292-y. Available from: https://www.nature.com/articles/s41591-026-04292-y Accessed November 2026

74 Bradley C, Boland A, Clarke L, et al. Diagnosis and treatment outcomes from prebronchodilator spirometry performed alongside lung cancer screening in a Lung Health Check programme. Thorax 2023;78:543 to 550. doi:10.1136/thorax-2022-219683. Available from: https://pubmed.ncbi.nlm.nih.gov/36972979/ Accessed November 2026

75 Lung Foundation Australia. COPD-X Plan: Australian and New Zealand guidelines for the management of COPD. Section C2.6, Incidental findings (National Lung Cancer Screening Program). Version 2.78, December 2025. Available from: https://copdx.org.au/copd-x-plan/ and https://copdx.org.au/copd-x-plan/confirm-diagnosis/c2-diagnosis/c2-6-incidental-findings-national-lung-cancer-screening-program/ Accessed November 2026

76 Chiesi UK and Ireland. FRONTIER Hull data reveals 50% diagnosis rate in COPD case-finding programme. Press release, 30 September 2025, reference UK-CHI-2500916. Reports data presented at the European Respiratory Society Congress 2025 (Brindle K, Watkins K, Gilroy-Cheetham J, Maxted C, Niazi-Ali S, Crooks M. The burden of undiagnosed COPD among Lung Cancer Screening participants). Available from: https://www.chiesi.uk.com/media/press-releases/frontier-hull-data-reveals-diagnosis-rate-in-copd Accessed November 2026

77 Chiesi Ltd. Transforming COPD: reducing avoidable pressure on the NHS. Summary of a parliamentary roundtable held on 27 November 2025, sponsored by Jim Shannon MP, Chair of the All Party Parliamentary Group on Respiratory Health.

78 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: quality assurance standards prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1647. Annex 1 (reporting proforma), Annex 2 (protocol for the management of incidental findings), Annex 3 (national incidental findings pathways) and QA standard 13. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

79 Lee RW, Nair A, Balata H, et al, on behalf of the UK Lung Cancer Screening Research Consortium. Implementation of the NHS England Lung Cancer Screening Programme over 5 years. Nature Medicine 2026;32:1817 to 1826. doi:10.1038/s41591-026-04292-y. Available from: https://www.nature.com/articles/s41591-026-04292-y Accessed November 2026

80 Primary Care Respiratory Society. Position statement: serious concerns regarding the erosion of respiratory leadership and expertise across ICBs, regional and primary care networks. June 2026. Available from: https://www.pcrs-uk.org/sites/default/files/resource/Position%20statement_Loss%20of%20Respiratory%20Leadership_PRF2%20290526.pdf Accessed November 2026

81 Primary Care Respiratory Society. Position statement: serious concerns regarding the erosion of respiratory leadership and expertise across ICBs, regional and primary care networks. June 2026. Available from: https://www.pcrs-uk.org/sites/default/files/resource/Position%20statement_Loss%20of%20Respiratory%20Leadership_PRF2%20290526.pdf Accessed November 2026

82 NHS England. Integrated care in your area. Records the integrated care board mergers of 1 April 2026. Available from: https://www.england.nhs.uk/integratedcare/integrated-care-in-your-area/ Accessed November 2026

83 Lee RW, Nair A, Balata H, et al, on behalf of the UK Lung Cancer Screening Research Consortium. Implementation of the NHS England Lung Cancer Screening Programme over 5 years. Nature Medicine 2026;32:1817 to 1826. doi:10.1038/s41591-026-04292-y. Available from: https://www.nature.com/articles/s41591-026-04292-y Accessed November 2026

84 UK Parliament. Written question 67321, Lung Cancer: Screening, tabled by Bob Blackman MP on 14 July 2025 and answered by Ashley Dalton MP on 25 July 2025. Available from: https://questions-statements.parliament.uk/written-questions/detail/2025-07-14/67321 Accessed November 2026

85 Chiesi UK and Ireland. FRONTIER Hull data reveals 50% diagnosis rate in COPD case-finding programme. Press release, 30 September 2025, reference UK-CHI-2500916. Reports data presented at the European Respiratory Society Congress 2025 (Brindle K, Watkins K, Gilroy-Cheetham J, Maxted C, Niazi-Ali S, Crooks M. The burden of undiagnosed COPD among Lung Cancer Screening participants). Available from: https://www.chiesi.uk.com/media/press-releases/frontier-hull-data-reveals-diagnosis-rate-in-copd Accessed November 2026

86 Baldwin D. Experts agree how to manage incidental findings in lung cancer screening. UK National Screening Committee blog, 9 April 2025. Available from: https://nationalscreening.blog.gov.uk/2025/04/09/experts-agree-how-to-manage-incidental-findings-in-lung-cancer-screening/ Accessed November 2026

87 Taskforce for Lung Health. Targeted Lung Health Checks incidental findings protocol: four principles. 16 October 2024. Available from: https://www.taskforceforlunghealth.org.uk/targeted-lung-health-checks-incidental-findings-protocol/ Accessed November 2026

88 Chiesi UK and Ireland. FRONTIER Hull data reveals 50% diagnosis rate in COPD case-finding programme. Press release, 30 September 2025, reference UK-CHI-2500916. Reports data presented at the European Respiratory Society Congress 2025 (Brindle K, Watkins K, Gilroy-Cheetham J, Maxted C, Niazi-Ali S, Crooks M. The burden of undiagnosed COPD among Lung Cancer Screening participants). Available from: https://www.chiesi.uk.com/media/press-releases/frontier-hull-data-reveals-diagnosis-rate-in-copd Accessed November 2026

89 Chiesi Ltd. FRONTIER 2: collaborative working project between Chiesi and Hull University Teaching Hospitals NHS Trust. High-risk COPD targeting web page, UK-CHI-2600289, July 2026. Available from: https://www.chiesi.uk.com/partnering/improving-respiratory-outcomes/high-risk-copd-targeting#frontier-2 Accessed November 2026

90 Chiesi Ltd and Wirral Primary Care Collaborative Ltd. COPD Targeted Management, Early Intervention and Treatment (COMET). Collaborative working project summary report, UK-CHI-2600466, June 2026. Available from: https://www.chiesi.uk.com/media/documents/comet-summary-report.pdf Accessed November 2026

91 Lancashire Teaching Hospitals NHS Foundation Trust. Advice and guidance: referral pathways for incidental findings on CT scan for GPs, Central Lancashire. Undated. Available from: https://www.lancsteachinghospitals.nhs.uk/media/.resources/659680259a6bc5.20956833.pdf Accessed November 2026

92 Lung Foundation Australia. COPD-X Plan: Australian and New Zealand guidelines for the management of COPD. Section C2.6, Incidental findings (National Lung Cancer Screening Program). Version 2.78, December 2025. Available from: https://copdx.org.au/copd-x-plan/ and https://copdx.org.au/copd-x-plan/confirm-diagnosis/c2-diagnosis/c2-6-incidental-findings-national-lung-cancer-screening-program/ Accessed November 2026

93 Future Health Research analysis, September 2026. Under 75 preventable respiratory mortality (OHID Respiratory Disease profile, 2022 to 2024) matched by area code to the IMD 2019 average score (MHCLG File 11, upper tier local authority summaries) for 151 upper tier local authorities in England on post April 2023 boundaries (City of London and the Isles of Scilly are reported combined with Hackney and Cornwall and are excluded); successor authorities in Cumbria and Northamptonshire assigned the 2019 county score. Pearson r = 0.879; Spearman rho = 0.865; excluding the four successor authorities r = 0.883. The IMD includes a health deprivation domain, so a degree of circularity is present; against the income deprivation domain alone r = 0.842. Data and workings available on request; NHS Hull Clinical Commissioning Group. NHS lung health checks in Hull. 28 January 2020. Available from: https://www.hullccg.nhs.uk/2020/01/28/nhs-lung-health-checks-in-hull/ Accessed November 2026

94 Chiesi Ltd. Finding the hidden millions: restoration of early COPD diagnosis for Hull Lung Health Check participants to optimise treatment and improve outcomes (FRONTIER). Collaborative working project. High-risk COPD targeting web page, UK-CHI-2600289, July 2026. Available from: https://www.chiesi.uk.com/partnering/improving-respiratory-outcomes/high-risk-copd-targeting Accessed November 2026

95 Chiesi Ltd. Finding the hidden millions: restoration of early COPD diagnosis for Hull Lung Health Check participants to optimise treatment and improve outcomes (FRONTIER). Collaborative working project output report, UK-CHI-2600072, February 2026. Available from: https://www.chiesi.uk.com/media/documents/frontier-collaborative-working-output-report.pdf Accessed November 2026

96 Chiesi UK and Ireland. FRONTIER Hull data reveals 50% diagnosis rate in COPD case-finding programme. Press release, 30 September 2025, reference UK-CHI-2500916. Reports data presented at the European Respiratory Society Congress 2025 (Brindle K, Watkins K, Gilroy-Cheetham J, Maxted C, Niazi-Ali S, Crooks M. The burden of undiagnosed COPD among Lung Cancer Screening participants). Available from: https://www.chiesi.uk.com/media/press-releases/frontier-hull-data-reveals-diagnosis-rate-in-copd Accessed November 2026

97 Crooks M, Leite J, Mushtaq S, Stork R, Tarpey G, Gilroy-Cheetham J. Budget impact of implementing a case-finding programme in UK patients at high-risk for COPD to explore cost savings due to earlier diagnosis. Poster EE106, ISPOR Europe 2025, Glasgow, 9 to 12 November 2025. Value in Health 2025;28(12S1). Available from: https://www.ispor.org/publications/journals/value-in-health/abstract/Volume-28--Supplemental-Issue-12S1/EE106-Budget-Impact-of-Implementing-a-Case-Finding-Program-in-UK-Patients-at-High-Risk-for-COPD-to-Explore-Cost-Savings-Due-to-Earlier-Diagnosis Accessed November 2026

98 Chiesi Ltd. FRONTIER 2: collaborative working project between Chiesi and Hull University Teaching Hospitals NHS Trust. Executive summary, UK-CHI-2501058, December 2025. Available from: https://www.chiesi.uk.com/media/documents/frontier-2-executive-summary.pdf Accessed November 2026

99 Crooks M, Leite J, Mushtaq S, Stork R, Tarpey G, Gilroy-Cheetham J. Budget impact of implementing a case-finding programme in UK patients at high-risk for COPD to explore cost savings due to earlier diagnosis. Poster EE106, ISPOR Europe 2025, Glasgow, 9 to 12 November 2025. Value in Health 2025;28(12S1). Available from: https://www.ispor.org/publications/journals/value-in-health/abstract/Volume-28--Supplemental-Issue-12S1/EE106-Budget-Impact-of-Implementing-a-Case-Finding-Program-in-UK-Patients-at-High-Risk-for-COPD-to-Explore-Cost-Savings-Due-to-Earlier-Diagnosis Accessed November 2026

100 UK Parliament. Written question 57226, Lung Cancer: Screening, tabled by Bob Blackman MP on 4 June 2025 and answered by the Department of Health and Social Care on 23 June 2025. Available from: https://questions-statements.parliament.uk/written-questions/detail/2025-06-04/57226 Accessed November 2026

101 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: quality assurance standards prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1647. Annex 1 (reporting proforma), Annex 2 (protocol for the management of incidental findings), Annex 3 (national incidental findings pathways) and QA standard 13. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

102 Lung Foundation Australia. COPD-X Plan: Australian and New Zealand guidelines for the management of COPD. Section C2.6, Incidental findings (National Lung Cancer Screening Program). Version 2.78, December 2025. Available from: https://copdx.org.au/copd-x-plan/ and https://copdx.org.au/copd-x-plan/confirm-diagnosis/c2-diagnosis/c2-6-incidental-findings-national-lung-cancer-screening-program/ Accessed November 2026

103 Bradley C, Boland A, Clarke L, et al. Diagnosis and treatment outcomes from prebronchodilator spirometry performed alongside lung cancer screening in a Lung Health Check programme. Thorax 2023;78:543 to 550. doi:10.1136/thorax-2022-219683. Available from: https://pubmed.ncbi.nlm.nih.gov/36972979/ Accessed November 2026

104 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: quality assurance standards prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1647. Annex 1 (reporting proforma), Annex 2 (protocol for the management of incidental findings), Annex 3 (national incidental findings pathways) and QA standard 13. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

105 Lee RW, Nair A, Balata H, et al, on behalf of the UK Lung Cancer Screening Research Consortium. Implementation of the NHS England Lung Cancer Screening Programme over 5 years. Nature Medicine 2026;32:1817 to 1826. doi:10.1038/s41591-026-04292-y. Available from: https://www.nature.com/articles/s41591-026-04292-y Accessed November 2026

106 NHS England. Quality assurance standards prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Table 1 of Annex 2 (incidental findings) carries a note recommending review for new evidence in January 2026. As at September 2026 no revised version of the standards or outcome of that review had been published on NHS England's website. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

107 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: standard protocol prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1646. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

108 Chiesi Ltd and Wirral Primary Care Collaborative Ltd. COPD Targeted Management, Early Intervention and Treatment (COMET). Collaborative working project executive summary, UK-CHI-2400814, October 2024. Available from: https://www.chiesi.uk.com/media/documents/comet-wirral-executive-summary.pdf Accessed November 2026

109 Department of Health and Social Care. Fit for the future: 10 Year Health Plan for England. July 2025. Available from: https://www.gov.uk/government/publications/10-year-health-plan-for-england-fit-for-the-future Accessed November 2026

110 NHS England. A consultation on proposed Multi-Neighbourhood Provider and Single Neighbourhood Provider contracting models: technical detail. Consultation closed 10 September 2026. Available from: https://www.england.nhs.uk/long-read/a-consultation-on-proposed-mnp-and-snp-contracting-models-technical-detail/ Accessed November 2026

111 Balata H, Harvey J, Barber PV, et al. Spirometry performed as part of the Manchester community-based lung cancer screening programme detects a high prevalence of airflow obstruction in individuals without a prior diagnosis of COPD. Thorax 2020;75:655 to 660. doi:10.1136/thoraxjnl-2019-213584. Available from: https://pubmed.ncbi.nlm.nih.gov/32444437/ Accessed November 2026

112 Lee RW, Nair A, Balata H, et al, on behalf of the UK Lung Cancer Screening Research Consortium. Implementation of the NHS England Lung Cancer Screening Programme over 5 years. Nature Medicine 2026;32:1817 to 1826. doi:10.1038/s41591-026-04292-y. Available from: https://www.nature.com/articles/s41591-026-04292-y Accessed November 2026

113 Chiesi Ltd. FRONTIER 2: collaborative working project between Chiesi and Hull University Teaching Hospitals NHS Trust. High-risk COPD targeting web page, UK-CHI-2600289, July 2026. Available from: https://www.chiesi.uk.com/partnering/improving-respiratory-outcomes/high-risk-copd-targeting#frontier-2 Accessed November 2026

114 Chiesi Ltd and Wirral Primary Care Collaborative Ltd. COPD Targeted Management, Early Intervention and Treatment (COMET). Collaborative working project summary report, UK-CHI-2600466, June 2026. Available from: https://www.chiesi.uk.com/media/documents/comet-summary-report.pdf Accessed November 2026

115 Department of Health and Social Care. NHS patients to get quicker tests and scans closer to home. Press release, 13 April 2026. Available from: https://www.gov.uk/government/news/nhs-patients-to-get-quicker-tests-and-scans-closer-to-home Accessed November 2026

116 Pulse. Exclusive: Quarter of ICBs did not pay GPs to offer spirometry last year. 26 May 2026. Available from: https://www.pulsetoday.co.uk/news/clinical-areas/respiratory/exclusive-quarter-of-icbs-did-not-pay-gps-to-offer-spirometry-last-year Accessed November 2026

117 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: quality assurance standards prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1647. Annex 1 (reporting proforma), Annex 2 (protocol for the management of incidental findings), Annex 3 (national incidental findings pathways) and QA standard 13. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

118 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: standard protocol prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1646. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

119 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: quality assurance standards prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1647. Annex 1 (reporting proforma), Annex 2 (protocol for the management of incidental findings), Annex 3 (national incidental findings pathways) and QA standard 13. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

120 Primary Care Respiratory Society. Position statement: serious concerns regarding the erosion of respiratory leadership and expertise across ICBs, regional and primary care networks. June 2026. Available from: https://www.pcrs-uk.org/sites/default/files/resource/Position%20statement_Loss%20of%20Respiratory%20Leadership_PRF2%20290526.pdf Accessed November 2026

121 Health Innovation Oxford and Thames Valley. Respiratory Transformation Partnership clinical leadership. Available from: https://www.healthinnovationoxford.org/clinical-priorities/respiratory/the-respiratory-transformation-partnership/respiratory-transformation-partnership-clinical-leadership/ Accessed November 2026

122 Lee RW, Nair A, Balata H, et al, on behalf of the UK Lung Cancer Screening Research Consortium. Implementation of the NHS England Lung Cancer Screening Programme over 5 years. Nature Medicine 2026;32:1817 to 1826. doi:10.1038/s41591-026-04292-y. Available from: https://www.nature.com/articles/s41591-026-04292-y Accessed November 2026

123 NHS England. Diagnostics waiting times and activity: DM01 guidance, version 9. March 2026. Available from: https://www.england.nhs.uk/statistics/wp-content/uploads/sites/2/2026/05/DM01-Guidance-v9.pdf Accessed November 2026

124 Lee RW, Nair A, Balata H, et al, on behalf of the UK Lung Cancer Screening Research Consortium. Implementation of the NHS England Lung Cancer Screening Programme over 5 years. Nature Medicine 2026;32:1817 to 1826. doi:10.1038/s41591-026-04292-y. Available from: https://www.nature.com/articles/s41591-026-04292-y Accessed November 2026

125 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: quality assurance standards prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1647. Annex 1 (reporting proforma), Annex 2 (protocol for the management of incidental findings), Annex 3 (national incidental findings pathways) and QA standard 13. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

126 Bradley C, Boland A, Clarke L, et al. Diagnosis and treatment outcomes from prebronchodilator spirometry performed alongside lung cancer screening in a Lung Health Check programme. Thorax 2023;78:543 to 550. doi:10.1136/thorax-2022-219683. Available from: https://pubmed.ncbi.nlm.nih.gov/36972979/ Accessed November 2026

127 NHS England. Targeted screening for lung cancer with low radiation dose computed tomography: quality assurance standards prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Publication reference PR1647. Annex 1 (reporting proforma), Annex 2 (protocol for the management of incidental findings), Annex 3 (national incidental findings pathways) and QA standard 13. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

128 Department of Health and Social Care. Men's health: a strategic vision for England. CP 1432. Presented to Parliament 19 November 2025; corrected 15 December 2025. Chapter 6, pages 36 to 39. Available from: https://www.gov.uk/government/publications/mens-health-strategy-for-england Accessed November 2026

129 NHS England. Quality assurance standards prepared for the Lung Cancer Screening Programme. Version 3, 3 February 2025. Table 1 of Annex 2 (incidental findings) carries a note recommending review for new evidence in January 2026. As at September 2026 no revised version of the standards or outcome of that review had been published on NHS England's website. Available from: https://www.england.nhs.uk/publication/targeted-screening-for-lung-cancer/ Accessed November 2026

130 Lung Foundation Australia. COPD-X Plan: Australian and New Zealand guidelines for the management of COPD. Section C2.6, Incidental findings (National Lung Cancer Screening Program). Version 2.78, December 2025. Available from: https://copdx.org.au/copd-x-plan/ and https://copdx.org.au/copd-x-plan/confirm-diagnosis/c2-diagnosis/c2-6-incidental-findings-national-lung-cancer-screening-program/ Accessed November 2026

131 Office for Health Improvement and Disparities. Indicator 93724: under 75 mortality rate from respiratory disease considered preventable, persons, upper tier local authorities (post 4/23), 2022 to 2024. Fingertips. Extracted September 2026. Available from: https://fingertips.phe.org.uk/profile/respiratory-disease Accessed November 2026

132 Ministry of Housing, Communities and Local Government. English indices of deprivation 2019. Available from: https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019 Accessed November 2026

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