

COMET Collaborative Working Output Summary

COMET (COPD Targeted Management, Early Intervention and Treatment)

A collaborative working project between Chiesi Ltd and Wirral Primary Care Collaborative.

Since the launch of this project, Targeted Lung Health Checks (TLHC) were changed to be called Lung Cancer Screening (LCS), and this output report will refer to this updated programme name.

The Executive summary for this project can be found here: [comet-wirral-executive-summary.pdf](#)

Background

Chronic Obstructive Pulmonary Disease (COPD) affects around 3 million people in the UK, with two million undiagnosed, often called ‘The Missing Millions.’^{1,2} COPD is the second most common cause of emergency hospital admissions annually (~130,000) putting strain on acute care.¹ Diagnosis can be difficult due to limited public awareness and challenges in confirming cases.¹

COPD & Health Inequalities

NHS England’s Lung Cancer Screening targets areas with high deprivation and low lung cancer survival rates to reduce health inequalities.³ In Cheshire and Merseyside, including Wirral, the lung cancer screening programme targets populations at highest risk, particularly individuals with a history of smoking and those living in areas with high lung cancer burden.⁴ Delivery uses a community-based model, helping to improve access and reach populations in more deprived or underserved communities.^{4,5,6}

Project description

COMET was a collaborative working project between Chiesi Ltd and Wirral Primary Care Collaborative, to understand the impact of addressing the gap in COPD diagnosis

among patients identified through the Lung Cancer Screening programme and share learnings with the NHS about potential approaches towards targeted case finding in patients at risk of having undiagnosed COPD.

Project objectives

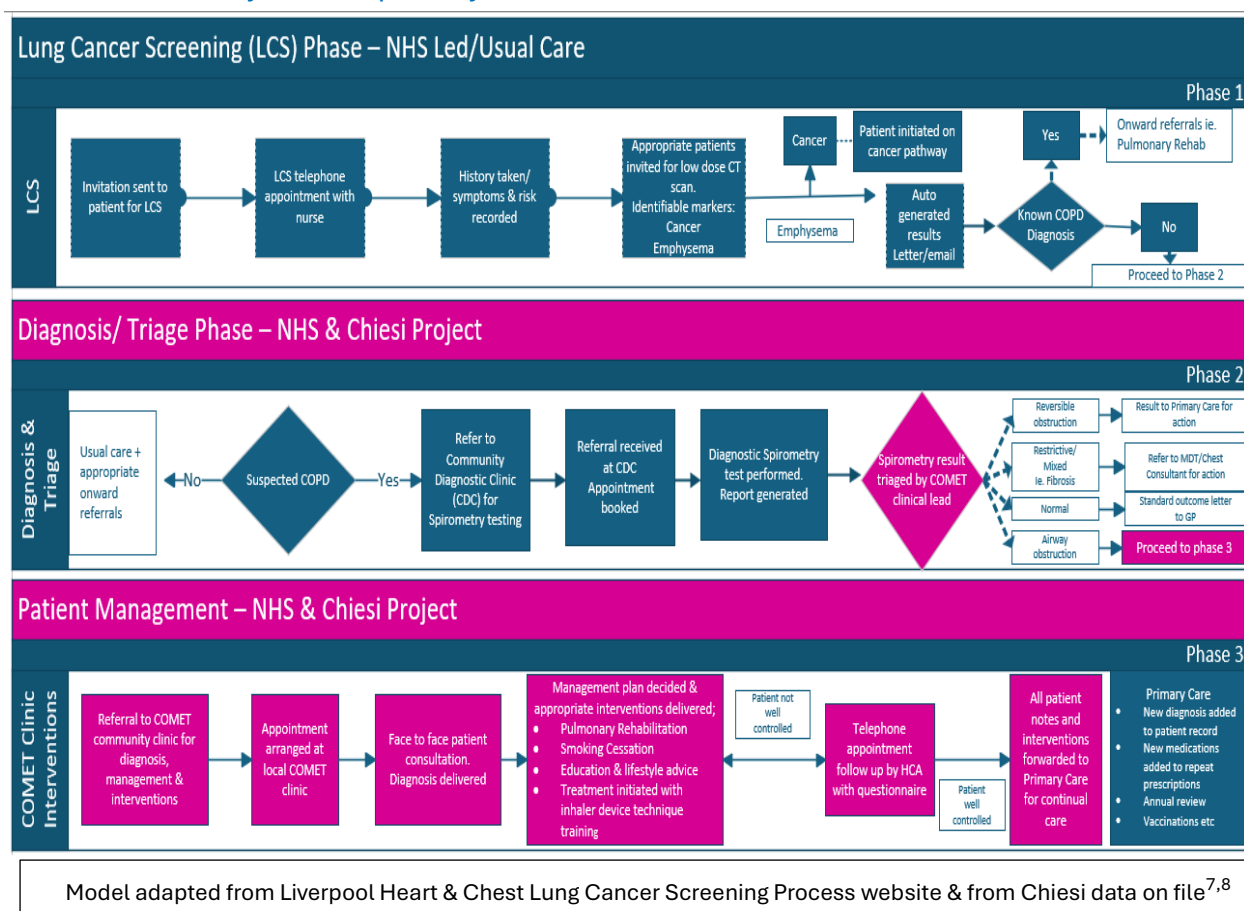
The intended objectives of this collaborative project were:

- To support LCS participants on the Wirral at high risk of having COPD based on symptoms, imagery, and spirometry findings.
- To invite an identified cohort of LCS participants at risk of having COPD to attend a diagnostic clinic to provide patients with a comprehensive clinical assessment.
- Initiate evidence-based pharmacological and non-pharmacological interventions for newly diagnosed COPD patients with the goal of improving short-, medium- and long-term health outcomes

Methodology

- Patients referred for Lung Cancer Screening on the Wirral who needed spirometry were sent to Clatterbridge Diagnostic Centre (CDC) for testing. (See Figure 1, Phase 1)
- For those attending CDC, their spirometry results, symptoms, and CT scans (if available) were reviewed by the COMET clinical lead. (See Figure 1, Phase 2)
- Patients showing signs of obstructive airways disease were invited to the COMET clinic for diagnosis and appropriate treatment. (See Figure 1, Phase 3)
- COMET patients received follow-up calls, NHS records were updated, and they returned to Primary Care for continued management. (See Figure 1, Patient Management Phase)

Figure 1 - COMET patient pathway. Original pathway designed with Clinical Lead, Cheshire & Merseyside Respiratory Clinical Network



Project Outcomes

Data routinely gathered during LCS as part of usual NHS care, highlighted patients who needed spirometry and were referred to Clatterbridge Diagnostic Centre (CDC) for testing. In total, 956 spirometry results, and where available, low dose CT scans and symptom records, were triaged by the COMET clinical lead to determine eligibility for the COMET clinic.

256 eligible patients were invited to the COMET clinic for a comprehensive diagnostic assessment, and 225 (~88%) attended an appointment with a member of the COMET nursing team.

Of the patients who attended the COMET clinic, 146 patients (~65%) were newly diagnosed with COPD, of which 85 patients (~58%) presented at a moderate or severe stage of the disease. Patients received evidence-based inhaled therapy, and those who were eligible and consented were also referred for pulmonary rehabilitation and specialist smoking cessation support.

Postcode data was available for the majority of COMET participants (~99%), and Figure 2 below represents a breakdown of this data based on the Indices of Multiple Deprivation.^{8,9}

Figure 2. COMET postcode breakdown based on Indices of Multiple Deprivation (IMD)

IMD deciles split all neighbourhoods in England into ten equal sized groups based on their deprivation rank. This means areas with the highest levels of deprivation, or the most deprived 10%, fall into decile 1. Areas with the lowest levels of deprivation, or least deprived, fall into decile 10. Areas 3-8 are 'Middle Groups' i.e. Areas around or slightly above or below the national average. ¹⁰						
Patient Number	Total Values	Deciles 1-2	Deciles 3-4	Deciles 5-6	Deciles 7-8	Deciles 9-10
Clinic attendees	223*	50%	17%	11%	12%	10%
COPD Confirmed Diagnosis	144*	54%	16%	10%	12%	8%
COPD Not Diagnosed /Excluded	52	38%	21%	16%	13%	12%
Diagnosis Pending/At Risk/Suspected	27	52%	18%	4%	8%	18%
*Data from 223/225 patients with available postcode data defined by Indices of Multiple Deprivation at Gov.UK. ⁹ Both patients where postcode data was undefined had COPD confirmed. Postcode Data from Chiesi data on File. ⁸						

Approximately half of the patients who attended clinics were from the most deprived populations (deciles 1-2), with ~67% of COMET attendees from deciles 1-4. In contrast, ~10% of patients were from the least deprived deciles (9-10).

Approximately 54% of confirmed COPD cases fell within deciles 1-2, while patients excluded from a diagnosis of COPD were more evenly spread across deprivation levels with ~38% from deciles 1-2 and a higher proportion from deciles 3-10.

COMET highlighted strong alignment with Core20PLUS5 and allowed the effective targeting and engagement of communities experiencing high levels of inequalities.¹¹

Lessons learned

COMET extends the achievements of Frontier, a collaborative working project between Hull University Teaching Hospitals NHS Trust (part of NHS Humber Health Partnership) and Chiesi Ltd¹², in establishing the practicality of identifying individuals at elevated risk of COPD by leveraging data from the Lung Cancer Screening Programme.

This approach enables timely diagnosis and intervention for high-risk, undiagnosed COPD patients, however engagement with multiple system providers presented challenges in data sharing, resulting in delays in triage and pathway progression, as well

as increased administrative workload and inefficiency. Additionally, the number and frequency of patient touchpoints increased the risk of patient drop out.

A comprehensive assessment of expected resources was agreed between the parties at the outset of the COMET project and further details will be provided in the forthcoming report.

Overall, COMET demonstrated that a targeted case-finding approach can effectively identify and engage high-risk and underserved groups, supporting earlier diagnosis of undiagnosed COPD in line with Core20PLUS5 principles.¹¹

A comprehensive summary of recommendations will be compiled.

References:

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